Section 3.11
Water Quality, Sediments, and Oceanography

SECTION SUMMARY

This section identifies the existing water quality, sediment conditions, and oceanographic conditions in the Project area and addresses potential impacts that could result from implementing the proposed Project or an alternative. The primary features of the proposed Project that could affect these resources include the following: dredging and disposal of approximately 38,000 cubic yards of sediment; installation of king piles and approximately 2,800 linear feet of sheet piles to stabilize the wharf; raising of up to five existing cranes; installation of five new 100-foot gauge A-frame over-water gantry cranes; and operating the terminal until 2038. Various alternatives to the proposed Project would implement these features to varying degrees, as described in Chapter 2, Project Description.

Section 3.11, Water Quality, Sediments, and Oceanography, provides the following:

- a description of the existing water and sediment quality and existing oceanographic parameters in the Los Angeles-Long Beach Harbor (LA/LB Harbor);
- a description of applicable local, state, and federal regulations and policies regarding water quality and sediment quality;
- a discussion on the methodology used to determine whether the proposed Project or alternatives would adversely affect water quality, sediment quality, or circulation in the proposed Project area;
- an impact analysis of both the proposed Project and alternatives; and
- a description of any mitigation measures proposed to reduce any potential impacts and residual impacts, as applicable.

Key Points of Section 3.11:

The proposed Project would improve an existing container terminal, and its operations would be consistent with other uses and container terminals in the proposed Project area. The alternatives evaluated include the No Federal Action Alternative, the No Project Alternative, two Reduced Project Alternatives, and an Expanded On-Dock Railyard Alternative. Construction activities with the potential to impact water quality include dredging and installation of sheet piles and king piles. Potential impacts on water quality from construction include surface runoff and accidental spills. Potential water quality impacts from operational activities include surface runoff, potential vessel spills, potential accidental discharges, and contaminant escape (leaching). The analysis determined potential impacts were less than significant, and no mitigation was required.

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3.11.1 Introduction

This section addresses the potential impacts on water quality, sediments, and circulation that would result from implementing the proposed Project or any alternatives. Potential impacts on groundwater are discussed in Section 3.7, Groundwater and Soils.

3.11.2 Environmental Setting

3.11.2.1 Regional Setting

The proposed Project is located at the lower end of the Dominguez Watershed, which drains an approximately 132 square mile (342 square kilometers) area. The Dominguez Watershed is primarily composed of urban and industrial land uses and includes Los Angeles/Long Beach Harbor (LA/LB Harbor) itself. Upper Dominguez Channel (freshwater) is connected to the harbor via the 8-mile long Dominguez Channel Estuary. Other nearby land areas drain to the harbor via smaller conveyances. Los Angeles Harbor (the Harbor) has been physically modified through previous dredging and filling projects, as well as construction of breakwaters, fills, and other structures.

The proposed Project site is located on Terminal Island, within an industrial area near the Main Channel and Turning Basin in the Harbor. Areas of the Harbor have been designated as either Inner or Outer Harbor in the *Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) (LARWQCB, 1994). The aquatic portions of the Project site are considered Inner Harbor. Both the Los Angeles Harbor and the Long Beach Harbor function oceanographically as one unit due to a connection via Cerritos Channel and because they share Outer Harbor waters. In addition, there is an opening in the Pier 400 causeway designed to enhance tidal circulation.

The LA/LB Harbor 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 influx into the Harbor is through Dominguez Channel. Another freshwater contributor to the Harbor is the discharge of effluent from the Terminal Island Water Reclamation Plant (TIWRP) into the Outer Harbor. Sheet runoff, storm drain discharges from several large City and County drains, and spillover from the Machado Lake weir also add freshwater to the Harbor during and after storm events.

The waters of LA/LB Harbor are governed by federal, state, and local regulations. The existing beneficial uses of the waters of Inner Los Angeles Harbor, as identified in the Basin Plan, include industrial service supply, navigation, noncontact water recreation, commercial and sportfishing, marine habitat, and preservation of rare and endangered species (LARWQCB, 1994)**Error! Bookmark not defined.**. The existing beneficial uses of Outer Los Angeles Harbor include navigation, noncontact and contact water recreation, commercial and sportfishing, marine habitat, and preservation of rare and endangered species (LARWQCB, 1994). Section 303(d) of the federal 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 and allocations for the listed pollutants 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 Code of Federal Regulations [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 quality data for the Dominguez Channel and LA/LB Harbor have been evaluated by the LARWQCB and EPA as part of the assessment of impaired water bodies of the nation under CWA Section 303(d). Consequently, the 2010 Section 303(d) List identified numerous pollutants or stressors to the Harbor's waters. 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 (which includes waters north of the entrance to the Main Channel, including the waters in the proposed Project area) were listed for: beach closures, 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 (SWRCB, 2010).

The LARWQCB previously amended the Basin Plan (Resolution No. 2004-011) to incorporate a TMDL for bacteria at Los Angeles Harbor, including Inner Cabrillo Beach and the Main Ship Channel (effective 2005). The Basin Plan was also amended (Resolution No. R11-008) to incorporate the TMDL for toxic pollutants in Dominguez Channel and the LA/LB Harbor; this TMDL became effective on March 23, 2012.

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, and contaminants. Water and sediment contaminants could also be indirectly affected by the proposed Project and alternatives. Dredging releases and distributes existing contaminants in the sediments during dredging operations, and removes existing contaminants from the system when sediments are dredged. Other parameters commonly used to describe marine water quality include salinity and temperature. While the proposed Project and alternatives would not directly affect salinity and temperature, they are addressed because stormwater runoff from the Project site could affect these conditions in the receiving waters surrounding Berths 226–236.

3.11.2.2 Water Quality

Water quality conditions in the LA/LB Harbor and proposed 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 (LAHD) in 2013 (LAHD, 2015), the 2008 San Pedro Bay biological baseline study (SAIC, 2010), and other sources as cited below. Use of data from 2013 (and earlier for some parameters) to approximate conditions for the CEQA baseline is appropriate because the CEQA baseline period is January through December 2013. 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 in the Harbor. LAHD conducted monthly water quality sampling at several stations in the Harbor from January through December 2013, including in the proposed Project area. These included two stations (LA 26 and LA 30) in the channel adjacent to the Project site (Figure 3.11-1).

Figure 3.11-1: Location of proposed Project site and water quality stations LA 26 and LA 30

No natural freshwater surface features occur at the Project site or the remainder of Terminal Island. Surface freshwater generated at or near the Project site is from stormwater runoff, which occurs episodically following rain events. Runoff from the Project site is collected by a stormwater system (consisting of catch basins and drain pipes) that drains into Harbor waters. The quality of the runoff water may reflect 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 streets immediately adjacent, which accumulate on the land surfaces during periods of dry weather.

Marine water quality in the LA/LB 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 is affected by both local processes and regional conditions. Results from the 2008 biological baseline study indicated that water quality characteristics within the LA/LB Harbor did not exhibit large spatial trends, and the variability of water quality parameters appeared to be related to water temperature rather than habitat types (SAIC, 2010).

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, 1994) 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 LA/LB 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 typical at Inner Harbor stations, and just over 7 mg/L at Outer Harbor stations (POLA and POLB, 2009).

During monthly sampling events in 2013 at two stations adjacent to the Project site, DO concentrations ranged from 4.0 to 6.3 mg/L, with mean values at each station between 5.1 and 5.2 mg/L (Figure 3.11-2; LAHD, 2015). Most of the lower DO levels (less than 5 mg/L) were recorded near the water surface in April and August and throughout the water column in November and December. The lowest value (3.99 mg/L) was recorded near the bottom at a depth of 15 meters (m) in April 2013 at Station LA 26.

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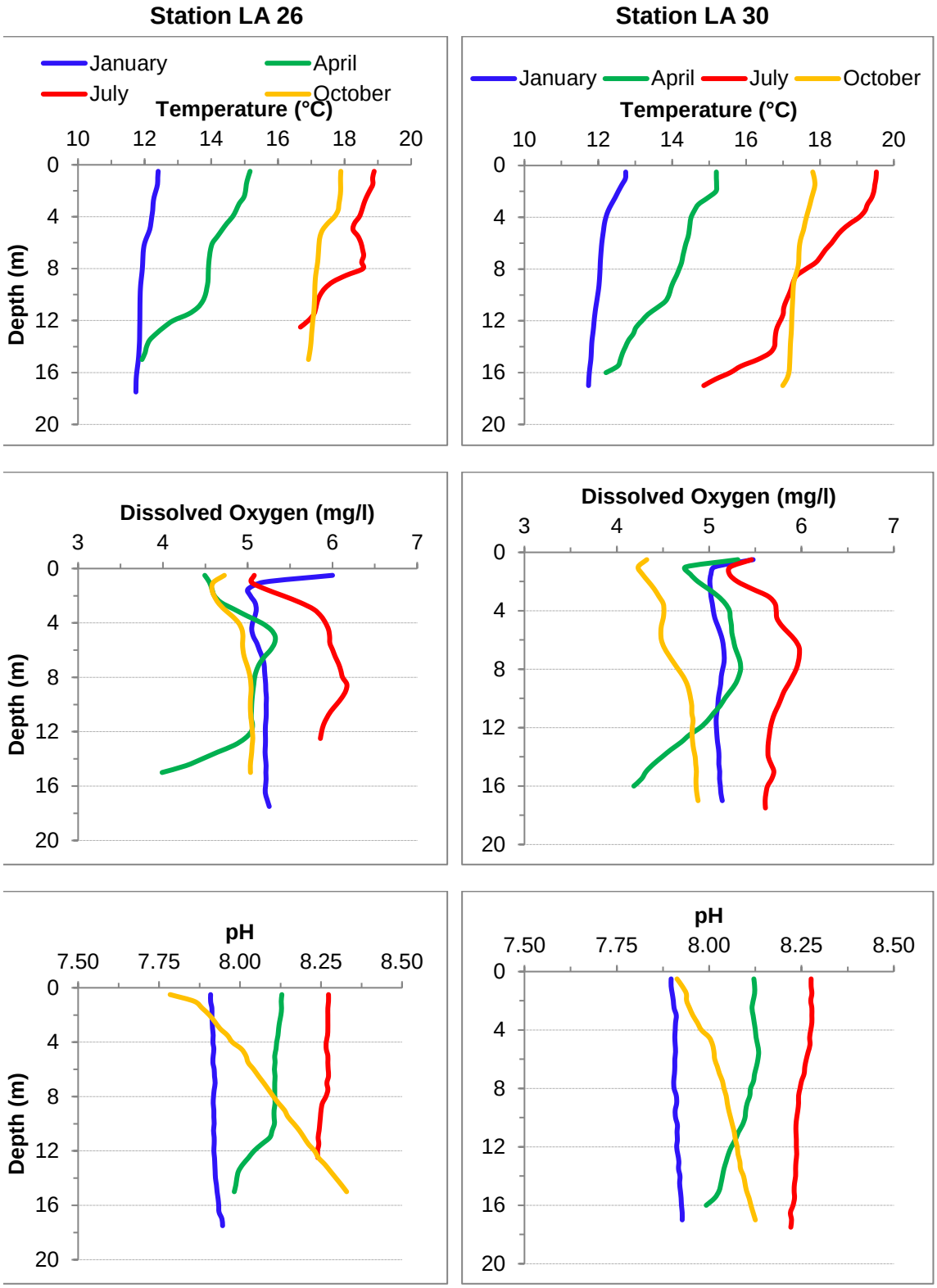

Figure 3.11-2. Temperature, DO, & pH in 2013 at Stations LA 26 (left) and LA 30 (right)

Temperature

Water temperatures in the LA/LB Harbor 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 insolation, and reduced runoff into nearshore waters.

During monthly sampling between January and December 2013 at the two stations adjacent to the Project site, mean station temperatures were 60°F (15.4°C) at Station LA 26 and 60°F (15.5°C) at Station LA 30, with a range throughout the water column from 53°F to 67°F (11.7°C to 19.5°C) (LAHD, 2015). Lowest temperatures were recorded near the bottom in January and April, while warmest temperatures were recorded near the surface in June and July 2013. Waters were also the most stratified during summer (Figure 3.11-2). Temperatures in the inner portions of the LA/LB Harbor occasionally are slightly warmer due to limited mixing with colder, offshore water masses (MEC and Associates, 2002; SAIC, 2010).

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 (Sverdrup et al., 1942). 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.

The pH and buffering capacity of Harbor waters in the Project vicinity are similar to that of the ocean because the LA/LB Harbor is directly connected to and exchanges seawater with the Pacific Ocean. However, in general, lower pH values are usually recorded in Inner Harbor areas than in Outer Harbor areas (Lyons and Birosik, 2007). The LARWQCB has established an acceptable range of 6.5 to 8.5 with a change in tolerance level of no more than 0.2 due to discharges (e.g., proposed Project impacts) in bays or estuaries (LARWQCB, 1994). During sampling between January through December 2013 at the two stations adjacent to the Project site, mean pH at both stations was 8.1, with a maximum range between 7.78 and 8.33 units (Figure 3.11-2).

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.

- Secchi disk: a visual assessment whereby a person determines the depth in the water column that a black and white (secchi) disk can be seen from the surface;
- Transmissometer: an electronic instrument that measures light attenuation by water as a percent of light transmission;

- Turbidimeter (or nephelometer): an instrument that measures turbidity, or the muddiness or cloudiness of water expressed as a standard unit of measure (nephelometric turbidity units [NTUs]), which quantifies the diffraction of light by particles suspended in the water; and
- Total suspended solids (TSS): The measurement of the amount (mass) of suspended material, including sediments and organic solids, such as algae and detritus in water, and is measured in mg/L.

The Basin Plan prohibits turbidity (solids) from adversely affecting beneficial uses or causing nuisances, and sets allowable increases in turbidity based on ambient conditions (LARWQCB, 1994). For instance, when natural turbidity is between 0 and 50 NTUs, increases cannot exceed 20 percent, and when turbidity is greater than 50 NTUs, increases cannot exceed 10 percent. 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 ships moving in and out of the Harbor is also a source of mixing in the water column that may temporarily disturb bottom sediments and affect transparency, especially in narrower channels in the Inner Harbor.

Historically, water clarity in the Harbor has varied tremendously, with secchi disk readings ranging from 0 to 40 feet (0 to 12m). However, water clarity has been fairly consistent for the last 40 years, with a slight increase from 1968 to 2006 (USACE and LAHD, 2007). During approximately monthly sampling between January and December 2013 at the two stations adjacent to the Project site, mean station light transmission ranged from 67 percent to 70 percent, with a maximum range between 22 percent and 79 percent (LAHD, 2015). Light transmission was generally stable throughout the water column (Figure 3.11-3), with lowest surface readings in May and June. Turbidity was also measured between January and December 2013. Mean turbidity at the two stations was 1.4 (LA 26) and 1.6 (LA 30) NTUs, with a range throughout the water column between 0.0 and 44.0 NTUs. Highest values were recorded near the surface at Station LA 30 in October 2013.

Total suspended solids—a measure of filterable solids in water - was measured monthly at Station LA 30 in 2013; results ranged from 1.0 to 6.7 ppm (LAHD, 2015). Highest concentrations were recorded in January and February, and lowest concentrations were recorded in June and July 2013.

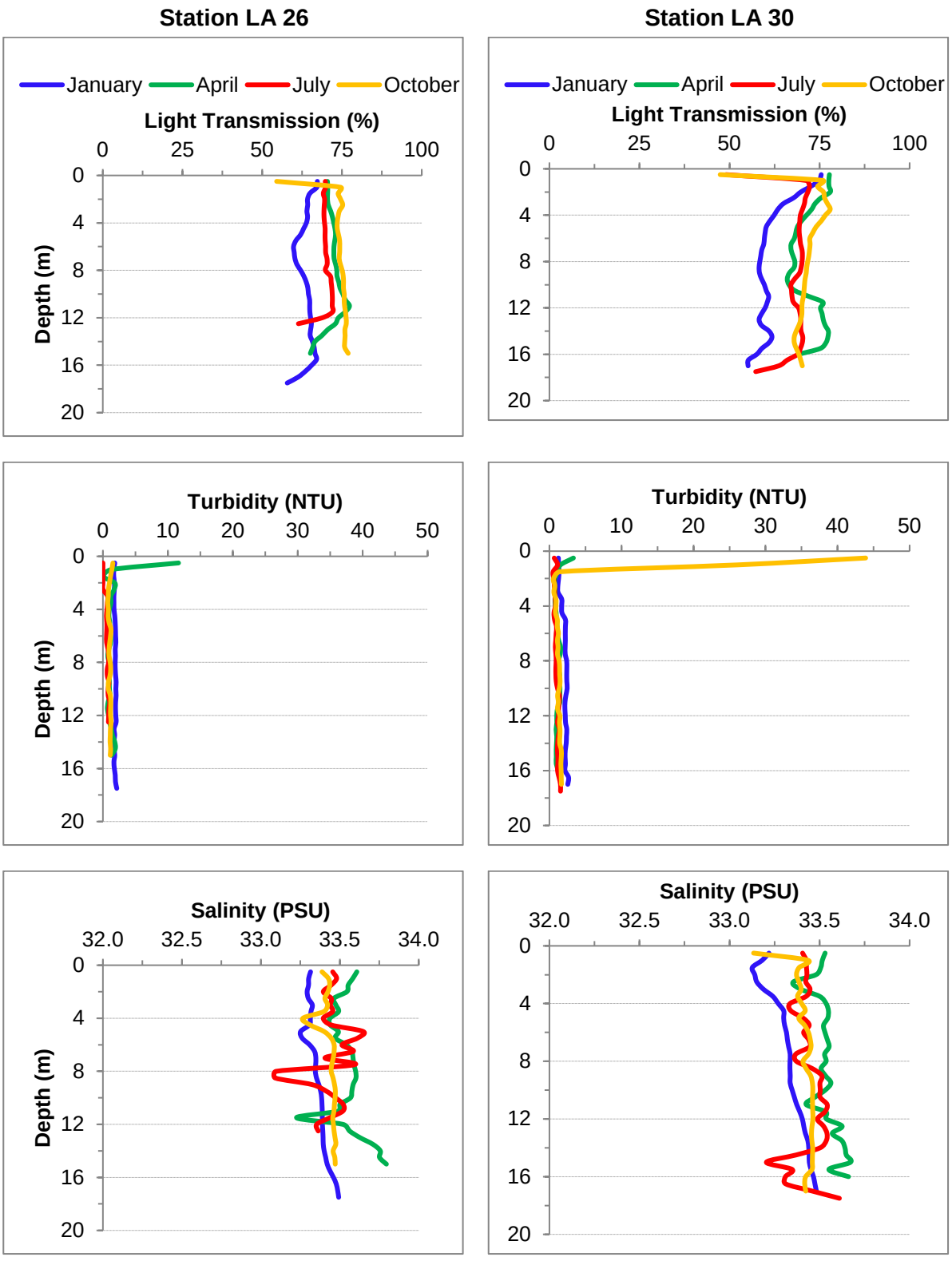

Figure 3.11-3: Light transmission, turbidity, & salinity in 2013 at Stations LA 26 (left) and LA 30 (right)

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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 LA/LB Harbor waters 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). During a Harbor-wide water quality survey in May 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 0.394 ppm (AMEC, 2012).

Salinity

Salinity measures the amount of dissolved salts in a water body. Salinities in the LA/LB Harbor usually range from 30.0 to 34.2 parts per thousand (ppt), but salinities ranging from less than 10 ppt to greater than 39 ppt have been reported (USACE and LAHD, 1984). Typical salinity for Southern California coastal waters is around 33 ppt. Higher salinity values in the LA/LB Harbor 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 wastewater 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 (AMEC, 2007). During monthly sampling between January and December 2013 at two stations adjacent to the Project site, salinity values ranged between 32.9 and 33.9 practical salinity units (psu), which is essentially equivalent to ppt in Southern California (LAHD, 2013). Salinity was variable throughout the water column, but within a narrow range (Figure 3.11-3).

Chemical and Biological Contaminants

Contaminants in Harbor waters can originate from a number of sources in and outside the Harbor. Potential sources of trace metals and organics include: municipal and industrial wastewater discharges, stormwater runoff from drainage channels (e.g., Dominguez Channel) and storm drains, local surface and storm drain runoff from within the Port area, 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 both non-structural and structural controls of stormwater runoff and discharge sources have reduced the input of contaminants into the Harbor over time.

Most of the dissolved or particulate organic contaminants that enter the Harbor have a low solubility in water and adhere to the surface of sediment that eventually settles to the bottom. 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 (USACE and LAHD, 1992; POLA and POLB, 2009). In addition, some contaminated sediment areas have been covered 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 water.

Ambient contaminant levels in LA/LB Harbor waters were measured during four sampling events in 2005 and 2006. With the exception of copper in 5 of 253 samples from throughout the LA/LB Harbor, concentrations of dissolved metals did not exceed regulatory criteria for continuous or maximum exposure (POLA and POLB, 2009). Copper was detected above California Toxics Rule (CTR) criteria in water samples from two locations in the Harbor—two in the Cabrillo Marina complex (including one sample that exceeded the higher maximum exposure criteria) and one in Fish Harbor. Concentrations of dissolved or particulate organic chemicals (including chlorinated pesticides, PCBs, PAHs, phenols, and phthalates) were consistently very low or not detected in the water column (POLA and POLB, 2009). The antifouling biocide tributyltin (TBT) was detected in 9 of 205 samples collected in the Harbor, with concentrations of TBT in seven of those samples that exceeded the published National Ambient Water Quality Criteria chronic exposure limit (7.4 mg/L; no California-specific criteria, including California Toxics Rule, exist for TBT). Those seven locations, primarily within the Inner Harbor, were in areas typified by limited water circulation. Concentrations of other organic chemicals were low when detected, and concentrations of these contaminants were not a concern in the waters of the LA/LB Harbor (POLA and POLB, 2009).

Additional Harbor-wide ambient water monitoring study of contaminant levels was performed in May 2012. At the two stations nearest to the Project site (Stations LA 26 and LA 30) concentrations of dissolved metals did not exceed regulatory criteria for continuous or maximum exposure (AMEC, 2012). Concentrations of organic chemicals (including chlorinated pesticides, PCBs, PAHs, phenols, pyrethroids, polybrominated diephenyl ethers [PBDEs], butyltins and phthalates) were consistently very low, and usually 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 non-detectable 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 Dominguez Channel and other 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 two stations near the Project site 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 LA/LB Harbor (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.

Atmospheric Deposition of Metals

Indirect dry deposition of metals on land within a watershed can influence stormwater quality in urban areas and can subsequently affect the water quality in downstream water bodies. Sabin et al. (2005) determined indirect dry deposition to land (not directly to the water surface) of the Los Angeles River, Dominguez Channel, and Ballona Creek watersheds accounted for 57–100 percent of the total trace metal loads in annual stormwater discharges. 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; Stolzenbach, 2006; Sabin et al., 2007). Direct atmospheric deposition of vanadium and nickel as a result of marine vessels burning crude oil has been linked to concentrations observed in air and rainwater (Poor, 2002). In contrast to indirect aerial deposition, direct aerial deposition of metals onto the water surface is a minor source of pollutants in the water (Sabin et al., 2005).

Aqueous Sources of Contaminants

Potential contaminants in the Harbor might 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. Permitted discharges to the Dominguez Channel and LA/LB Harbor include six major NPDES discharge sources (industrial sources with a yearly average flow of 100,000 gallons per day [gpd] or more) and 12 minor NPDES dischargers (less than 100,000 gpd). The major point sources includes a publicly owned treatment works (i.e., TIWRP), two generating stations, and three refineries. There are also 17 discharges covered by general NPDES permits. General NPDES permits often regulate episodic discharges (such as dewatering operations) rather than continuous flows. The minor NPDES permits issued within the Dominguez Channel watershed are also for episodic discharges. As described above, a number of segments of the bodies of water in the Dominguez Watershed and the LA/LB Harbor 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 Everport Container Terminal is collected in catch basins located throughout the existing terminal site, and is conveyed toward seven separate discharge points along the wharf that discharge to the Main Channel. Runoff from the 23.5-acre

expansion areas is collected in various storm drain inlets along Terminal Way, Cannery Street, Seaside Avenue, Tuna Street, Ways Street, and Barracuda Street, and conveyed to either the Main Channel or Fish Harbor where it is discharged.

Leachate from Vessel Hulls

Antifouling coatings used on vessel hulls are another source of metals, especially copper and zinc, to waters of the LA/LB Harbor. Some 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. Antifouling paints containing TBT were first manufactured and used in the U.S. in the late 1960s and were found to prevent fouling on ships for approximately 5 years (International Maritime Organization, 2002). Consequently, TBT has been entering the marine system for more than 40 years through the leaching of TBT from paint and because of paint removal and ship repair activities. TBT is also introduced to the aquatic environment through atmospheric deposition, but actual deposition rates have not been quantified (Mearns et al., 1991). As discussed above, TBT was detected in 9 of 205 ambient samples collected in LA/LB Harbor beginning in 2005, with concentrations of TBT in seven of those samples exceeding the National Ambient Water Quality Criteria chronic exposure limit of 7.4 mg/L (no California-specific standard, including California Toxics Rule, exists for TBT).

In addition to TBT, there are a variety of other compounds found in antifouling coatings on vessels that may enter the Harbor. The paint coatings used are dependent on the type of material comprising the hull. TBT or biocide-free silicone-based coatings are used on aluminum hulls, while copper-based coatings are typically applied to steel, fiberglass, glass-reinforced plastic composites, and wood hulls. Copper-based coatings also contain small amounts of zinc, are also used as a biocide in antifouling paints, and, as such, both metals will leach from copper coatings of vessels. Water sampling near the Project site conducted in May 2012 as part of LAHD's Enhanced Water Quality Monitoring measured copper concentrations between 0.8 and 1.1 micrograms per liter (µg/L), which is below the chronic toxicity threshold of 3.1 µg/L. As noted above, with the exception of copper in five samples from throughout the LA/LB Harbor, concentrations of dissolved metals did not exceed regulatory limits (POLA and POLB, 2009).

3.11.2.3 Marine Sediments

Sediment quality in the Harbor 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: random 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 in the Harbor. Sediment quality in the LA/LB Harbor varies widely, and there are localized areas of sediment contamination "hotspots," which have driven the 303(d) listings and creation of TMDLs for the harbors (POLB and POLA, 2009). Much of the sediment contamination in the LA/LB Harbor 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 LA/LB Harbor, 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 impacted by water or sediment chemical concentrations. Results from regional sampling efforts in 2003 and 2008 indicated areas of LA/LB Harbor vary from no sediment toxicity to high toxicity (Bay et al., 2005; Bay et al., 2010). Although the proposed Project area is listed as impaired pursuant to Section 303(d) of the CWA, the area is not considered a hotspot. Data from the proposed Project vicinity suggests that sediments within the proposed Project area are estimated to be "unimpacted" or "likely unimpacted" as determined by the integration of chemical, biological, and toxicological data conducted under the Sediment Quality Objectives evaluation process and based on data from Bay et al. (2005, 2010) and the 2008 biological baseline studies (SAIC, 2010).

A sediment characterization study was performed at Berths 226-232 to determine the suitability of the dredged sediments for the range of potential dredged material management options (Ramboll Environ, 2015). Results from this evaluation are summarized below; the full sediment characterization study report is included as an appendix to this EIS/EIR (Appendix F1). The dredge footprint was divided into two separate dredged material management units (DMMUs): DMMU-1 extended from Berth 229 to 232 (with design depths of -45 and -47 feet MLLW) (see Figure 3.11-4). DMMU-2 included the dredge footprint at Berths 226-228 (with a design depth of -53 feet MLLW).

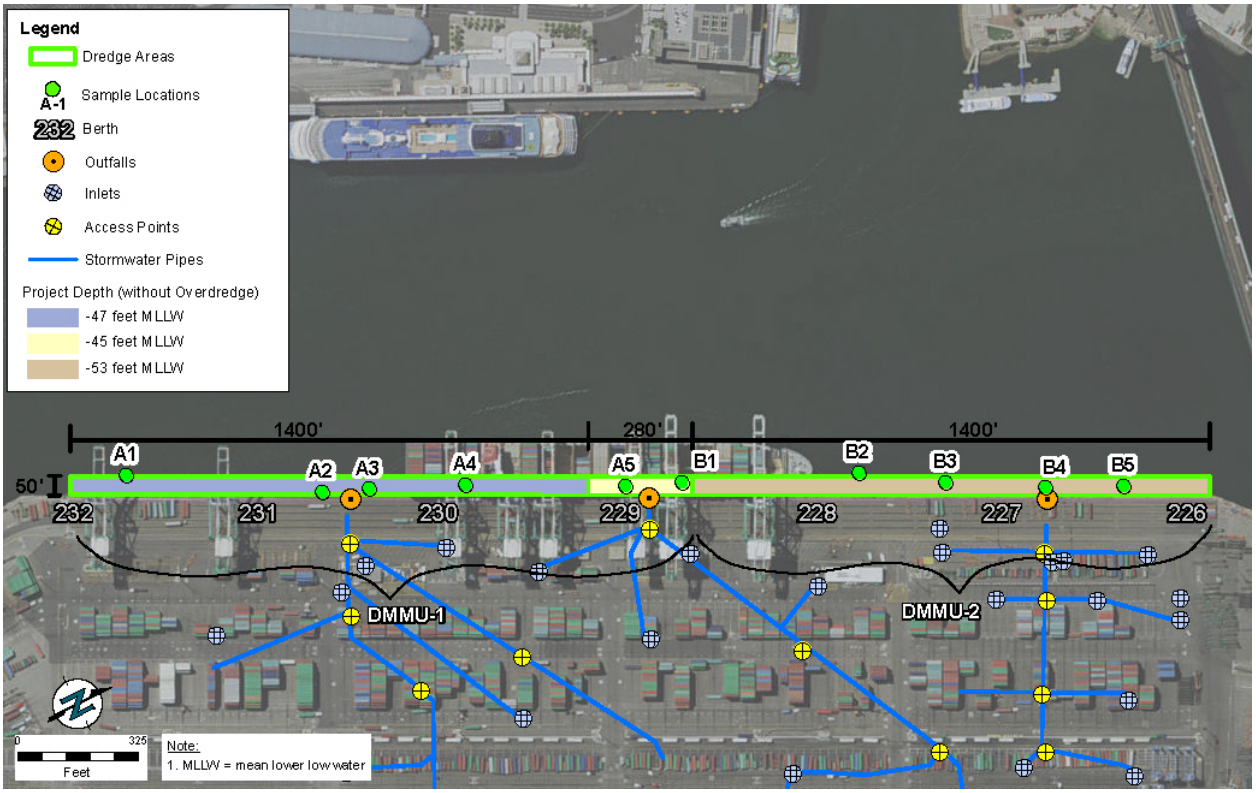

Figure 3.11-4: Location of Everport DMMUs and sediment sampling locations (from Ramboll Environ, 2015)

Sediments at each location were collected using a vibratory coring device, and water samples for elutriate tests were collected at one location within each of the DMMUs. One composite sediment sample was obtained from each of the two DMMUs (composite samples IDs DMMU-1 and DMMU-2). Each composite sample contained material obtained from five stations within each DMMU (A1-A5 for DMMU-1, B1-B5 for DMMU-2). Sediment cores from Stations B1-B5 were collected October 28 & 29, 2014. Sediment cores from Stations A1-A5 were collected March 26 and 27, 2015. One composite sample was obtained via pipe dredge from the LA-2 designated reference station along the 620-foot depth contour on October 27, 2014 for comparison to DMMU-2 results. A second composite sample was taken on March 25, 2015 for comparison to DMMU-1 results.

Disposal suitability determinations were conducted through evaluations of sediment chemistry, toxicity, and bioaccumulation potential testing. Within DMMU-1, sediment grain size varied with distance along the wharf (Table 3.11-1). For ocean disposal testing, sediment contaminant concentrations were compared with Effects Range Low (ERL) and Effects Range Median (ERM) values (Long et al. 1995) as a screening level evaluation. Concentrations of all analytes were below ERM values, although some exceeded ERL values at the DMMUs and at the LA-2 reference station (Table 3.11-2).

Table 3.11-1: Sediment Grain Size Results

Sediment Category	Units	DMMU-1-A1	DMMU-1-A2	DMMU-1-A3	DMMU-1-A4	DMMU-1-A5
Gravel	%	<0.01	<0.01	<0.01	<0.01	<0.01
Sand	%	0.53	38.94	49.25	50	89.31
Silt	%	77.64	49.41	40.33	39.72	8.48
Clay	%	21.83	11.65	10.41	10.28	2.22

Source: Ramboll Environ, 2015

Results from all phases of the sediment suitability study, including sediment analysis, elutriate analysis, solid phase and suspended particle phase testing, and bioaccumulation analysis indicated sediments from both DMMUs were suitable for unconfined aquatic disposal. The bioaccumulation potential analyses indicated that the mean concentrations of total polychlorinated biphenyls (PCBs) in tissues from *Neanthes virens* and *Macoma nasuta* exposed to DMMU-1 and DMMU-2 sediments were significantly elevated compared to their respective LA-2 reference samples. However, a screening level risk assessment determined there would be little to no risk to humans from placement of dredged sediments at LA-2. On August 26, 2015, members of the Los Angeles Regional Contaminated Sediments Task Force (CSTF) agreed with the results and conclusions of the sediment suitability study, and determined that all sediments dredged during the proposed Project would be suitable for ocean disposal at LA-2.

Table 3.11-2: Sediment Chemistry Results

Sediment Parameter	Units	ERL	ERM	DMMU-1	LA-2[A]	DMMU-2	LA-2[B]
Total Solids	%			68.3	64.8	69.7	70.0
Total Organic Carbon	%			0.72	0.80	0.89	0.73
Total Ammonia	mg/kg			4.9	4.8	14	4.8
Total Sulfide	mg/kg			210	0.31	4	0.86
Dissolved Sulfide	mg/kg			0.1	<0.10	<0.017	<0.017
Arsenic	mg/kg	8.2	70	7.09	3.89	**9.83**	2.47
Cadmium	mg/kg	1.2	9.6	0.209	0.230	0.437	0.218
Chromium	mg/kg	81	370	27.2	27.4	39.8	24.6
Copper	mg/kg	34	270	**54.4**	11.8	**49.4**	10.8
Lead	mg/kg	46.7	218	18.7	6.07	19.0	5.54
Mercury	mg/kg	0.15	0.71	**0.164**	0.0331	**0.247**	0.0238
Nickel	mg/kg	20.9	51.6	16.8	14.1	**29.4**	13.0
Selenium	mg/kg	-	-	0.485	0.363	0.587	0.445
Silver	mg/kg	1.0	3.7	0.0791	0.0745	0.190	0.0602
Zinc	mg/kg	150	410	98.6	56.9	108	55.0
TRPH	mg/kg			180	18	180	32
Total Detectable PAHs	µg/kg	4022	44792	**594**	0	280.8	<8.3
Total Detectable DDTs	µg/kg	1.58	46.1	**23.3**	**6.12**	**14.1**	**7.95**
Total Detectable PCBs	µg/kg	22.7	180	**47.26**	1.92	**54.36**	<0.014
Tributyltin	µg/kg			23	<4.6	10	<2.1

Notes:
Boldface - Value exceeds ERL
Boldface and Underlined – Value exceeds ERM
% - percent
mg/kg - milligrams per kilogram
µg/kg - micrograms per kilogram
< - less than
Source: Ramboll Environ, 2015

TRPH - total recoverable petroleum hydrocarbons
PAH - polycyclic aromatic hydrocarbons
DDT - dichlorodiphenyltrichloroethane
PCB - polychlorinated biphenyl

A – LA-2 sample collected on Mar. 25, 2015
B – LA-2 sample collected on Oct. 27, 2014

3.11.2.4 Oceanography

The LA/LB Harbor 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 LA/LB Harbor 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 LA/LB Harbor, 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 Harbor, 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 m), and the mean diurnal range, calculated by averaging the difference between all the HHW and LLW, is approximately 5.5 feet (1.68 m) (NOAA, 2015). Mean lower-low water (MLLW) is the mean of all LLWs, equal to 2.8 feet (0.85 m) below mean sea level (MSL), and 0.7 feet (0.23 m) 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 m). The highest and lowest tides reported are 7.96 feet (2.43 m) above MLLW and -2.56 feet (-0.78 m) below MLLW, respectively (USACE and LAHD, 1992). Since 2005, the highest tide measured at the Los Angeles Harbor tide station (NOAA No. 9410660) is +7.71 feet (+2.35 m) MLLW (measured in December 2012), and the lowest was -2.34 feet (-0.71 m) MLLW, measured in January 2009 (NOAA, 2015).

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 LA/LB Harbor is directly exposed to ocean swells entering from two main exposure windows to the south and southeast, regardless of swell origin. 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 LA/LB Harbor 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 m) 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, deep-water wave heights have ranged up to 20 feet (6.1 m) but are typically less than 12 feet (3.7 m), 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 m) in height, with wave periods of less than 10 seconds.

From January 2005 through January 2015, 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 3.2 feet (1.0 m) (CDIP, 2015). The highest significant wave heights, measured as the mean height of the largest one-third of the waves in a specified sampling period, during that same time period ranged between 14.0 feet (4.2 m) and 15.9 feet (4.9 m). Almost all of the significant wave records occurred during the months of December and January.

Circulation

To better understand circulation patterns and watershed inputs into LA/LB Harbor, 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).

Circulation patterns in LA/LB Harbor are established and maintained by tidal currents. Flood tides in the LA/LB Harbor flow into the Harbor and up the channels (generally northward), while ebb tides flow down the channels and out of the Harbor (generally southward) (POLA and POLB, 2009). The LA/LB Harbor is protected from incoming waves by the Federal Breakwater, which consists of three breakwaters: the San Pedro, Middle, and Long Beach Breakwaters. In addition to protecting the ports from waves, the breakwaters reduce the exchange of the water between the LA/LB Harbor and the rest of San Pedro Bay, hence creating unique tidal circulation patterns. Modeled current direction and velocity throughout the LA/LB Harbor during both ebb and flood tides are summarized in Figure 3.11-5.

1

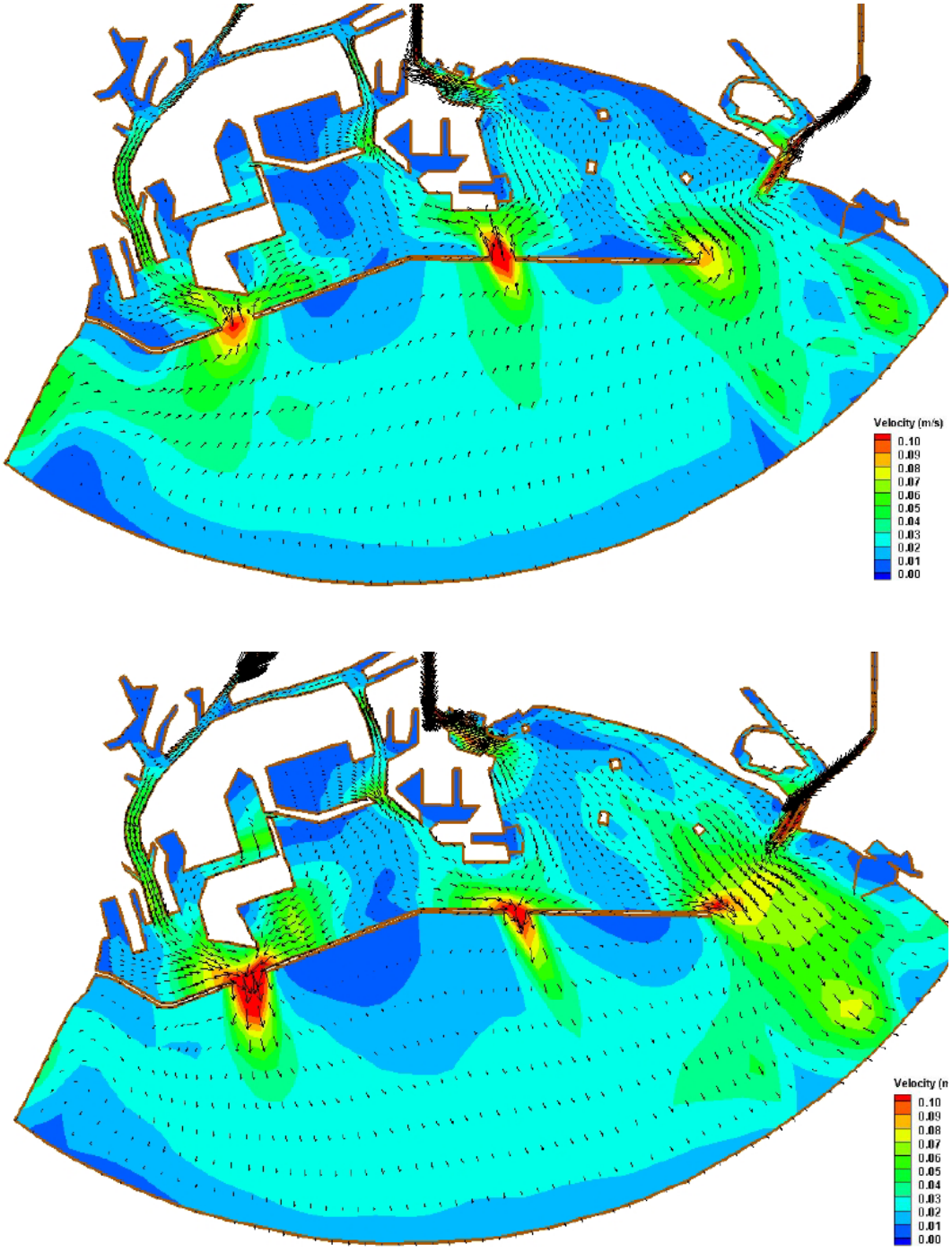

Figure 3.11-5: Current patterns in Los Angeles and Long Beach Harbors predicted by the WRAP Model (POLA and POLB, 2009). Top: Typical flood tide currents. Bottom: Typical ebb tide currents

2

3.11.3 Applicable Regulations

3.11.3.1 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 Regional Water Quality Control Boards (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 General Permit (described below) (EPA, 2008).

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 segments 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 is handled through the CSTF, in accordance with the CSTF Long Term Management Strategy (Anchor et al., 2005). The RWQCB can issue CWA Section 401 Water Quality Certifications to certify that actions occurring in waters of the United States that would not have adverse water quality impacts. 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;
- return flow that is free of solid dredged material; and
- compensation for loss of waters of the United States.

Dredged material from the proposed Project (or an alternative) could be disposed of at an approved upland facility or at the LA-2 Ocean Dredged Material Disposal Site. 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 (EPA, 1988), and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE, 2005). Effects from sediment disposal at an upland facility would have to meet the facility's acceptance criteria.

3.11.3.2 Rivers and Harbors Appropriations Act of 1899

Sections 10 of the Rivers and Harbors Appropriations Act (33 U.S.C. Section 403) regulates work and structures in, over, and under navigable waters that would affect the

course, location, condition or capacity of navigable waters of the United States, including dredging, wharf improvements, overwater cranes, and artificial islands and installations on the outer continental shelf (33 CFR 322.3). The objectives of the Rivers and Harbors Appropriations Act include the protection of navigation and navigable capacity for maritime commercial protection. The General Bridge Act applies to bridges and causeways over navigable waters, and is administered by the U.S. Coast Guard (USCG). Under Section 10, USACE issues permits for work (e.g., dredging) and structures (e.g., cranes, sheet piles, king piles) in, over, and under navigable waters.

3.11.3.3 Marine Protection, Research, and Sanctuaries Act of 1972

Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA) (33 U.S.C. Section 1401 *et seq.)* regulates the 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 MPRSA applies to unconfined aquatic disposal of dredged material in all U.S. ocean waters from the baseline to the limit of the territorial sea (approximately 12 nautical miles from the shoreline). Section 102 of the MPRSA authorizes EPA to promulgate environmental criteria for evaluation of all disposal permit actions, to retain review authority over the USACE-issued MPRSA Section 103 permits, and to designate ocean disposal sites for dredged material disposal. Disposal of dredged material at the EPA-approved LA-2 site would be conducted only if the dredged material met the permitted annual volume and sediment quality requirements for this site, if the disposal was approved by EPA and USACE, and if beneficial reuse was unavailable or not practicable. Effects to water quality and sediment from disposal of dredged material at LA-2 were determined to be insignificant during an evaluation of increased disposal capacity (to one million cubic yards per annum) (EPA and USACE, 2005).

3.11.3.4 Vessel General Permits

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

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. Some of the discharges that are eligible for coverage under the permit include: 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 is discussed in greater detail in Section 3.3, Biological Resources.

In 2014, EPA issued the small VGP (sVGP) to provide NPDES permit coverage for discharges incidental to the normal operation of non-military, non-recreational vessels less than 79 feet in length operating in a capacity as a means of transportation. EPA issued the sVGP in anticipation of the expiration date of the then existing moratorium on

permitting, which specified that neither EPA nor the states may require NPDES permits, other than for ballast water, for incidental discharges from these vessels. However, on December 18, 2014, President Obama signed into law the Howard Coble Coast Guard and Maritime Transportation Act of 2014, S.2444, which extended that moratorium for an additional three years, until December 18, 2017. Ballast water discharges from vessels less than 79 feet in length are not affected by the moratorium (i.e., discharges still require permit coverage), but are now able to obtain coverage under either the Vessel General Permit (VGP) or the sVGP as of December 19, 2014.

3.11.3.5 Coastal Nonpoint Source Pollution Control Program

This is a joint program between EPA and the National Oceanic and Atmospheric Administration (NOAA). Established during reauthorization of the Coastal Zone Management Act of 1972, the program provides a more comprehensive solution to the problem of polluted runoff in coastal areas. The program sets economically achievable measures to prevent and mitigate runoff pollution problems stemming from agriculture, forestry, urban developments, marinas, hydromodification (e.g., stream channelization), and the loss of wetland and riparian areas. The *Plan for California's Nonpoint Source Pollution Control Program* is implemented by the SWRCB, the RWQCBs, and the California Coastal Commission.

3.11.3.6 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 in California, establishes a comprehensive program to protect water quality and the beneficial uses of state waters. Unlike the federal CWA, the Porter-Cologne Act covers both surface water and groundwater. 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 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 to minimize potential impacts to surface water, groundwater, and sediment quality from dredging and filling activities.

3.11.3.7 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 Objectives. 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 the Harbor.

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

The Basin Plan (LARWQCB, 1994) 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/characteristics that could be affected by the proposed 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 narrative 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.

3.11.3.9 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 Industrial Activities Stormwater Permit (GIASP) for projects that do not require an individual permit for these activities. The GCASP was adopted in 2009 and further revised in 2012 (Order No. 2012-0006-DWQ). 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 nonstructural 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) was adopted in April 2014 and requires dischargers to develop and implement a SWPPP to reduce or prevent industrial pollutants in stormwater discharges, eliminate unauthorized non-storm discharges, and conduct visual and analytical stormwater discharge monitoring to verify the effectiveness of the SWPPP and submit an annual report.

3.11.3.10 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 of the MS4 agencies except for City of Long Beach are permitted under a single permit issued to Los Angeles County and 84 incorporated cities. The permit is the *Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4* (Order No. R4-2012-0175, NPDES Permit No. CAS004001). 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 November 8, 2012, and became effective on December 28, 2012. It was originally issued in 2001 and was amended in 2006 to incorporate provisions of the Santa Monica Bay Beaches Dry Weather TMDL. This amendment was voided in 2011 by order of a writ of mandate; however, this amendment was included in the 2012 permit. The permit was also revised in 2007 to incorporate provisions of the Marina del Rey Harbor Mother's Beach and Back Basins Bacterial TMDL and again in 2009 to be consistent with the Los Angeles River Watershed Trash TMDL.

The permit identifies the implementation of Watershed Management Programs as a framework for permitees 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 customizing certain control measures. The ultimate goal of the Watershed Management Programs is to ensure that discharges from the Los Angeles County MS4 (1) achieve applicable Water Quality Based Effluent Limitations that implement TMDLs, (2) do not cause or contribute to exceedances of receiving water limitations, and (3) for non-storm water discharges from the MS4, are not a source of pollutants to receiving waters.

Development and Construction Program

For construction activities that would result in the disturbance of one acre or more, permitees 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. Permitees are required to review construction site plans to determine potential water quality impacts and ensure proposed controls are adequate. These include preparation and submission of an Erosion and Sediment Control Plan (ESCP) with elements of a SWPPP prior to issuance of building or grading permits. The 2012 MS4 permit requires that ESCP must be developed by Qualified SWPPP Developers to ensure high quality. Permitees are required to develop a list of BMPs for a range of construction activities.

Industrial / Commercial Business Program

Industrial/commercial facilities include any facility involved and/or used in the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/or commodities, and any facility involved and/or used in providing professional and non-professional services. For industrial facilities, 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.

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.

TMDL Provisions

The MS4 permit requirements are consistent with the assumptions and requirements of the available WLAs assigned to MS4 discharges in 33 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.

Low Impact Development

In 2011, the Los Angeles Municipal Code was amended (Ordinance No. 181899) to expand the applicability of existing SUSMP requirements by imposing rainwater LID) strategies on projects that require building permits. The LID recognizes that urbanization has led to increased impervious surface areas, resulting in increased runoff and less percolation to groundwater aquifers, and causing the transportation of pollutants to downstream areas.

The LID is intended to manage the quantity and quality of stormwater runoff by setting standards and practices to maintain or restore the hydrologic character of a development site, reduce off-site runoff, improve water quality, and provide groundwater recharge. The LID ordinance expands the SUSMP requirements by increasing the number of new and re-development conditions under which stormwater mitigation measures must be implemented. As with SUSMP requirements, the 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 percent 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 LID section of the Development BMP Handbook.

The ordinance provides that where LID requirements cannot be met, SUSMP requirements at a minimum would instead need to be met on site. For the remaining runoff that cannot be managed onsite (the difference between the amount of runoff that is managed by SUSMP requirements and the amount that was required to have been managed to meet LID requirements), either the runoff would need to be managed somewhere else in the same subwatershed, or a fee would need to be paid to the City of Los Angeles Stormwater Pollution Abatement Fund, whereby the City would allocate that fee toward stormwater mitigation projects within that subwatershed.

3.11.3.11 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.

3.11.3.12 Oil Spill Prevention and Response

The California Office of Spill Prevention and Response (OSPR) is a multi-agency effort that 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 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. 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 for the LA/LB Harbor.

3.11.3.13 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 will be established in the relevant TMDLs and to comply with the 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, and the ports will modify it as circumstances warrant. 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. Preparation of a Design Guidance Manual (to address LID and other BMPs) is underway.

3.11.3.14 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 Tariffs govern a variety of activities in the two San Pedro Bay Ports, including vessel operating procedures, fees, wharf and dock usage, and the use of hazardous or polluting substances on or near the water. Each port publishes its own version of the tariff, but the two versions address largely the same issues.

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 the 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.

3.11.4 Impacts and Mitigation Measures

3.11.4.1 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 Harbor sediments, results from current testing of sediment chemistry and water quality, and scientific expertise of the preparers. For oceanographic resources, potential impacts were assessed using results from previous modeling studies for the Harbor and preparer expertise. Impacts are considered significant if any of the significance criteria listed below in Section 3.11.4.2 occur in association with construction or operation of the proposed Project or an alternative.

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

- Coverage under the GCASP for the onshore portions of the proposed Project will be obtained by LAHD as the “Legally Responsible Person” that will delegate applicable responsibilities to the construction contractor. The associated SWPPP will contain the following measures:

- Equipment will be inspected regularly (daily) during construction, and any leaks found will be repaired immediately.
- Refueling of vehicles and equipment will occur in a designated, contained area.
- Drip pans will be used under stationary equipment (e.g., diesel fuel generators), during refueling, and when equipment is maintained.
- Drip pans that are in use will be covered during rainfall to prevent washout of pollutants.
- Appropriate containment structures will be constructed and maintained to prevent off-site transport of pollutants from spills and construction debris.
- Monitoring will occur to verify that the BMPs are implemented and kept in good working order.

- Other relevant standard operating procedures and BMPs for Port construction projects will be followed.
- This includes adherence to a SWPPP during operation of the proposed Project or alternatives as part of the GIASP.
- The LAHD will incorporate MS4/LID measures into the proposed Project design for review and approval by the City of Los Angeles Department of Building and Safety.
- All contaminated upland soils will be characterized and remediated in accordance with LAHD, LARWQCB, Department of Toxic Substances Control, and Los Angeles County Fire Department protocol and cleanup standards.
- The tenant will obtain and implement the appropriate stormwater discharge permits for operations.
- Sediments from the proposed dredging area were evaluated using standard EPA/USACE protocols to determine the suitability of the material for unconfined, aquatic disposal. Dredged sediments would be disposed of at the LA-2 disposal site or an approved upland disposal site.
- A Section 10 permit will be required from USACE for dredging, crane raising and installation, and pile installation activities in waters of the United States. An MPRSA Section 103 permit will be required for transport and disposal of dredged sediments at LA-2. No DA permit would be required for sediment disposal at an approved upland facility.
- A CWA Section 401 Water Quality Certification from the LARWQCB would be required for dredging.
- A Debris Management Plan and OSCP will be prepared and implemented prior to the start of demolition, dredging, and construction activities associated with the proposed Project. The OSCP will specifically identify in-water containment and spill management in the event of an accidental spill. The plan will require that emergency cleanup equipment is available on site to respond to such accidental spills. All pollutants will be managed in accordance with all applicable laws and regulations.
- During dredging, LAHD will implement a water quality monitoring program in conjunction with both USACE and LARWQCB permit requirements. The objective of the monitoring program will be adaptive management of the dredging operation,

whereby potential exceedances of water quality objectives can be measured and dredging operations subsequently modified, if warranted. If turbidity levels exceed the threshold established in the WDRs issued by the LARWQCB, water chemistry analysis will be conducted and LAHD will 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 such as a silt curtain.

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 will be included as conditions of approval to facilitate their tracking and implementation.

CEQA Baseline

Section 15125 of the CEQA Guidelines 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 October 2014. For purposes of this Draft EIS/EIR, the CEQA baseline takes into account the throughput for the 12-month calendar year preceding NOP publication (January through December 2013) in order to provide a representative characterization of terminal activity levels throughout the complete calendar year preceding release of the NOP. In 2013, the Everport Container Terminal encompassed approximately 205 acres (181 acres under its long-term permit plus an additional 25 acres on month-to-month space assignment), supported eight cranes, handled approximately 1.24 million TEUs, and had 166 vessel calls. The CEQA baseline conditions are also described in Section 2.7.1 and summarized in Table 2-1.

The CEQA baseline represents the setting at a fixed point in time. The CEQA baseline differs from the No Project Alternative (Alternative 2) in that the No Project Alternative addresses what is likely to happen at the Project site over time without improvements, starting from the existing conditions. Therefore, the No Project Alternative allows for growth at the Project site that could be expected to occur without additional approvals, whereas the CEQA baseline does not.

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 in Chapter 2, Project Description. 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 DA permit.

Unlike the CEQA baseline, which is defined by conditions at a point in time, the NEPA baseline is not bound by statute to a “flat” or “no-growth” scenario. Instead, the NEPA baseline is dynamic and includes increases in operations for each study year (2017, 2018, 2019, 2026, 2033 and 2038), which are projected to occur absent a federal permit. Federal permit decisions focus on direct impacts of the proposed Project permit area to the aquatic environment, as well as indirect and cumulative impacts in the uplands

determined to be within the scope of federal control and responsibility. Significance of the proposed Project or the alternatives under NEPA is determined by comparing the proposed Project or the alternatives to the NEPA baseline.

The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative. Under the No Federal Action Alternative (Alternative 1), no dredging, dredged material disposal, in-water pile installation, or crane raising or installation would occur, and the existing terminal capacity would not be increased. The No Federal Action Alternative includes the installation of AMP vaults along the wharf and the addition of 23.5 acres of additional backlands (addition of the 1.5-acre area at the southern end of the terminal and the 22-acre backland expansion area) to improve efficiency (these improvements could occur absent a federal permit).

The NEPA baseline assumes that the terminal would handle up to approximately 1,818,000 TEUs annually by 2038, and accommodate 208 annual ship calls at two existing berths with eight cranes.

3.11.4.2 Thresholds of Significance

The following criteria is based on the *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006) and is the basis for determining the significance of impacts associated with water quality, sediment quality, hydrology, and oceanography resulting from proposed Project/alternative development.

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

WQ-1: Discharges that create pollution, contamination, or a nuisance as defined in Section 13050 of the California Water Code (CWC) or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permits or Water Quality Control Plan for the receiving water body.

3.11.4.3 Impact Determination

Proposed Project

Proposed Project construction would include dredging and disposing of dredged material, installing piles, raising of up to five existing cranes, adding five new wharf cranes, modifying the wharf to accommodate five additional AMP vaults, and improving/developing backlands. Approximately 30,000 cubic yards of sediment would be dredged from Berths 226–229, and king piles and sheet piles would be installed over 1,400 linear feet along those berths. Approximately 8,000 cubic yards would be dredged from Berths 230–232, and sheet piles would be installed over 1,400 linear feet along those berths.

Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) to determine the suitability of the material for unconfined aquatic disposal or other disposal alternatives (Ramboll Environ, 2015). Sediments within the dredge footprint at Berths 226–232 were determined to be suitable for unconfined, aquatic disposal, and suitability for disposal of all sediments at LA-2 was confirmed by the Contaminated Sediments Task Force on August 26, 2015. Therefore,

the dredged material could be disposed of at LA-2 or an approved upland disposal site. Effects from sediment disposal at LA-2 were evaluated during the site designation process (EPA, 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE, 2005).

Following completion of construction activities, the terminal would be able to accommodate the same number of vessels, but the design depths along the wharf would allow the terminal to accommodate larger vessels with deeper drafts (up to 16,000 TEU vessels). This would increase the throughput potential and improve the efficiency of cargo handling at the terminal. For purposes of impact analyses, it is assumed that increased container throughput would increase truck traffic and cargo handling equipment at the terminal, and result in a corresponding increase in the amount of pollutants in runoff from terminal surfaces. The proposed Project would also result in the addition of impervious backlands after development of 23.5 acres of land. This could affect water quality in the vicinity of the Project site.

Impact WQ-1: The proposed Project would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.

Construction

As shown in Table 2-3 (see Chapter 2, Project Description), in-water and over-water construction activities would extend over approximately 11–13 months. Mobilization would take up to two months. Installation of sheet piles and dredging/disposal at Berths 230–232 would take approximately 4.5 months, while installation of sheet and king piles and dredging/disposal at Berths 226–229 would take approximately 6 months.

Impacts on water quality could occur from dredging, installation of sheet piles and king piles, backland improvements, and potential construction-related spills. Impacts on water quality could result from the resuspension of sediments and/or the introduction of contaminants to the water column. Resuspension is the dislodgement and dispersal of sediment into the water column (where finer sediments are subject to transport and dispersion by currents). Sediment resuspension 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 separation from suspended particles. The potential water quality effects from construction for each of the major proposed Project components are described separately below.

The types of water quality impacts from proposed Project construction could include:

- Increased turbidity (sediment resuspension resulting in reduced water clarity and light transmittance),
- 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), and
- Reduced pH

There would be no effects to salinity or temperature from construction and operation of the proposed Project. The biological effects on marine biota from potential water quality impacts are discussed in Section 3.3, Biological Resources.

Effects of Dredging and Pile Installation

Dredging would resuspend some bottom sediments and create localized and temporary turbidity plumes over a relatively small area. The extent of disturbance would depend on the method of dredging. Resuspension of sediments during clamshell dredging occurs during bucket impact, penetration, and removal of the bucket from the sediment, as well as during bucket retrieval through the water column. During cutterhead dredging, resuspended sediments are limited to the immediate vicinity of the dredge.

For continuous dredging operations, elevated turbidity would occur in the immediate vicinity of the dredge for periods of days to several weeks. The majority of suspended sediments 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 amount of contaminants redistributed in this manner would be small, and the distribution would be localized and adjacent to the work area. Monitoring efforts associated with previous dredging projects in the Harbor have shown that resuspension followed by settling of sediments is low (generally 2 percent or less) (Anchor Environmental, 2002), suggesting that only a small portion of the dredged sediment is subject to movement and transport through the water column.

Dredging at the Project site would likely generate a relatively small turbidity plume. Sediment particle sizes transitioned from mostly sand (89 percent) adjacent to Berth 229 to mostly silt (78 percent) at Berth 232 (Table 3.11-1). Receiving water monitoring studies at other dredge sites in the Harbor and other water bodies have documented a relatively small, turbid dredge plume that dissipates rapidly with distance from dredging operations (MBC, 2001a–b, 2002; USACE and LAHD, 2008**Error! Bookmark not defined.**; POLA, 2009a–i, 2010a–d; Parish and Wiener, 1987; Jones & Stokes, 2007a–b). Water quality was measured during dredging at Berths 212–215 (northeast of the proposed Project site) in 2001 (MBC, 2001a). During dredging, light transmittance was reduced by about 15 percent in the bottom half of the water column 300 feet downcurrent from the dredge (MBC 2001a). Similar effects are expected during dredging for the proposed Project due to similarity in sediment character, dredging depths and currents.

Sheet piles and king piles would be lowered through the water column, and then driven into the seafloor by either vibratory and impact driving methods. Some sediment would be resuspended during this process, but over a much smaller area than during dredging, and any turbidity would be limited to waters near the seafloor. In general, sediment resuspension during pile driving represents only about 30 percent of the resuspension that occurs during dredging (Hayes, 2012).

Within areas of sediment resuspension, DO and pH could be slightly reduced. Reductions in DO concentrations, however, would be brief and are not expected to 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 downcurrent of dredging) and Station D (the control station, located at Berth 195 in East Basin) (MBC, 2001a**Error! Bookmark not defined.**). Similar effects are expected during dredging for the proposed Project due to similarity in sediment character, dredging depths and currents.

Contaminants, including metals and organics, could be released into the water column during the dredging and pile installation. However, any increase in contaminant levels in the water is expected to be localized and of short duration. The magnitude of contaminant releases would be related to the sediment particle sizes, sediment organic content, and contaminant concentrations associated with the disturbed sediments. Sediment grain size affects the binding capacity of contaminants. Concentrations of all contaminants at the Project site were below ERM levels, and results from elutriate testing (which used a 4:1 mixture of water and sediments from the dredge footprint) were below EPA Criteria for Continuous Concentrations (CCC) (Ramboll Environ, 2015). There was also no demonstrated toxicity in solid phase and suspended particulate phase bioassays tests in sediments at the Everport Container Terminal. Therefore, contaminant concentrations associated with any potentially disturbed or resuspended sediments during dredging and pile installation are not expected to result in any long-term effects in the waters near the Project site.

Effects of Dredge Material Disposal

Ocean Disposal

Effects from sediment disposal at LA-2 were evaluated during the site designation process (EPA, 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE, 2005). 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.

Upland Disposal

Disposal of dredged material at an upland disposal site would not affect sediment quality or water quality near the Project site. In addition, disposal of dredged material at an upland disposal site is not expected to result in water quality impacts due to required operational best management practices (leachate management practices), protocols and design (such as the lining of the landfill) at the landfill site.

Effects of Backlands Improvements

Ground disturbances and construction activities related to backlands improvements could result in temporary impacts on surface water quality if uncontrolled runoff of exposed soils, asphalt leachate, concrete washwater, and other construction materials enter Harbor waters. No upland surface bodies of water currently exist within the proposed Project boundaries. Thus, proposed Project-related impacts on surface water quality would be limited to potential non-stormwater discharges or discharges of stormwater runoff to Harbor waters. Runoff from the upland portions of the Project site would flow into the Harbor, along with runoff from other adjacent areas of the Harbor's subwatershed. Runoff at the Project site is collected by the on-site storm drain system and is managed in compliance with applicable permits and ordinances (including MS4/LID requirements). The 1.5-acre expansion area is currently unpaved, and the site topography contains various low points that collect rainfall, which will minimize runoff from the site during construction activities. The 22-acre expansion area is partially developed and paved, and runoff from this area enters the local storm drain system. During construction, runoff from the construction site would be subject to SWPPP requirements, including implementation of BMPs, to control pollutant discharges. In addition to soils, runoff from a construction site could contain a variety of contaminants, including metals and PAHs,

associated with construction materials, and spills of oil or other petroleum products. Impacts on surface water quality from accidental spills are addressed below.

Accidental Spills

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. In addition, appropriate spill response equipment would be present at the site.

Operation

Impacts on water quality during operations could occur from atmospheric (aerial) deposition of contaminants, runoff, accidental spills, and discharges of contaminants from vessels.

Deposition of Contaminants

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 by runoff. Atmospheric deposition related to Port operations emissions may contribute to an increased impact on the local watersheds. These impacts are primarily related to resuspended dust from vehicular traffic and coarse-sized, mechanically derived particles, such as zinc from tire wear and copper from brake pad wear. Fine particulates from vehicle exhaust may also contribute to the local watersheds, but to a lesser degree.

Particulates from area-wide and regional transportation sources likely dominate the metal-containing particulate matter that enters the storm drain systems because traffic volumes from freeways, commercial roads, and surface streets far outweigh the transportation volumes from the Port operations alone. These particles accumulate during dry weather conditions and are later washed off during storm events. For suspended zinc and copper pollutants from the Project site (tire and brake wear from equipment and trucks), direct impacts would not be expected to significantly affect water quality due to the likely limited and dispersed nature of direct deposition on Harbor waters, and because direct aerial deposition would not allow for a significant buildup of these pollutants before entering Harbor waters.

Runoff

Operation of the proposed Project facilities would not involve any direct point source discharges of wastes or wastewaters to the Harbor. The operation of marine terminals and backland container facilities on land adds particulates and other pollutants to the site from cargo handling equipment (pollutants include hydrocarbons, brake dust, and particulates from tire wear) Operations of non-electric equipment and vehicles for the proposed Project would also generate air emissions containing particulate pollutants. A portion of these particulates would be deposited on the site and subject to subsequent transport by storm runoff. At the Project site, stormwater is collected in catch basins and conveyed to storm drains along the Main Channel. Transport of contaminants, such as

metals, by runoff from the Project site would contribute incrementally to changes in receiving water quality.

Accidental Spills

Other potential operational sources of pollutants that could affect water quality in the waters adjacent to the Project site include accidental spills on land that enter storm drains, as well as accidental spills from vessels. If spilled materials in upland areas were not captured prior to reaching the storm drain system, such materials could reach the Main Channel adjacent to the Project site. Spills or illegal discharges from vessels could also occur in the same waters, or during their transit to and from the Project site from the Harbor entrance at Angel's Gate. Impacts on water and sediment quality would depend on (1) the characteristics of the material spilled, such as volatility, solubility in water, and sedimentation rate, and (2) the speed and effectiveness of the spill response and cleanup efforts. Potential releases of pollutants from a large spill on land to Harbor waters and sediments would be minimized through existing regulatory and on-site controls, such as containment of hazardous substances, and are unlikely to occur during the life of the proposed Project.

Vessel Discharges and Contaminants

The amount of vessel traffic at the Project site would increase compared to the CEQA baseline as a result of the proposed Project. However, ship calls for the proposed Project would be the same as the NEPA baseline. Discharges of polluted water (such as bilge water or gray water) or ballast water directly to the Harbor are prohibited under the Port tariff and other regulations. Ballast water cannot be discharged to the Harbor without treatment or exchange, or unless the ballast water originated in the Port Complex or the El Segundo Marine Oil Terminal.

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 hull vessel leachates were in most cases below federal and state water quality criteria (EPA, 1999). One constituent of hull coating known to cause toxic effects is TBT, which has been banned from use. Other constituents, such as copper, still pose a threat. However, concentrations of metals, such as those used in antifouling applications (copper and zinc), have been measured near or below detection limits in waters adjacent to the Project site.

CEQA Impact Determination

Construction

Dredging and pile installation during the construction phases of the proposed Project would not cause any direct or intentional discharges of wastes to waters adjacent to the Project site. However, in-water dredging and pile installation would disturb and resuspend bottom sediments, which would result in temporary and localized changes to water quality. Dredging of Berths 226–232 may reduce DO concentrations in the immediate vicinity of the dredge, but this decrease would generally not extend beyond the dredge area or persist following the completion of the dredging operation. Changes in pH and contaminant levels could also occur as a result of construction activities for the proposed Project. The extent of sediment dispersal would depend on the dredge method, the specific sediment characteristics, and the current speed and direction during dredging.

Results from previous dredge receiving water monitoring studies in the Harbor indicate that turbidity and TSS concentrations would rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases.

Dredging for the proposed Project would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB. The Water Quality Certification would include monitoring requirements necessary to assure compliance with applicable effluent limitations, or any other CWA limitation, or with any 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. Monitoring data would be used by the dredging contractor to ensure that water quality limits specified in the permit are not exceeded. This could include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume.

Sediments could be disposed of at LA-2 or an approved upland location. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226–232 dredging footprint complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F), and the CSTF determined in August 2015 that the sediments are suitable for disposal at LA-2. If the sediments were disposed of at an upland disposal facility, they would have to meet acceptance criteria and would not result in adverse impacts. Therefore, water quality impacts due to dredging and disposal would be less than significant.

Runoff from the Project site during construction would be managed 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 (such as a silt fence or sand bag barrier) 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 runoff into the Harbor. These measures would minimize any soil and contaminant loading to the Harbor resulting from construction activities. The SWPPP would be prepared by LAHD (or contractor) with LAHD designated as the “Legally Responsible Person.” Runoff during construction is not anticipated to cause regulatory standards to be violated, and impacts would be less than significant.

Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes that can be effectively contained in the work area and cleaned up immediately (Port of Los Angeles Spill Prevention and Control Procedures [CA012]). Accidental or incidental spills or leaks that occur on land are expected to be contained and cleaned up before any impacts on surface water quality

can occur. Construction and industrial SWPPPs and standard BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to be transported off site and enter storm drains. The unlikelihood of spills to occur, combined with established prevention measures, would reduce and minimize the probability that regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant.

Accidental spills from dredges or barges could directly affect water quality in the waters adjacent to the Project site; however, the probability of an accidental spill from a construction vessel to the Harbor is low. In addition, if an accidental spill does occur, the planning effort to contain and neutralize the spill and the actual spill response by the dredging contractors (such as deployment of floating booms to contain and absorb the spill and use pumps to assist the cleanup) are expected to prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor.

Operation

As part of the proposed Project, the footprint of the terminal would increase, and the amount of truck traffic and yard equipment would increase to handle up to 2,379,525 TEUs annually (from approximately 1.24 million TEUs annually under the CEQA baseline). Rail traffic would also increase at the existing on-dock railyard. This would 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 the Harbor.

As noted above, runoff would be managed (consistent with applicable permit and ordinance requirements) prior to discharge into Harbor waters. Site operations would be conducted in accordance with an industrial SWPPP to minimize the generation of particulate pollutants. In addition, monitoring would be conducted under the SWPPP to observe the quality of the stormwater runoff discharged to the Harbor. This would allow the tenant and LAHD to ensure that the quality of any runoff would comply with the permit conditions and verify that any BMPs are performing as anticipated.

The design and operation of the proposed Project would comply with both the MS4 permit and LID requirements. Applicable BMPs would be incorporated into the proposed Project plan that must be approved by the Bureau of Sanitation WPD prior to issuance of building and grading permits. The BMPs would include, as applicable, site design BMPs, source control BMPs, and treatment control BMPs. To the maximum extent feasible, treatment control BMPs would be selected from LID BMPs.

Given the limited footprint of the proposed Project, there may be very limited opportunity to incorporate significant site design BMPs, but these will be incorporated where possible. All applicable source control BMPs would be incorporated in the proposed Project design. Feasible treatment control BMPs would be selected from the list of treatment control categories in the 2010 Stormwater Quality Post-Construction Guidance Manual. For the backland portion of the proposed Project, BMPs would be designed to retain and/or treat the water quality design volume for the entire area subject to grading and resurfacing. These BMPs must meet the specified design standards in the guidance manual to mitigate (infiltrate or treat) stormwater runoff. The controls and BMPs for runoff and storm drain discharges described above are designed to reduce impacts on

water quality and would be fully implemented for the proposed Project. Tenants would be required to obtain and meet all conditions of applicable stormwater discharge permits as well as meet all Port pollution control requirements.

LA/LB Harbor-wide water quality studies from 2005–2008 found only five instances where metal concentrations exceeded CTR criteria for chronic exposure of marine life (POLA and POLB, 2009). All five instances were for dissolved copper: two samples were in Cabrillo Marina, one in Fish Harbor, and two in Long Beach Inner Harbor. Concentrations of organic chemicals (such as pesticides, PCBs, and PAHs) were very low; the exception was TBT (discussed below). Ambient monitoring and stormwater monitoring in Long Beach Harbor in 2010–2011 showed that pollutants, such as metals and semivolatile organic compounds, were present in harbor waters during both dry-weather surveys and storm surveys (MBC, 2011). However, in one sample during the 2010 dry-weather survey, zinc exceeded the standard for marine waters; all other metals were well below regulatory standards. Mixing with the harbor receiving waters dilutes the pollutants so that the receiving water standards are usually not exceeded. It is reasonable to expect that these findings would also apply to stormwater runoff from the Project site, pollutants in runoff would not cause violations of receiving water quality objectives, given compliance with SWPPP and LID requirements. Upland operations associated with the proposed Project would not result in direct discharges of wastes to Harbor waters. However, stormwater runoff from the Project site could contain particulate debris from operation of the proposed Project facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

In 2012, the Ports of Los Angeles and Long Beach published "Vessel Discharge Rules and Regulations," which summarizes the rules and regulations of ballast water discharge and other discharges (POLB and POLA, 2012). This document, which is updated as the applicable regulations change, has been distributed to all terminal operators/shipping lines to make them aware of the regulations. Port Tariff No. 4 prohibits the discharge of ballast water without written permission from the Executive Director of the Harbor Department. With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with the proposed Project are not anticipated to result in significant ballast water discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of the proposed Project are not likely to occur.

By the 1980s, numerous studies had documented toxic effects of TBT at extremely low concentrations (parts per trillion) to non-target species (Huggett et al., 1992). Because of these studies, regulatory actions were adopted in France (1982) and the United Kingdom (1985), and in 1988 the U.S. Congress passed the Organotin Antifouling Paint Control Act. On an international level, the IMO passed the International Convention on the

Control of Harmful Antifouling Systems on Ships. This prohibits or restricts the use of antifouling systems on ships that are parties to the convention, those that are more than 400 gross tonnage that are engaged in international voyages, or those greater than 24 m in length. This convention was ratified in 2007, and became binding on those governments who ratified it on September 17, 2008. This convention was signed by the U.S. on December 12, 2002 (NOAA, 2011).

The proposed Project would result in an additional 42 ship calls annually compared to the CEQA baseline, and the sizes of the ships calling at the terminal may increase. Evergreen Line, which uses the Everport Container Terminal, uses tin-free coatings on its vessels (Evergreen Line, 2015), but the hull fouling strategies of other vessels that could use the terminal are unknown. Therefore, hull leaching of non-TBT substances, such as metals, could incrementally increase. However, concentrations of metals in waters near the Project site have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the site of the proposed Project, operation of the proposed Project would require compliance with all existing hazardous material/waste laws and regulations. Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of the proposed Project would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant under CEQA.

For the proposed Project, 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 oil 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.

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.

In summary, based on the analysis above, proposed Project-related construction activities, including dredging, pile installation, and backlands improvements, and operations at the improved terminal, 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, significant water quality impacts under CEQA are not expected to occur from construction, terminal operations, or accidental spills that could occur from implementation of the proposed Project. Impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction

The proposed Project would include in-water work and infrastructure installation within 100 feet of the water's edge that would not occur under the NEPA baseline. Dredging and pile installation during the construction phases of the proposed Project would not cause any direct or intentional discharges of wastes to waters adjacent to the Project site. However, in-water dredging and pile installation would disturb and resuspend bottom sediments, which would result in temporary and localized changes to water quality. Dredging of Berths 226–232 may reduce DO concentrations in the immediate vicinity of the dredge, but this decrease would generally not extend beyond the dredge area or persist following the completion of the dredging operation. Changes in pH and contaminant levels could also occur as a result of construction activities for the proposed Project. The extent of sediment dispersal would depend on the dredge method, the specific sediment characteristics, and the current speed and direction during dredging. Results from previous dredge receiving water monitoring studies in the Harbor indicate that turbidity and TSS concentrations would rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases.

Dredging for the proposed Project would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB. The Water Quality Certification would be required to include monitoring requirements necessary to assure compliance with applicable effluent limitations, or any other Clean Water Act limitation, or with any 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. Monitoring data would be used to ensure that water quality limits specified in the permit are not exceeded. This could include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume.

Sediments would be disposed of at LA-2 or approved upland disposal site. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226-232 dredging footprint complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F). In addition, all sediments would be subject to acceptance requirements if disposed of at an approved upland facility. Therefore, water quality impacts due to dredging and disposal would be less than significant.

Runoff from the Project 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 runoff into the Harbor. These measures, combined with the low potential for erosion, would minimize any soil and contaminant loading to the Harbor resulting from construction activities. The SWPPP would be prepared by LAHD (or contractor) with LAHD designated as the "Legally Responsible Person." Runoff during construction is not anticipated to cause regulatory standards to be violated, and impacts would be less than significant.

Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes that can be effectively contained in the work area and cleaned up immediately (Port of Los Angeles Spill Prevention and Control Procedures [CA012]). Accidental or incidental spills or leaks that occur on land are expected to be contained and cleaned up before any impacts on surface water quality can occur. Construction and industrial SWPPPs and standard BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to be transported off site and enter storm drains. The unlikelihood of spills to occur, combined with established prevention measures, would reduce and minimize the probability that regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant.

Accidental spills from dredges or barges could directly affect water quality in the waters adjacent to the Project site; however, the probability of an accidental spill from a construction vessel to the Harbor is low. In addition, if an accidental spill does occur, the planning effort to contain and neutralize the spill and the actual spill response by the dredging contractors (deployment of floating booms to contain and absorb the spill and use pumps to assist the cleanup) would likely prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor.

Operation

The footprint of the terminal would increase, and the amount of truck traffic and yard equipment operations at the Project site would increase to handle up to 2,379,525 TEUs annually (from about 1,818,000 TEUs annually under the NEPA baseline [2038]). Rail traffic would also increase at the existing on-dock railyard. This would 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 the Harbor.

As noted above, runoff would be managed (consistent with applicable permit and ordinance requirements) prior to discharge into Harbor waters. Site operations would be conducted in accordance with an industrial SWPPP to minimize the generation of particulate pollutants. In addition, monitoring would be conducted under the SWPPP to observe the quality of the stormwater runoff discharged to the Harbor. This would allow

the tenant and LAHD to ensure that the quality of any runoff would comply with the permit conditions and verify that any BMPs are performing as anticipated.

The design and operation of the proposed Project would comply with both the MS4 permit and the LID requirements. Applicable BMPs would be incorporated into the proposed Project plan that must be approved by the Bureau of Sanitation WPD prior to issuance of building and grading permits. The BMPs would include, as applicable, site design BMPs, source control BMPs, and treatment control BMPs. To the maximum extent feasible, treatment control BMPs would be selected from LID BMPs.

Given the limited footprint of the proposed Project, there may be very limited opportunity to incorporate significant site design BMPs, but these will be incorporated where possible. All applicable source control BMPs would be incorporated in the proposed Project design. Feasible treatment control BMPs would be selected from for the list of treatment control categories in the 2010 Stormwater Quality Post-Construction Guidance Manual. For the backland portion of the proposed Project, BMPs would need to be designed to retain and/or treat the water quality design volume for the entire area subject to grading and resurfacing.

The controls and BMPs for runoff and storm drain discharges described above are designed to reduce impacts on water quality and would be fully implemented for the proposed Project. Tenants would be required to obtain and meet all conditions of applicable stormwater discharge permits as well as meet all Port pollution control requirements.

LA/LB Harbor-wide water quality studies from 2005–2008 found only five instances where metal concentrations exceeded CTR criteria for chronic exposure of marine life (POLA and POLB, 2009). All five instances were for dissolved copper: two samples were in Cabrillo Marina, one in Fish Harbor, and two in Long Beach Inner Harbor. Concentrations of organic chemicals (such as pesticides, PCBs, and PAHs) were very low; the exception was TBT (discussed in Section 3.11.2.2). Ambient monitoring and stormwater monitoring in Long Beach Harbor in 2010–2011 showed that pollutants, such as metals and semivolatile organic compounds, were present in harbor waters during both dry-weather surveys and storm surveys (MBC, 2011). However, in one sample during the 2010 dry-weather survey, zinc exceeded the standard for marine waters; all other metals were well below regulatory standards. Mixing with the harbor receiving waters dilutes the pollutants so that the receiving water standards are usually not exceeded. It is reasonable to expect that these findings would also apply to stormwater runoff from the Project site, and pollutants in runoff would not cause violations of receiving water quality objectives, given compliance with SWPPP and LID requirements. Upland operations associated with the proposed Project would not result in direct discharges of wastes to Harbor waters. However, stormwater runoff from the Project site could contain particulate debris from operation of the proposed Project facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

In 2012, the Ports of Los Angeles and Long Beach published “Vessel Discharge Rules and Regulations,” which summarizes the rules and regulations of vessel discharges, including ballast water and other discharges (POLB and POLA, 2012). This document, which is updated as the applicable regulations change, has been distributed to all terminal

operators/shipping lines to make them aware of the regulations. Port Tariff No. 4 prohibits the discharge of ballast water without written permission from the Executive Director of the Harbor Department. Vessel traffic would not increase compared to the NEPA baseline. Therefore, the proposed Project is not anticipated to result in significant ballast water discharge impacts from vessels, or hull leeching of antifouling materials. Water quality impacts related to these activities would not be significant.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of the proposed Project are not likely to occur.

By the 1980s, numerous studies had documented toxic effects of TBT at extremely low concentrations (parts per trillion) to non-target species (Huggett et al., 1992). Because of these studies, regulatory actions were adopted in France (1982) and the United Kingdom (1985), and in 1988 the U.S. Congress passed the Organotin Antifouling Paint Control Act. On an international level, the IMO passed the International Convention on the Control of Harmful Antifouling Systems on Ships. This prohibits or restricts the use of antifouling systems on ships that are parties to the convention, those that are more than 400 gross tonnage that are engaged in international voyages, or those greater than 24 m in length. This convention was ratified in 2007, and became binding on those governments who ratified it on September 17, 2008. This convention was signed by the U.S. on December 12, 2002 (NOAA, 2011). Therefore, TBT is not expected to leech from vessel hulls at the Project site.

The proposed Project would not result in increased vessel traffic compared to the NEPA baseline, although the sizes of the ships calling at the terminal may increase. Evergreen Line, which uses the Everport Container Terminal, uses tin-free coatings on its vessels (Evergreen Line, 2015), but the hull fouling strategies of other vessels that could use the terminal are unknown. Therefore, hull leaching of non-TBT substances, such as metals, could incrementally increase. However, concentrations of metals in waters near the Project site have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the Project site, operation of the proposed Project would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, under NEPA, proposed Project operations would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release

(including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant under NEPA.

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.

In summary, although the proposed Project would include in-water work and infrastructure installation within 100 feet of the water's edge that would not occur under the NEPA baseline, as well as increased operational throughput, based on the analysis above, proposed Project-related construction activities, including dredging, pile installation, and backlands improvements, and operations at the improved terminal, 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, significant water quality impacts under NEPA are not expected to occur from construction, terminal operations, or accidental spills that could occur from implementation of the proposed Project. Impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Alternative 1 – No Federal Action

Alternative 1 is a NEPA-required No-Action Alternative for purposes of this Draft EIS/EIR. This alternative includes the activities that would occur absent a DA permit and could include improvements that require a local permit. Absent a DA permit, no dredging, dredged material disposal, in-water pile installation, or raising existing cranes and new crane installation would occur. The existing terminal's ability to handle larger ships (compared to current terminal constraints) would be facilitated by activities that require a DA permit (dredging, in-water pile driving, and raising or new cranes). Therefore, without the activities that address the constraints of the terminal's berths (the existing berth depths cannot accommodate vessels larger than about 8,000 TEUs, and deeper berths would allow the terminal to service larger ships), the existing terminal berth capacity would not be increased. The No Federal Action Alternative includes 23.5 acres of additional backlands to improve efficiency, which could occur absent a federal permit.

The site would continue to operate as an approximately 228-acre container terminal where cargo containers are loaded to/from vessels, temporarily stored on backlands, and transferred to/from trucks or on-dock rail. Based on the throughput projections, the site of Alternative 1 is expected to operate at its capacity of approximately 1,818,000 TEUs by 2038. In addition, under this alternative, five new AMP vaults and associated infrastructure (e.g., electrical conduit and wires) would be constructed at various locations within the wharf face of Berths 226 to 232 for a total of eight AMP vaults.

Impact WQ-1: Alternative 1 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.

Construction

Alternative 1 would not involve dredging and pile installation, or disposal of dredged material; therefore, impacts associated with dredging, disposal, and pile installation as described under the proposed Project would not occur under this alternative.

Effects of Backlands Improvements

Alternative 1 would have the same backland improvements as the proposed Project (23.5 acres of additional backlands and associated improvements) and therefore would have the same effects related to backlands improvements as the proposed Project described above. Construction-related impacts on surface water quality would be limited to potential non-stormwater discharges or discharges of stormwater runoff to Harbor waters that receive runoff from the terminal site of Alternative 1. Runoff from the upland portions of the terminal is managed in compliance with applicable permits and ordinances (including SWPPP requirements) prior to discharge to the Harbor (to the Main Channel). In addition, runoff from the construction site could contain a variety of contaminants, including metals and PAHs, associated with construction materials, and spills of oil or other petroleum products.

Accidental Spills

Because Alternative 1 would have the same backland improvements as the proposed Project (23.5 acres of additional backlands and associated improvements), there would be the same potential for accidental spills during backlands construction as the proposed Project (described above). However, 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.

Operation

Operation of Alternative 1 would handle up to 1,818,000 TEUs with 208 vessel calls annually by 2038 (increase of approximately 577,000 TEUs and 42 annual vessel calls above the CEQA baseline). There would be no increase in throughput or ship calls compared to the NEPA baseline. Like the proposed Project, this alternative would not involve any direct point source discharges of wastes or wastewaters to the Harbor. The increase in terminal operations from increased vessel, truck, rail, and backland equipment could incrementally increase polluted runoff in receiving waters.

Runoff

Operation of the site under Alternative 1, as with the proposed Project, would not involve any direct point source discharges of wastes or wastewaters to the Harbor. However, the transport of contaminants deposited on the terminal site from operations, such as metals, by runoff from the site of Alternative 1 would contribute incrementally to changes in receiving water quality.

Deposition of Contaminants

Direct atmospheric deposition of air pollutants that settle in the Port (including at the site of Alternative 1) and on Harbor would be similar to that described above for the proposed Project, and may provide an increased impact on local watersheds. For particulates, including suspended zinc and copper pollutants from the site of Alternative 1 (e.g., tire and brake wear from equipment and trucks), direct impacts would not be expected to significantly affect water quality due to the likely limited and dispersed nature of direct deposition on Harbor waters, and because direct aerial deposition would not allow for a significant buildup of these pollutants before entering Harbor waters.

Accidental Spills

The potential for accidental spills (in upland areas and from vessels) to affect Harbor waters under Alternative 1 would be similar to the proposed Project, albeit somewhat less due to lower operational throughput i.e., higher throughput but similar number of ship calls). If spilled materials in upland areas were not captured prior to reaching the storm drain system, such materials could reach the Main Channel adjacent to the site of Alternative 1. Spills or illegal discharges from vessels could also occur in the same waters, or during their transit to and from the Everport Container Terminal from the Harbor entrance at Angel's Gate. Impacts on water and sediment quality would depend on (1) the characteristics of the material spilled, such as volatility, solubility in water, and sedimentation rate, and (2) the speed and effectiveness of the spill response and cleanup efforts. Potential releases of pollutants from a large spill to Harbor waters and sediments would be minimized through existing regulatory and on-site controls and are unlikely to occur during the life of Alternative 1.

Vessel Discharges and Contaminants

The amount of vessel traffic at the site of Alternative 1 would increase by 42 annual ship calls compared to the CEQA baseline, but would be the same as the NEPA baseline. The water quality effects under Alternative 1 from vessel discharges and leaching of contaminants from vessel coatings (including TBT, copper, and zinc) would be similar to the proposed Project, albeit slightly lower due to lower operational throughput. TBT has been discontinued from use, and concentrations of metals, such as those used in antifouling applications (copper and zinc), have been measured near or below detection limits in waters adjacent to the site of Alternative 1.

CEQA Impact Determination

Construction

Runoff from the Alternative 1 site during construction would be managed under a construction SWPPP prepared in accordance with GCASP requirements and implemented prior to start of any construction activities, as described for the proposed Project. Implementation of BMPs, would minimize any soil and contaminant loading to the Harbor resulting from construction activities. The SWPPP would be prepared by LAHD (or contractor) with LAHD designated as the "Legally Responsible Person." Runoff during construction is not anticipated to cause regulatory standards to be violated, and impacts would be less than significant.

Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, as with the proposed Project, would be managed via construction and industrial SWPPPs and standard Port BMPs, which would minimize the potential for

materials from onshore construction activities to be transported off site and enter storm drains. The unlikelihood of spills to occur, combined with established prevention measures, would reduce and minimize the probability that regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant.

Operation

The footprint of the terminal would increase, and the amount of truck traffic and yard equipment operations at the site of Alternative 1 would increase to handle up to 1,818,000 TEUs annually (from 1,240,773 TEUs annually under the CEQA baseline). Rail traffic would also increase at the existing on-dock railyard. This would 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 the Harbor.

As with the proposed Project, runoff under Alternative 1 would be managed under an industrial SWPPP to minimize the generation of particulate pollutants, and the quality of any runoff is expected to comply with the permit conditions.

Similar to the proposed Project, the design and operation of Alternative 1 would comply with both the MS4 permit requirements and LID requirements, and would implement BMPs to maximize the reduction of pollutant loadings in terminal runoff. The BMPs would include, as applicable, site design BMPs, source control BMPs, and treatment control BMPs. To the maximum extent feasible, treatment control BMPs would be selected from LID BMPs.

As with the proposed Project, given the limited footprint of Alternative 1, there may be very limited opportunity to incorporate significant site design BMPs, but these will be incorporated where possible. All applicable source control BMPs would be incorporated in the proposed Project design. Feasible treatment control BMPs would be selected from for the list of treatment control categories in the 2010 Stormwater Quality Post-Construction Guidance Manual. For the backland portion of Alternative 1, BMPs would need to be designed to retain and/or treat the water quality design volume for the entire area subject to grading and resurfacing, where applicable. The controls and BMPs for runoff and storm drain discharges described above are designed to reduce impacts on water quality and would be fully implemented for Alternative 1. Tenants would be required to obtain and meet all conditions of applicable stormwater discharge permits as well as meet all Port pollution control requirements.

As described under the proposed Project above, receiving water standards for the Harbor are usually not exceeded due in part to mixing effects, and it is reasonable to expect that these effects would also keep pollutants in runoff under Alternative 1 from resulting in violations of receiving water quality objectives, given compliance with MS4 and LID requirements. Upland operations associated with Alternative 1 would not result in direct discharges of wastes to Harbor waters. Stormwater runoff from the terminal site under Alternative 1 could contain particulate debris from operation of the facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

Vessel discharges under Alterative 1 would be similar to those for the proposed Project because the number of annual ship calls would be the same (even though throughput would increase by about 577,000 TEUs annually). In 2012, the Ports of Los Angeles and Long Beach published "Vessel Discharge Rules and Regulations," which summarizes the rules and regulations of ballast water discharge and other discharges (POLB and POLA, 2012). With international, federal, and state regulations in place, the increased terminal operations associated with Alternative 1 are not anticipated to result in significant discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of Alternative 1 are not likely to occur.

As with the proposed Project, vessels under Alternative 1 would not contain TBT in their hull coatings; therefore, TBT is not expected to leech from vessel hulls at the site of Alternative 1. The number of ship calls under Alternative 1 would be higher than the CEQA baseline (208 compared with 166 ship calls), but the maximum size of the ships calling at the terminal (up to 8,000 TEU vessels) would not increase. Concentrations of metals in waters near the site of Alternative 1 have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the site of Alternative 1, operation of this alternative would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of Alternative 1 would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from Alternative 1-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.

In summary, construction and operations under Alternative 1, 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. Significant water quality impacts under CEQA are not expected to occur as a

result of construction, terminal operations, or accidental spills that could occur from implementation of Alternative 1. Impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 1 would include 23.5 acres of additional backlands and related improvements. This would consist of removal of existing structures, placement of engineered fill, placement of base and pavement, relocation of the main gate, and installation of infrastructure, such as electrical lines, lighting, and drainage. No construction of in-water or over-water features would occur under Alternative 1. The No Federal Action Alternative would involve the same construction activities and operations as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 1 and the NEPA baseline, and Alternative 1 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Alternative 2 – No Project

Alternative 2 is a CEQA-only alternative. The No Project Alternative is not evaluated under NEPA because NEPA requires an evaluation of the No Federal Action Alternative (see Section 2.9.1.2), which is Alternative 1 analyzed above. Section 15126.6(e) of the State CEQA Guidelines requires the analysis of a no-project alternative. This no-project analysis must discuss the existing conditions as well as what would be reasonably expected to occur in the foreseeable future if the proposed Project is not approved.

Under Alternative 2, none of the proposed construction activities would occur in water or in water-side or backland areas. LAHD would not implement any terminal improvements or increases in backland acreage. No existing cranes would be raised and no new cranes would be added, as well as no dredging would occur.

Under the No Project Alternative, the existing Everport Container Terminal would continue to operate as an approximately 205-acre container terminal. Based on the throughput projections for the Port, the site of Alternative 2 is expected to operate at its capacity of approximately 1,818,000 TEUs in 2038. AMP facilities have been installed and are currently in use at Berths 227 (two existing AMP vaults) and 230 (one existing AMP vault).

Impact WQ-1: Alternative 2 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.

Construction

Alternative 2 would not involve any construction activities. Therefore, there would be no pollution, contamination, nuisance, or violation of regulatory standards due to construction.

Operation

Impacts on water quality during operations could occur from runoff, atmospheric (aerial) deposition of contaminants, discharges of contaminants from vessels, and accidental spills.

Runoff

Operation of the site under Alternative 2 would not involve any direct point source discharges of wastes or wastewaters to the Harbor. Similar to the proposed Project, operation of Alternative 2 would generate air emissions containing particulate pollutants, and a portion of these particulates would be deposited on the site and subject to subsequent transport by storm runoff. Transport of contaminants, such as metals, by runoff from the site of Alternative 2 would contribute incrementally to changes in receiving water quality. Impacts would be lower than those from the proposed Project because throughput of Alternative 2 would be lower than that associated with the proposed Project.

Deposition of Contaminants

Direct atmospheric deposition of air pollutants that settle in the Port (including on the site of Alternative 2) and on Harbor waters would be less than that described above for the proposed Project, and may provide an increased impact on local watersheds. Impacts would be lower than those from the proposed Project because throughput of Alternative 2 would be lower than that for the proposed Project. For particulates, including suspended zinc and copper pollutants from the site of Alternative 2 (e.g., tire and brake wear from equipment and trucks), direct impacts would not be expected to significantly affect water quality due to the likely limited and dispersed nature of direct deposition on Harbor waters, and because direct aerial deposition would not allow for a significant buildup of these pollutants before entering Harbor waters.

Accidental Spills

The potential for accidental spills (in upland areas and from vessels) to affect Harbor waters under Alternative 2 would be similar to the proposed Project, albeit somewhat less due to lower operational throughput (the number of vessel calls would be the same for Alternative 2 and the proposed Project, although container throughput for Alternative 2 would be about 24 percent lower than that for the proposed Project). If spilled materials in upland areas were not captured prior to reaching the storm drain system, such materials could reach the Main Channel adjacent to the site of Alternative 2. Spills or illegal discharges from vessels could also occur in the same waters, or during their transit to and from the Everport Container Terminal from the Harbor entrance at Angel's Gate. Impacts on water and sediment quality would depend on (1) the characteristics of the

material spilled, such as volatility, solubility in water, and sedimentation rate, and (2) the speed and effectiveness of the spill response and cleanup efforts. Potential releases of pollutants from a large spill to Harbor waters and sediments would be minimized through existing regulatory and on-site controls and are unlikely to occur during the life of Alternative 2.

Vessel Discharges and Contaminants

The amount of vessel traffic at the site of Alternative 2 would increase by 42 annual ship calls compared to the CEQA baseline and would be the same as the NEPA baseline. The water quality effects under Alternative 2 from vessel discharges and contaminants (including TBT, copper, and zinc) would be similar to the proposed Project, albeit slightly lower due to lower operational throughput. TBT has been discontinued from use, and concentrations of metals, such as those used in antifouling applications (copper and zinc), have been measured near or below detection limits in waters adjacent to the site of Alternative 2.

CEQA Impact Determination

Construction

Because there would be no new construction at the proposed site of Alternative 2, there would be no pollution, contamination, nuisance, or violation of regulatory standards due to proposed Project construction. No impacts would occur.

Operation

Even though the footprint of the terminal would not increase, the amount of truck traffic and yard equipment operations at the site of Alternative 2 would increase to handle up to 1,818,000 TEUs annually (from 1,240,773 TEUs annually under the CEQA baseline). Rail traffic would also increase at the existing on-dock railyard. This would 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 the Harbor.

Runoff under Alternative 2 would be similar to that under the CEQA baseline, and managed under an industrial SWPPP to minimize the generation of particulate pollutants. The quality of any runoff would be expected to comply with the permit conditions.

Runoff from the existing terminal is routed to catch basins on site, and discharged to harbor waters. Under Alternative 2, runoff would still be collected on site and discharged to the Main Channel until 2038. With increased throughput, the amount of contaminants (such as metals and PAHs) in runoff would increase. As described under the proposed Project above, receiving water standards for the Harbor are usually not exceeded due in part to mixing effects, and it is reasonable to expect that these effects would also keep pollutants in runoff under Alternative 2 from resulting in violations of receiving water quality objectives.

Upland operations associated with Alternative 2 would not result in direct discharges of wastes to Harbor waters. Stormwater runoff from the terminal site under Alternative 2 could contain particulate debris from operation of the facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES

discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

Vessel discharges under Alterative 2 would be similar to, although somewhat less than, the proposed Project due to lower operational throughput. With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with Alternative 2 are not anticipated to result in significant discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing Los Angeles Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of Alternative 2 are not likely to occur.

As with the proposed Project, vessels under Alternative 2 would not contain TBT in their hull coatings; therefore, TBT is not expected to leach from vessel hulls at the site of Alternative 2. The number of ship calls under Alternative 2 would be higher than the CEQA baseline (208 compared with 166 ship calls), even though the maximum sizes of the ships calling at the terminal would not increase (up to 8,000 TEU vessels). Concentrations of metals in waters near the site of Alternative 2 have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the site of Alternative 2, operation of this alternative would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of Alternative 2 would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant under CEQA.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from Alternative-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.

In summary, based on the analysis above, no construction would occur under Alternative 2. Operations at the terminal from Alternative 2, 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, significant water quality impacts under CEQA are not expected to occur from terminal operations, or accidental spills that could occur from implementation of Alternative 2. Impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Analysis of the No Project Alternative is required by CEQA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 1 in this document). Therefore, the analysis of this alternative is not required under NEPA.

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Alternative 3 – Reduced Project: Reduced Wharf Improvements

Under Alternative 3, there would be two operating berths after construction, similar to the proposed Project; but Berths 230-232 would remain at the existing depth (-45 feet plus two feet of overdepth), which would eliminate the need for sheet pile placement at this operating berth. Under this alternative, dredging along Berths 226-229 would occur as described for the proposed Project. This alternative would require less dredging (by approximately 8,000 cubic yards for a total of about 30,000 cubic yards) and less sheet pile driving and a slightly shorter construction period than the proposed Project. Based on the throughput projections, this alternative is expected to operate at its capacity of approximately 2,225,000 TEUs by 2038, similar to the proposed Project. However, while the terminal could handle similar levels of cargo, the reduced project alternative would not achieve the same level of efficient operations as achieved by the proposed Project. This alternative would include the raising of up to five existing cranes and five new cranes. Berths 226-229 would accommodate the largest vessels (16,000 TEUs). The existing design depth that would remain at Berths 230-232 would only be capable of handling vessels up to 8,000 TEUs. Other proposed Project elements, such as installation of AMP and backland improvements would be implemented under this alternative. Under this alternative, 208 vessels would call on the terminal by 2038, which is the same number or annual vessel calls as the proposed Project.

Impact WQ-1: Alternative 3 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.

Construction

Impacts on water quality could occur from dredging, installation of sheet piles and king piles, disposal of dredged materials, backland improvements, and potential construction-related spills. Impacts to water quality could result from the suspension of sediments and/or the introduction of contaminants to the water column.

Dredging would disturb bottom sediments, and suspend sediments over a relatively small area. The extent of disturbance would depend on the method of dredging. Suspension of sediments during clamshell dredging occurs during bucket impact, penetration, and removal of the bucket from the sediment, as well as during bucket retrieval through the water column. During cutterhead dredging, suspended sediments are limited to the immediate vicinity of the dredge. Sheet piles and king piles would be installed along Berths 226-229, as described under the proposed Project, which would result in some sediment suspension, but over a much smaller area than dredging. During pile installation, turbidity would be limited to waters near the seafloor.

Similar to the proposed Project, backland improvements under Alternative 3 would not directly introduce sediments to the waters adjacent to the site of Alternative 3; however, stormwater runoff could carry sediments to the Harbor waters without intervention. Accidental spills could also introduce contaminants to Harbor waters.

They types of water quality impacts from construction of Alternative 3 could include:

- Increased turbidity (sediment resuspension resulting in reduced water clarity and light transmittance),
- 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), and
- Reduced pH

There are no projected effects to salinity or temperature from construction and operation of Alternative 3. The biological effects on marine biota from potential water quality impacts are discussed in Section 3.3, Biological Resources.

Effects of Dredging and Pile Installation

Dredging impacts to water quality under Alternative 3 would be similar to those of the proposed Project, albeit slightly less because dredging would only occur along Berths 226-229.

The majority of suspended sediments settle within one hour of dredging (Palermo et al., 2008). Similarly, dredging would result in a relatively small turbidity plume with an associated slight reduction is light transmission (about 15 percent); however, as with the proposed Project, the turbidity plume and reductions in light transmission during dredging for Alternative 3 are expected to dissipate rapidly with distance from dredging operations. As with the proposed Project, contaminants, including metals and organics,

could be released into the water column during the dredging and pile installation. Concentrations of all contaminants in the dredge footprint were below ERM levels, and results from elutriate testing (which used a 4:1 mixture of water and sediments from the dredge footprint) were below EPA CCC (Ramboll Environ, 2015). There was also no demonstrated toxicity in solid phase and suspended particulate phase bioassays tests in sediments at the Everport Container Terminal. Therefore, contaminant concentrations associated with any potentially disturbed or resuspended sediments during dredging are not expected to result in any long-term effects in the waters near the site of Alternative 3.

As with the proposed Project, DO and pH could be slightly reduced within areas of sediment resuspension. Reductions in DO concentrations, however, would be brief and are not expected to persist or cause detrimental effects to biological resources.

Effects of Dredge Material Disposal

Ocean Disposal

Effects from sediment disposal at LA-2 were evaluated during the site designation process (EPA, 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE, 2005). Alternative 3 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.

Upland Disposal

Disposal of dredged material at an approved upland disposal site would not affect sediment quality or water quality in the vicinity of Alternative 3.

Effects of Backlands Improvements

Alternative 3 would have the same backland improvements as the proposed Project (23.5 acres of additional backlands and associated improvements) and therefore would have the same effects related to runoff from backlands improvements as the proposed Project described above. Construction-related impacts on surface water quality would be limited to potential non-stormwater discharges or discharges of stormwater runoff to Harbor waters that receive runoff from the terminal site under Alternative 3. During construction, runoff from the construction site would be subject to SWPPP requirements, including implementation of BMPs, to control pollutant discharges. Runoff from the upland portions of the site of Alternative 3 is managed in compliance with applicable permits and ordinances (including MS4 requirements) prior to discharge to the Harbor (to the Main Channel).

Accidental Spills

Alternative 3 would have the same backland improvements as the proposed Project (23.5 acres of additional backlands and associated improvements) and therefore would have the same effects related to accidental spills during backlands construction as the proposed Project (described above). 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. Appropriate spill response equipment would be stored at the site.

Operation

Operation of Alternative 3 would result in similar water quality impacts as described under the proposed Project, and handle up to 2,250,000 TEUs annually by 2038 (compared to 1,240,773 TEUs under the CEQA baseline, and 1,818,000 TEUs under the NEPA baseline). This alternative would also result in 208 annual vessel calls (an increase of 42 annual vessel calls above the CEQA baseline, but the same number of annual ship calls as the NEPA baseline). This alternative would handle vessels capable of holding up to 16,000 TEUs at Berths 226-229.

Impacts on water quality during operations could occur from runoff, atmospheric (aerial) deposition of contaminants, discharges of ballast water and other contaminants from vessels, and accidental spills.

Runoff

Operation of the site under Alternative 3, as with the proposed Project, would not involve any direct point source discharges of wastes or wastewaters to the Harbor, and the transport of contaminants, such as metals, by runoff from the site would contribute incrementally to changes in receiving water quality.

Deposition of Contaminants

Direct atmospheric deposition of air pollutants that settle in the Port (including at the site of Alternative 3), and on Harbor waters would be similar to that described above for the proposed Project, and may provide an increased impact on local watersheds. For particulates, including suspended zinc and copper pollutants from site of Alternative 3 (tire and brake wear from equipment and trucks), direct impacts would not be expected to significantly affect water quality due to the likely limited and dispersed nature of direct deposition on Harbor waters, and because direct aerial deposition would not allow for a significant buildup of these pollutants before entering Harbor waters.

Accidental Spills

The potential for accidental spills (in upland areas and from vessels) to affect Harbor waters under Alternative 3 would be similar to the proposed Project. If spilled materials in upland areas were not captured prior to reaching the storm drain system, such materials could reach the Main Channel. Spills or illegal discharges from vessels could also occur in the same waters or during their transit to and from the Everport Container Terminal from the Harbor entrance at Angel's Gate. Impacts on water and sediment quality would depend on (1) the characteristics of the material spilled, such as volatility, solubility in water, and sedimentation rate, and (2) the speed and effectiveness of the spill response and cleanup efforts. Potential releases of pollutants from a large spill to Harbor waters and sediments would be minimized through existing regulatory and on-site controls and are unlikely to occur during the life of Alternative 3.

Vessel Discharges and Contaminants

The amount of vessel traffic under Alternative 3 would increase by up to 42 annual ship calls (by 2038) as compared to the CEQA baseline, but the number of annual ship calls would be the same as the NEPA baseline. The water quality effects under Alternative 3 from vessel discharges and leaching of contaminants (including TBT, copper, and zinc) from vessel coatings would be similar to the proposed Project. TBT has been discontinued from use, and concentrations of metals, such as those used in antifouling

applications (copper and zinc), have been measured near or below detection limits in waters adjacent to the site of Alternative 3.

CEQA Impact Determination

Construction

As with the proposed Project, in-water dredging and pile installation under Alternative 3 would disturb and resuspend bottom sediments, which would result in temporary and localized changes to some water quality indicators. Dredging of Berths 226–229 may reduce DO concentrations in the immediate vicinity of the dredge, but this decrease would generally not extend beyond the dredge area or persist following the completion of the dredging operation. Changes in pH and contaminant levels could also occur as a result of construction activities for Alternative 3. Turbidity and TSS concentrations are expected to rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases.

As with the proposed Project, dredging for Alternative 3 would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB, which include monitoring requirements and controls for DO, light transmittance (turbidity), pH, and suspended solids necessary to assure compliance with applicable effluent limitations, or any other CWA limitation, or with any State laws or regulations. Monitoring data would be used by the dredge contractor to ensure that water quality limits specified in the permit are not exceeded. This could include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume.

Sediments could be disposed of at LA-2 or an approved upland disposal site. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226–229 dredging footprints complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F), and the CSTF determined in August 2015 that the sediments are suitable for disposal at LA-2. If the sediments are disposed of at an upland disposal facility, they would have to meet acceptance criteria and would not result in adverse impacts. Therefore, water quality impacts due to dredging and disposal would be less than significant.

Potential effects from runoff and spills during construction of Alternative 3 would be similar to those associated with the proposed Project. Runoff from the terminal site during construction would be managed under a construction SWPPP and control measures would be used during construction. Runoff during construction is not anticipated to cause regulatory standards to be violated, and impacts would be less than significant.

Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes that can be effectively contained in the work area and cleaned up immediately (Port of Los Angeles Spill Prevention and Control Procedures [CA012]). Accidental or incidental spills or leaks that occur on land are expected to be contained and cleaned up before any impacts on surface water quality can occur. Construction and industrial SWPPPs and standard BMPs (e.g., use of drip

pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to enter storm drains. The unlikelihood of spills to occur, combined with established prevention measures, would reduce the probability that regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant.

Accidental spills from dredges or barges could directly affect water quality in the waters adjacent to the t site of Alternative 3; however, the probability of an accidental spill from a construction vessel to the Harbor is low. In addition, if an accidental spill does occur, the planning effort to contain and neutralize the spill and the actual spill response by the dredging contractors (deployment of floating booms to contain and absorb the spill and use pumps to assist the cleanup) would likely prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor.

Operation

The footprint of the terminal would increase, and the amount of truck traffic and yard equipment operations at the site of Alternative 3 would increase to handle up to 2,250,000 TEUs annually (from 1,240,773 TEUs annually under the CEQA baseline). Rail traffic would also increase at the existing on-dock railyard. This would 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 the Harbor.

As with the proposed Project, runoff under Alternative 3 would be managed under an industrial SWPPP to minimize the generation of particulate pollutants, and the quality of any runoff is expected to comply with the permit conditions.

Similar to the proposed Project, the design and operation of Alternative 3 would comply with both the MS4 permit and LID requirements, and would implement BMPs to maximize the reduction of pollutant loadings in terminal runoff. For the backland portion of Alternative 3, BMPs would be designed to retain and/or treat the water quality design volume for the entire area subject to grading and resurfacing, where applicable.

The controls and BMPs for runoff and storm drain discharges described above are designed to reduce impacts on water quality and would be fully implemented for Alternative 3. Tenants would be required to obtain and meet all conditions of applicable stormwater discharge permits as well as meet all Port pollution control requirement

As described under the proposed Project above, receiving water standards for the Harbor are usually not exceeded due in part to mixing effects, and it is reasonable to expect that these effect would also keep pollutant concentrations in runoff under Alternative 3 from resulting in violations of receiving water quality objectives, given compliance with SWPPP and MS4/LID requirements.

Upland operations associated with Alternative 3 would not result in direct discharges of wastes to Harbor waters. Stormwater runoff from the terminal site under Alternative 3 could contain particulate debris from operation of the Project facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES

discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

Vessel discharges under Alterative 3 would be similar to the proposed Project. In 2012, the Ports of Los Angeles and Long Beach published "Vessel Discharge Rules and Regulations," which summarizes the rules and regulations of ballast water discharge and other discharges (POLB and POLA, 2012). With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with Alternative 3 are not anticipated to result in significant ballast water discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of Alternative 3 are not likely to occur.

As with the proposed Project, vessels under Alternative 3 would not contain TBT in their hull coatings; therefore, TBT is not expected to leach from vessel hulls at the site of Alternative 3. The number of ship calls under Alternative 3 would be higher than the CEQA baseline (208 compared with 166 ship calls), and the maximum size of the ships calling at the terminal would increase (to up to 16,000TEU vessels). Concentrations of metals in waters near the site of Alternative 3 have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the site of Alternative 3, operation of this alternative would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of Alternative 3 would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from Alternative 3-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.

In summary, based on the analysis above, Alternative 3 construction activities, including dredging, pile installation, and backlands improvements, and operations at the improved

terminal, 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, significant water quality impacts under CEQA are not expected to occur from construction, terminal operations, or accidental spills that could occur from implementation of Alternative 3. Impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction

Alternative 3 would include in-water work and infrastructure installation within 100 feet of the water's edge that would not occur under the NEPA baseline. As with the proposed Project, in-water dredging and pile installation under Alternative 3 would disturb and resuspend bottom sediments, which would result in temporary and localized changes to some water quality indicators. Dredging of Berths 226–229 may reduce DO concentrations in the immediate vicinity of the dredge, but this decrease would generally not extend beyond the dredge area or persist following the completion of the dredging operation. Changes in pH and contaminant levels could also occur as a result of construction activities for Alternative 3. Turbidity and TSS concentrations are expected to rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases.

As with the proposed Project, dredging for Alternative 3 would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB, which include monitoring requirements and controls for DO, light transmittance (turbidity), pH, and suspended solids necessary to assure compliance with applicable effluent limitations, or any other CWA limitation, or with any state laws or regulations. Monitoring data would be used by the dredge contractor to ensure that water quality limits specified in the permit are not exceeded. This could include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume.

Sediments could be disposed of at LA-2 or an upland disposal site. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226-229 dredging footprints complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F), and the CSTF determined in August 2015 that the sediments are suitable for disposal at LA-2. If the sediments are disposed of at an upland disposal facility, they would have to meet acceptance criteria and would not result in adverse impacts. Therefore, water quality impacts due to dredging and disposal would be less than significant.

Runoff from the terminal site during construction would be controlled under a construction SWPPP prepared in accordance with GCASP requirements, and control measures would be used during construction. Runoff during construction would not cause regulatory standards to be violated, and impacts would be less than significant.

Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes that can be effectively contained in the work area and cleaned up immediately (Port of Los Angeles Spill Prevention and Control Procedures [CA012]). Accidental or incidental spills or leaks that occur on land are expected to be contained and cleaned up before any impacts on surface water quality can occur. Construction and industrial SWPPPs and standard BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to enter storm drains. The unlikelihood of spills to occur, combined with established prevention measures, would reduce the probability that regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant.

Accidental spills from dredges or barges could directly affect water quality in the waters adjacent to the site of Alternative 3; however, the probability of an accidental spill from a construction vessel to the Harbor is low. In addition, if an accidental spill does occur, the planning effort to contain and neutralize the spill and the actual spill response by the dredging contractors (deployment of floating booms to contain and absorb the spill and use pumps to assist the cleanup) would likely prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor.

Operation

The footprint of the terminal would increase, and the amount of truck traffic and yard equipment operations at the site of Alternative 3 would increase to handle up to 2,250,000 TEUs annually (from 1,818,000 TEUs annually under the NEPA baseline) by 2038. Rail traffic would also increase at the existing on-dock railyard. This would 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 the Harbor.

As with the proposed Project, runoff under Alternative 3 would be managed under an industrial SWPPP to minimize the generation of particulate pollutants, and the quality of any runoff is expected to comply with the permit conditions.

Similar to the proposed Project, the design and operation of Alternative 3 would comply with both the MS4 permit and LID requirements, and would implement BMPs to maximize the reduction of pollutant loadings in terminal runoff. Given the limited footprint of Alternative 3, there may be very limited opportunity to incorporate significant site design BMPs, but these will be incorporated where possible. All applicable source control BMPs would be incorporated in the Project design. For the backland portion of Alternative 3, BMPs would be designed to retain and/or treat the water quality design volume for the entire area subject to grading and resurfacing, where applicable.

The controls and BMPs for runoff and storm drain discharges described above are designed to reduce impacts on water quality and would be fully implemented for Alternative 3. Tenants would be required to obtain and meet all conditions of applicable stormwater discharge permits as well as meet all Port pollution control requirements.

As described under the proposed Project above, receiving water standards for the Harbor are usually not exceeded due in part to mixing effects, and it is reasonable to expect that these effects would also keep pollutant concentrations in runoff under Alternative 3 from resulting in violations of receiving water quality objectives, given compliance with SWPPP and MS4/LID requirements.

Upland operations associated with Alternative 3 would not result in direct discharges of wastes to Harbor waters. Stormwater runoff from the terminal site under Alternative 3 could contain particulate debris from operation of the Project facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

Vessel discharges under Alterative 3 would be similar to the proposed Project. In 2012, the Ports of Los Angeles and Long Beach published "Vessel Discharge Rules and Regulations," which summarizes the rules and regulations of ballast water discharge and other discharges (POLB and POLA, 2012). With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with Alternative 3 is not anticipated to result in significant ballast water discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of Alternative 3 are not likely to occur.

As with the proposed Project, vessels under Alternative 3 would not contain TBT in their hull coatings; therefore, TBT is not expected to leach from vessel hulls at the site of Alternative 3. The number of ship calls under Alternative 3 would be the same as the NEPA baseline (208 ship calls), but the maximum size of the ships calling at the terminal would increase (to up to 16,000 TEU vessels). Concentrations of metals in waters near the site of Alternative 3 have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the site of Alternative 3, operation of this alternative would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling

would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of Alternative 3 would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from alternative-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.

In summary, although Alternative 3 would include in-water work and infrastructure installation within 100 feet of the water's edge that would not occur under the NEPA baseline, as well as increased operational throughput, based on the analysis above, Alternative 3 construction activities, including dredging, pile installation, and backlands improvements, and operations at the improved terminal, 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, significant water quality impacts under NEPA are not expected to occur from construction, terminal operations, or accidental spills that could occur from implementation of Alternative 3. Impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Alternative 4 – Reduced Project: Reduced Backland Improvements

Under Alternative 4 there would be two operating berths after construction, similar to the proposed Project. This alternative would require the same dredging as the proposed Project. Up to five of the existing cranes would be raised and five new cranes installed, as well as AMP. This alternative would not include any backland expansion. Based on the throughput projections, this alternative is expected to operate at its capacity of 2,115,133 TEUs by 2038, slightly less than the proposed Project. However, while the terminal could handle similar levels of cargo, this reduced project alternative would not achieve the same level of efficient operations as achieved by the proposed Project. This alternative would accommodate the largest vessels (16,000 TEUs) at Berths 226-229. The new design depth at Berths 230-232 would be capable of handling vessels up to 10,000 TEUs. Under this alternative, 208 vessels would call on the terminal in 2038, which is the same as the proposed Project.

Impact WQ-1: Alternative 4 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.

Construction

Impacts on water quality could occur from dredging, installation of sheet piles and king piles, disposal of dredged materials, and potential construction-related spills. Impacts to water quality could result from the suspension of sediments and/or the introduction of contaminants to the water column.

Dredging would disturb bottom sediments, and suspend sediments over a relatively small area. The extent of disturbance would depend on the method of dredging. Suspension of sediments during clamshell dredging occurs during bucket impact, penetration, and removal of the bucket from the sediment, as well as during bucket retrieval through the water column. During cutterhead dredging, suspended sediments are limited to the immediate vicinity of the dredge.

Sheet piles and king piles would be installed along Berths 226-229 and Berths 230-232, as described under the proposed Project, which would result in some sediment suspension, but over a much smaller area than dredging. During pile installation, turbidity would be limited to waters near the seafloor.

Existing backlands under Alternative 4 would not directly introduce sediments to the waters adjacent to the site of Alternative 4; however, stormwater runoff could carry sediments to the Harbor waters without intervention. Accidental spills could also introduce contaminants to Harbor waters.

The types of water quality impacts from construction of Alternative 4 could include:

- Increased turbidity (sediment resuspension resulting in reduced water clarity and light transmittance),
- 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), and
- Reduced pH

There are no projected effects to salinity or temperature from construction and operation of Alternative 4. The biological effects on marine biota from potential water quality impacts are discussed in Section 3.3, Biological Resources.

Effects of Dredging and Pile Installation

Dredging impacts to water quality under Alternative 4 would be the same as for the proposed Project. The majority of suspended sediments settle within one hour of dredging (Palermo et al., 2008). Similarly, dredging would result in a relatively small turbidity plume with an associated slight reduction is light transmission (about 15 percent); however, as with the proposed Project, the turbidity plume and reductions in light transmission during dredging for Alternative 4 are expected to dissipate rapidly with distance from dredging operations. As with the proposed Project, contaminants, including metals and organics, could be released into the water column during the

dredging and pile installation. However, any increase in contaminant levels in the water is expected to be localized and of short duration, and contaminant concentrations associated with any potentially disturbed or resuspended sediments during dredging are not expected to result in any long-term effects in the waters near the site.

As with the proposed Project, within areas of sediment resuspension, DO and pH could be slightly reduced. Reductions in DO concentrations, however, would be brief and are not expected to persist or cause detrimental effects to biological resources.

Contaminants, including metals and organics, could be released into the water column during the dredging and pile installation. However, any increase in contaminant levels in the water is expected to be localized and of short duration. The sediment testing performed in the proposed dredge footprint determined concentrations of all contaminants were below ERM levels, and results from elutriate testing (which used a 4:1 mixture of water and sediments from the dredge footprint) were below EPA CCC (Ramboll Environ, 2015). There was also no demonstrated toxicity in solid phase and suspended particulate phase bioassays tests in sediments at the Everport Container Terminal. Therefore, contaminant concentrations associated with any potentially disturbed or resuspended sediments during dredging and pile installation are not expected to result in any long-term effects in the waters near the site of Alternative 4.

Effects of Dredge Material Disposal

Ocean Disposal

Effects from sediment disposal at LA-2 were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE, 2005). Alternative 4 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.

Upland Disposal

Disposal of dredged material at an upland disposal site would not affect sediment quality or water quality in the vicinity of Alternative 4.

Accidental Spills

Accidents resulting in spills of fuel, lubricants, or hydraulic fluid from equipment used during dredging, pile installation, and/or disposal of dredged material, could occur during construction of Alternative 4. 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. Appropriate spill response equipment would be present at the site.

Operation

Operation of Alternative 4 would result in similar water quality impacts as described under the proposed Project, and would handle up to 2,115,133 TEUs annually by 2038 (compared to 1,240,773 TEUs under the CEQA baseline, and 1,818,000 [2038] under the NEPA baseline). This alternative would result in 208 vessel calls (an increase of 42

vessel calls above the CEQA baseline, and the same number of ship calls as the NEPA baseline). This alternative would handle vessels up to 16,000 TEUs.

Impacts on water quality during operations could occur from runoff, atmospheric (aerial) deposition of contaminants, discharges of ballast water and other contaminants from vessels, and accidental spills.

Runoff

Operation of the site under Alternative 4, as with the proposed Project, would not involve any direct point source discharges of wastes or wastewaters to the Harbor, and the transport of contaminants, such as metals, by runoff from the site of Alternative 4 would contribute incrementally to changes in receiving water quality.

Deposition of Contaminants

Direct atmospheric deposition of air pollutants that settle in the Port (including at the site of Alternative 4) and on harbor waters would be similar to that described above for the proposed Project, and may provide an increased impact on local watersheds. For particulates, including suspended zinc and copper pollutants from the site of Alternative 4 (tire and brake wear from equipment and trucks), direct impacts would not be expected to significantly affect water quality due to the likely limited and dispersed nature of direct deposition on Harbor waters, and because direct aerial deposition would not allow for a significant buildup of these pollutants before entering Harbor waters.

Accidental Spills

The potential for accidental spills (in upland areas and from vessels) to affect Harbor waters under Alternative 4 would be similar to the proposed Project. If spilled materials in upland areas were not captured prior to reaching the storm drain system, such materials could reach the Main Channel adjacent to the site of Alternative 4. Spills or illegal discharges from vessels could also occur in the same waters or during their transit to and from the Everport Container Terminal from the Harbor entrance at Angel's Gate. Impacts on water and sediment quality would depend on (1) the characteristics of the material spilled, such as volatility, solubility in water, and sedimentation rate, and (2) the speed and effectiveness of the spill response and cleanup efforts. Potential releases of pollutants from a large spill to Harbor waters and sediments would be minimized through existing regulatory and on-site controls and are unlikely to occur during the life of Alternative 4.

Vessel Discharges and Contaminants

The amount of vessel traffic at the site of Alternative 4 would increase by up to 42 annual ship calls (by 2038) as compared to the CEQA baseline (but there would be no increase compared with the NEPA baseline). The water quality effects under Alternative 4 from vessel discharges and leaching of contaminants from vessel coatings (including TBT, copper, and zinc) would be similar to the proposed Project. TBT has been discontinued from use, and concentrations of metals, such as those used in antifouling applications (copper and zinc), have been measured near or below detection limits in waters adjacent to the site of Alternative 4.

CEQA Impact Determination

Construction

As with the proposed Project, in-water dredging and pile installation under Alternative 4 would disturb and resuspend bottom sediments, which would result in temporary and localized changes to some water quality indicators. Dredging of Berths 226–229 and Berths 230-232 may reduce DO concentrations in the immediate vicinity of the dredge, but this decrease would generally not extend beyond the dredge area or persist following the completion of the dredging operation. Changes in pH and contaminant levels could also occur as a result of construction activities for Alternative 4. Turbidity and TSS concentrations would rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases.

As with the proposed Project, dredging for Alternative 4 would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB, which include monitoring requirements and controls for DO, light transmittance (turbidity), pH, and suspended solids necessary to assure compliance with applicable effluent limitations, or any other CWA limitation, or with any State laws or regulations. Monitoring data would be used by the dredge contractor to ensure that water quality limits specified in the permit are not exceeded. This could include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume.

Sediments could be disposed of at LA-2or an approved upland disposal site. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226–229 and Berths 230-232 dredging footprints complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F), and the CSTF determined in August 2015 that the sediments are suitable for disposal at LA-2. If the sediments are disposed of at an upland disposal facility, they would have to meet acceptance criteria and would not result in adverse impacts. Therefore, water quality impacts due to dredging and disposal would be less than significant.

Runoff from the terminal site during installation of infrastructure would be managed under a construction SWPPP prepared in accordance with GCASP requirements, and runoff control structures would be placed and maintained around the construction area to minimize loss of site soils to the storm drain system. Runoff during construction would not cause regulatory standards to be violated, and impacts would be less than significant.

Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes that can be effectively contained in the work area and cleaned up immediately (Port of Los Angeles Spill Prevention and Control Procedures [CA012]). Accidental or incidental spills or leaks that occur on land are expected to be contained and cleaned up before any impacts on surface water quality can occur. Construction and industrial SWPPPs and standard BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to enter storm drains. The unlikelihood of spills to occur, combined with established prevention measures, would reduce the probability that

regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant.

Accidental spills from dredges or barges could directly affect water quality in the waters adjacent to the site of Alternative 4; however, the probability of an accidental spill from a construction vessel to the Harbor is low. In addition, if an accidental spill does occur, the planning effort to contain and neutralize the spill and the actual spill response by the dredging contractors (deployment of floating booms to contain and absorb the spill and use pumps to assist the cleanup) would likely prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor.

Operation

The footprint of the terminal would not change from existing conditions, but the amount of truck traffic and yard equipment operations at the terminal under Alternative 4 would increase to handle up to 2,115,133 TEUs annually (from 1,240,773 TEUs annually under the CEQA baseline). Rail traffic would also increase at the existing on-dock railyard. This would 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 the Harbor.

Runoff under Alternative 4 would be similar to that under Alternative 2 (the No Project Alternative) and managed under an industrial SWPPP to minimize the generation of particulate pollutants. The quality of any runoff would be expected to comply with the permit conditions. Runoff from the existing terminal is routed to catch basins on site, and discharged to harbor waters. Under Alternative 4, runoff would still be collected on site and discharged to the Main Channel until 2038. With increased throughput, the amount of contaminants (such as metals and PAHs) in runoff would increase. As described under the proposed Project above, receiving water standards for the Harbor are usually not exceeded due in part to mixing effects, and it is reasonable to expect that these effects would also keep pollutants in runoff under Alternative 4 from resulting in violations of receiving water quality objectives.

Upland operations associated with Alternative 4 would not result in direct discharges of wastes to Harbor waters. Stormwater runoff from the terminal site under Alternative 4 could contain particulate debris from operation of the facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

Vessel discharges under Alterative 4 would be similar to, although somewhat less than the proposed Project due to lower operational throughput. In 2012, the Ports of Los Angeles and Long Beach published “Vessel Discharge Rules and Regulations,” which summarizes the rules and regulations of ballast water discharge and other discharges (POLB and POLA, 2012). This document, which is updated as the applicable regulations change, has been distributed to all terminal operators/shipping lines to make them aware of the regulations. With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with Alternative 4 are not anticipated to result in significant ballast water discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of Alternative 4 are not likely to occur.

As with the proposed Project, vessels under Alternative 4 would not contain TBT in their hull coatings. Therefore, TBT is not expected to leach from vessel hulls at the site of Alternative 4. The number of ship calls under Alternative 4 would increase compared to the CEQA baseline (by 42 ship calls), and the maximum size of the ships calling at the terminal would increase (to 16,000 TEU vessels). Concentrations of metals in waters near the site of Alternative 4 have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the site of Alternative 4, operation of this alternative would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of Alternative 4 would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from Alternative 4-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.

In summary, based on the analysis above, Alternative 4 construction activities, including dredging, pile installation, and infrastructure installation, and operations at the improved terminal, 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, significant water quality impacts are not expected to occur from construction, terminal operations, or accidental spills that could occur from implementation of Alternative 4. Impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction

Alternative 4 would include in-water work and infrastructure installation within 100 feet of the water's edge that would not occur under the NEPA baseline. As with the proposed Project, in-water dredging and pile installation under Alternative 4 would disturb and resuspend bottom sediments, which would result in temporary and localized changes to some water quality indicators, which would not occur under the NEPA baseline. Dredging of Berths 226–229 and Berths 230-232may reduce DO concentrations in the immediate vicinity of the dredge, but this decrease would generally not extend beyond the dredge area or persist following the completion of the dredging operation. Changes in pH and contaminant levels could also occur as a result of construction activities for Alternative 4. Turbidity and TSS concentrations would rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases.

As with the proposed Project, dredging for Alternative 4 would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB, which include monitoring requirements and controls for DO, light transmittance (turbidity), pH, and suspended solids necessary to assure compliance with applicable effluent limitations, or any other CWA limitation, or with any state laws or regulations. Monitoring data would be used by the dredge contractor to ensure that water quality limits specified in the permit are not exceeded. This could include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume.

Sediments would be disposed of at LA-2. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226-229 and Berths 230-232 dredging footprints complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F), and the CSTF determined in August 2015 that the sediments are suitable for disposal at LA-2. If the sediments are disposed of at an upland disposal facility, they would have to meet acceptance criteria and would not result in adverse impacts. Therefore, water quality impacts due to dredging and disposal would be less than significant.

Runoff from the terminal site during installation of infrastructure would be managed under a construction SWPPP prepared in accordance with GCASP requirements and implemented prior to the 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 runoff into the Harbor. These measures, combined with the low potential for erosion, would minimize any soil and contaminant loading to the Harbor resulting from construction activities. The SWPPP would be prepared by

LAHD (or contractor) with LAHD designated as the "Legally Responsible Person." Runoff during construction is not anticipated to cause regulatory standards to be violated, and impacts would be less than significant.

Although Alternative 4 would include infrastructure construction within 100-feet of the water's edge, runoff during construction would not cause regulatory standards to be violated, and impacts would be less than significant. Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes that can be effectively contained in the work area and cleaned up immediately (Port of Los Angeles Spill Prevention and Control Procedures [CA012]). Accidental or incidental spills or leaks that occur on land within 100 feet of the water's edge are expected to be contained and cleaned up before any impacts on surface water quality can occur. Construction and industrial SWPPPs and standard BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to be transported off site and enter storm drains.

Although Alternative 4 would include infrastructure construction within 100-feet of the water's edge, the unlikelihood of spills to occur, combined with established prevention measures, would reduce the probability that regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant. Accidental spills from dredges or barges could directly affect water quality in the waters adjacent to the site of Alternative 4; however, the probability of an accidental spill from a construction vessel to the Harbor is low. In addition, if an accidental spill does occur, the planning effort to contain and neutralize the spill and the actual spill response by the dredging contractors (deployment of floating booms to contain and absorb the spill and use pumps to assist the cleanup) would likely prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor.

Operation

The footprint of the terminal would not increase, but the amount of truck traffic and yard equipment operations at the site of Alternative 4 would increase to handle up to 2,115,133 TEUs annually (from about 1,818,000 TEUs annually under the NEPA baseline) by 2038. Rail traffic would also increase at the existing on-dock railyard. This would 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 the Harbor.

The terminal site under Alternative 4 would be the same as that under the NEPA baseline; however, terminal operations would increase slightly. Runoff under Alternative 4 would be similar to that under Alternative 2 (the No Project Alternative) and managed under an industrial SWPPP to minimize the generation of particulate pollutants. The quality of any runoff would be expected to comply with the permit conditions. Runoff from the existing terminal is routed to catch basins on site, and discharged to harbor waters. Under Alternative 4, runoff would still be collected on site and discharged to the Main Channel until 2038. With increased throughput, the amount of contaminants (such as metals and PAHs) in runoff would increase. As described under the proposed Project above, receiving water standards for the Harbor are usually not exceeded due in part to mixing effects, and it is reasonable to expect that these effects would also keep pollutants

in runoff under Alternative 4 from resulting in violations of receiving water quality objectives.

Upland operations associated with Alternative 4 would not result in direct discharges of wastes to Harbor waters. Stormwater runoff from the terminal site under Alternative 4 could contain particulate debris from operation of the facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

Vessel discharges under Alterative 4 would be similar to, although somewhat greater than the NEPA baseline due to slightly higher operational throughput. In 2012, the Ports of Los Angeles and Long Beach published "Vessel Discharge Rules and Regulations," which summarizes the rules and regulations of ballast water discharge and other discharges (POLB and POLA, 2012). This document, which is updated as the applicable regulations change, has been distributed to all terminal operators/shipping lines to make them aware of the regulations. With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with Alternative 4 is not anticipated to result in significant ballast water discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of Alternative 4 are not likely to occur.

As with the proposed Project, vessels under Alternative 4 would not contain TBT in their hull coatings. Therefore, TBT is not expected to leach from vessel hulls at the site of Alternative 4. The number of ship calls under Alternative 4 would not increase compared to the NEPA baseline (208 annual ship calls), but the maximum size of the ships calling at the terminal would increase (to up to 16,000 TEU vessels). Concentrations of metals in waters near the site of Alternative 4 have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant. Even though small amounts of hazardous materials/wastes are stored on the site of Alternative 4, operation of this alternative would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of Alternative 4 would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from alternative-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.

In summary, although Alternative 4 would include in-water work and infrastructure installation within 100 feet of the water's edge that would not occur under the NEPA baseline, as well as increased operational throughput, based on the analysis above, Alternative 4 construction activities, including dredging, pile installation, and infrastructure construction within 100 feet of the water's edge, and operations at the improved terminal, 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, significant water quality impacts under NEPA are not expected to occur from construction, terminal operations, or accidental spills that could occur from implementation of Alternative 4. Impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Alternative 5 – Expanded On-Dock Railyard: Wharf and Backland Improvements with an Expanded TICTF

Alternative 5 would be the same as the proposed Project, but with an additional on-dock rail track at the Terminal Island Container Transfer Facility (TICTF). Under Alternative 5, there would be two operating berths after construction and the terminal would add 23.5 acres of backlands, similar to the proposed Project. This alternative would require the same dredging as the proposed Project. This alternative would accommodate the largest vessels (16,000 TEUs) at Berths 226-229. The new design depth at Berths 230-232 would be capable of handling vessels up to 10,000 TEUs. Based on the throughput projections, this alternative is expected to operate at its capacity of approximately 2,379,525 TEUs by 2038, the same as the proposed Project. Under this project alternative, the terminal could handle similar levels of cargo as the proposed Project, but would have added capacity at the TICTF and be able to transport a greater number of containers via rail than the proposed Project. Under this alternative, 208 vessels would call on the terminal in 2038, the same as the proposed Project.

Impact WQ-1: Alternative 5 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.

Construction

Impacts on water quality could occur from dredging, installation of sheet piles and king piles, disposal of dredged materials, and potential construction-related spills. Impacts to water quality could result from the suspension of sediments and/or the introduction of contaminants to the water column.

Dredging would disturb bottom sediments, and suspend sediments over a relatively small area. The extent of disturbance would depend on the method of dredging. Suspension of sediments during clamshell dredging occurs during bucket impact, penetration, and removal of the bucket from the sediment, as well as during bucket retrieval through the water column. During cutterhead dredging, suspended sediments are limited to the immediate vicinity of the dredge.

Sheet piles and king piles would be installed along Berths 226-229 and Berths 230-232, as described under the proposed Project, which would result in some sediment suspension, but over a much smaller area than dredging. During pile installation, turbidity would be limited to waters near the seafloor.

Existing backlands under Alternative 5 would not directly introduce sediments to the waters adjacent to the site of Alternative 5; however, stormwater runoff could carry sediments to the Harbor waters without intervention. Accidental spills could also introduce contaminants to Harbor waters.

They types of water quality impacts from construction of Alternative 5 could include:

- Increased turbidity (sediment resuspension resulting in reduced water clarity and light transmittance),
- 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), and
- Reduced pH

There would be no effects to salinity or temperature from construction and operation of Alternative 5. The biological effects on marine biota from potential water quality impacts are discussed in Section 3.3, Biological Resources.

Effects of Dredging and Pile Installation

Dredging impacts to water quality under Alternative 5 would be the same as for the proposed Project. The majority of suspended sediments settle within one hour of dredging (Palermo et al., 2008). Similarly, dredging would result in a relatively small turbidity plume with an associated slight reduction is light transmission (about 15 percent); however, as with the proposed Project, the turbidity plume and reductions in light transmission during dredging for Alternative 5 are expected to dissipate rapidly with distance from dredging operations. As with the proposed Project, contaminants, including metals and organics, could be released into the water column during the dredging and pile installation. However, any increase in contaminant levels in the water is expected to be localized and of short duration, and contaminant concentrations associated with any potentially disturbed or resuspended sediments during dredging are not expected to result in any long-term effects in the waters near the site of Alternative 5.

As with the proposed Project, within areas of sediment resuspension, DO and pH could be slightly reduced. Reductions in DO concentrations, however, would be brief and are not expected to persist or cause detrimental effects to biological resources.

Contaminants, including metals and organics, could be released into the water column during the dredging and pile installation. However, any increase in contaminant levels in

the water is expected to be localized and of short duration. The sediment testing performed in the proposed dredge footprint determined concentrations of all contaminants were below ERM levels, and results from elutriate testing (which used a 4:1 mixture of water and sediments from the dredge footprint) were below EPA CCC (Ramboll Environ, 2015). There was also no demonstrated toxicity in solid phase and suspended particulate phase bioassays tests in sediments at the Everport Container Terminal. Therefore, contaminant concentrations associated with any potentially disturbed or resuspended sediments during dredging are not expected to result in any long-term effects in the waters near the site of Alternative 5.

Effects of Dredge Material Disposal

Ocean Disposal

Effects from sediment disposal at LA-2 were evaluated during the site designation process (EPA 1988) and subsequently evaluated in consideration of higher maximum annual disposal volume (EPA and USACE, 2005). Alternative 5 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.

Upland Disposal

Disposal of dredged material at an upland disposal site would not affect sediment quality or water quality in the vicinity of Alternative 5.

Effects of Backlands Improvements

Alternative 5 would have the same backland improvements as the proposed Project (23.5 acres of additional backlands and associated improvements) and therefore would have the same effects related to runoff from backlands improvements as the proposed Project described above. Construction-related impacts on surface water quality would be limited to potential non-stormwater discharges or discharges of stormwater runoff to Harbor waters that receive runoff from the terminal site under Alternative 5. Runoff from the upland portions of the site of Alternative 5 is managed in compliance with applicable permits and ordinances (including MS4 requirements) prior to discharge to the Harbor (to the Main Channel).

Effects of Rail Line Addition at TICTF

Alternative 5 includes construction of one additional rail line at the TICTF. Construction of the rail line would include excavation of the rail line corridor, soil compaction, placement of crushed base, installation of the track, and paving. Therefore, potential effects resulting from construction of the rail line would be similar to those described for backland improvements described above. Construction-related impacts on surface water quality would be limited to potential non-stormwater discharges or discharges of stormwater runoff to Harbor waters that receive runoff from the terminal site under Alternative 5. Runoff from the upland portions of the site of Alternative 5 is managed in compliance with applicable permits and ordinances (including MS4 requirements) prior to discharge to the Harbor (to the Main Channel).

Accidental Spills

Accidents resulting in spills of fuel, lubricants, or hydraulic fluid from equipment used during dredging, pile installation, and/or disposal of dredged material, could occur during

construction of Alternative 5. 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.

Operation

Operation of Alternative 5 would result in similar water quality impacts as described under the proposed Project, and would handle up to 2,379,525 TEUs annually by 2038 (compared to 1,240,773 TEUs under the CEQA baseline, and 1,818,000 TEUs under the NEPA baseline by 2038). This alternative would result in 208 vessel calls (an increase of 42 vessel calls above the CEQA baseline, but no increase above the NEPA baseline) and an increase in the peak day vessel calls at the terminal. This alternative would handle vessels up to 16,000 TEUs.

Impacts on water quality during operations could occur from runoff, atmospheric (aerial) deposition of contaminants, discharges of ballast water and other contaminants from vessels, and accidental spills.

Runoff

Operation of the site under Alternative 5, as with the proposed Project, would not involve any direct point source discharges of wastes or wastewaters to the Harbor, and the transport of contaminants, such as metals, by runoff from the site of Alternative 5 would contribute incrementally to changes in receiving water quality.

Deposition of Contaminants

Direct atmospheric deposition of air pollutants that settle in the Port (including at the site of Alternative 5) and on harbor waters would be slightly higher than that described above for the proposed Project (due to increased railyard activities related to the addition of the on-dock rail track), and may provide an increased impact on local watersheds. For particulates, including suspended zinc and copper pollutants from the site of Alternative 5 (tire and brake wear from equipment and trucks), direct impacts would not be expected to significantly affect water quality due to the likely limited and dispersed nature of direct deposition on Harbor waters, and because direct aerial deposition would not allow for a significant buildup of these pollutants before entering Harbor waters.

Accidental Spills

The potential for accidental spills (in upland areas and from vessels) to affect Harbor waters under Alternative 5 would be similar to the proposed Project. If spilled materials in upland areas were not captured prior to reaching the storm drain system, such materials could reach the Main Channel adjacent to the site of Alternative 5. Spills or illegal discharges from vessels could also occur in the same waters or during their transit to and from the Everport Container Terminal from the Harbor entrance at Angel's Gate. Impacts on water and sediment quality would depend on (1) the characteristics of the material spilled, such as volatility, solubility in water, and sedimentation rate, and (2) the speed and effectiveness of the spill response and cleanup efforts. Potential releases of pollutants from a large spill to Harbor waters and sediments would be minimized through existing regulatory and on-site controls and are unlikely to occur during the life of Alternative 5.

Vessel Discharges and Contaminants

The amount of vessel traffic at the site of Alternative 5 would increase by up to 42 annual ship calls (by 2038) as compared to the CEQA baseline. However, ship calls for Alternative 5 would be the same as the NEPA baseline. The water quality effects under Alternative 5 from vessel discharges and leaching of contaminants (including TBT, copper, and zinc) from vessel coatings would be similar to the proposed. TBT has been discontinued from use, and concentrations of metals, such as those used in antifouling applications (copper and zinc), have been measured near or below detection limits in waters adjacent to the site of Alternative 5.

CEQA Impact Determination

Construction

As with the proposed Project, in-water dredging and pile installation under Alternative 5 would disturb and resuspend bottom sediments, which would result in temporary and localized changes to some water quality indicators. Dredging off Berths 226–229 and Berths 230-232 may reduce DO concentrations in the immediate vicinity of the dredge, but this decrease would generally not extend beyond the dredge area or persist following the completion of the dredging operation. Changes in pH and contaminant levels could also occur as a result of construction activities for Alternative 5. Turbidity and TSS concentrations would rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases.

As with the proposed Project, dredging for Alternative 5 would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB, which include monitoring requirements and controls for DO, light transmittance (turbidity), pH, and suspended solids necessary to assure compliance with applicable effluent limitations, or any other CWA limitation, or with any State laws or regulations. Monitoring data would be used by the dredge contractor to demonstrate 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.

Sediments could be disposed of at LA-2 or an approved upland disposal site. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226–229 and Berths 230-232 dredging footprints complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F) and the CSTF determined in August 2015 that the sediments are suitable for disposal at LA-2. If the sediments are disposed of at an upland disposal facility, they would have to meet acceptance criteria and would not result in adverse impacts. Therefore, water quality impacts due to dredging and disposal would be less than significant.

Runoff from the terminal site during installation of infrastructure would be managed under a construction SWPPP prepared in accordance with GCASP requirements, and runoff control structures would be placed and maintained around the construction area to minimize loss of site soils to the storm drain system. Runoff during construction is not anticipated to cause regulatory standards to be violated, and impacts would be less than significant.

Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes that can be effectively contained in the work area and cleaned up immediately (Port of Los Angeles Spill Prevention and Control Procedures [CA012]). Accidental or incidental spills or leaks that occur on land are expected to be contained and cleaned up before any impacts on surface water quality can occur. Construction and industrial SWPPPs and standard BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to enter storm drains. The unlikelihood of spills to occur, combined with established prevention measures, would reduce the probability that regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant.

Accidental spills from dredges or barges could directly affect water quality in the waters adjacent to the site of Alternative 5; however, the probability of an accidental spill from a construction vessel to the Harbor is low. In addition, if an accidental spill does occur, the planning effort to contain and neutralize the spill and the actual spill response by the dredging contractors (deployment of floating booms to contain and absorb the spill and use pumps to assist the cleanup) would likely prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor.

Operation

The footprint of the terminal would not change from existing conditions, but the amount of truck traffic and yard equipment operations at the terminal under Alternative 5 would increase to handle up to 2,379,525 TEUs annually (from 1,240,773 TEUs annually under the CEQA baseline). An additional on-dock rail line would be constructed, and rail traffic would also increase at the existing on-dock railyard. The percentage of terminal throughput that would be handled by on-dock rail is expected to increase from approximately 18.5 percent in 2013 to approximately 27.7 percent in 2038 under this alternative. This would 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 the Harbor.

Runoff under Alternative 5 would be similar to the proposed Project and managed under an industrial SWPPP to minimize the generation of particulate pollutants. The quality of any runoff would be expected to comply with the permit conditions. Runoff from the existing terminal is routed to catch basins on site, and discharged to harbor waters. Under Alternative 5, runoff would still be collected on site and discharged to the Main Channel until 2038. With increased throughput, the amount of contaminants (such as metals and PAHs) in runoff would increase. As described under the proposed Project above, receiving water standards for the Harbor are usually not exceeded due in part to mixing effects, and it is reasonable to expect that these effects would also keep pollutants in runoff under Alternative 5 from resulting in violations of receiving water quality objectives.

Upland operations associated with Alternative 5 would not result in direct discharges of wastes to Harbor waters. Stormwater runoff from the terminal site under Alternative 5 could contain particulate debris from operation of the facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES

discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

Vessel discharges under Alterative 5 would be similar to those for the proposed Project due to lower operational throughput. In 2012, the Ports of Los Angeles and Long Beach published "Vessel Discharge Rules and Regulations," which summarizes the rules and regulations of ballast water discharge and other discharges (POLB and POLA, 2012). This document, which is updated as the applicable regulations change, has been distributed to all terminal operators/shipping lines to make them aware of the regulations. With international, federal, and state regulations in place, the increased vessel traffic and terminal operations associated with Alternative 5 are not anticipated to result in significant ballast water discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of Alternative 5 are not likely to occur.

As with the proposed Project, vessels under Alternative 5 would not contain TBT in their hull coatings. Therefore, TBT is not expected to leach from vessel hulls at the site of Alternative 5. The number of ship calls under Alternative 5 would increase compared to the CEQA baseline (by 42 ship calls), and the maximum size of the ships calling at the terminal would increase to 16,000 TEU vessels). Concentrations of metals in waters near the site of Alternative 5 have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the site of Alternative 5, operation of this alternative would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of Alternative 5 would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant under CEQA.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from Alternative 5-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.

In summary, based on the analysis above, Alternative 5 construction activities, including dredging, pile installation, and infrastructure installation, and operations at the improved terminal, 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, significant water quality impacts under CEQA are not expected to occur from construction, terminal operations, or accidental spills that could occur from implementation of Alternative 5. Impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction

Alternative 5 would include in-water work and infrastructure installation within 100 feet of the water's edge that would not occur under the NEPA baseline. However, construction of the additional TICTF rail line in the backlands could occur absent a DA permit. As with the proposed Project, in-water dredging and pile installation under Alternative 5 would disturb and resuspend bottom sediments, which would result in temporary and localized changes to some water quality indicators, which would not occur under the NEPA baseline. Dredging off Berths 226–229 and Berths 230-232 may reduce DO concentrations in the immediate vicinity of the dredge, but this decrease would generally not extend beyond the dredge area or persist following the completion of the dredging operation. Changes in pH and contaminant levels could also occur as a result of construction activities for Alternative 5. Turbidity and TSS concentrations would rapidly drop to levels approaching background concentrations within a few hundred meters of the dredge once dredging ceases.

As with the proposed Project, dredging for Alternative 5 would require a Section 10 permit from USACE and a CWA Section 401 Water Quality Certification from the LARWQCB, which include monitoring requirements and controls for DO, light transmittance (turbidity), pH, and suspended solids necessary to assure compliance with applicable effluent limitations, or any other CWA limitation, or with any state laws or regulations. Monitoring data would be used by the dredge contractor to demonstrate 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.

Sediments would be disposed of at LA-2. Sediments from the proposed dredging area were tested using standard EPA/USACE protocols (according to an approved SAP) prior to dredging to determine the suitability of the material for unconfined, aquatic disposal or other disposal alternatives. The sediments within the Berths 226-229 and Berths 230-232 dredging footprints complied with the chemistry, toxicity, and bioaccumulation suitability requirements for ocean disposal (Title 40 CFR Parts 220–228; Appendix F), and the CSTF determined in August 2015 that the sediments are suitable for disposal at LA-2. If the sediments are disposed of at an upland disposal facility, they would have to

meet acceptance criteria and would not result in adverse impacts. Therefore, water quality impacts due to dredging and disposal would be less than significant.

Runoff from the terminal site during installation of infrastructure would be managed under a construction SWPPP prepared in accordance with GCASP requirements and implemented prior to the 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 runoff into the Harbor. These measures, combined with the low potential for erosion, would minimize any soil and contaminant loading to the Harbor resulting from construction activities. The SWPPP would be prepared by LAHD (or contractor) with LAHD designated as the "Legally Responsible Person." Runoff during construction is not anticipated to cause regulatory standards to be violated, and impacts would be less than significant.

Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes that can be effectively contained in the work area and cleaned up immediately (Port of Los Angeles Spill Prevention and Control Procedures [CA012]). Accidental or incidental spills or leaks that occur on land within 100 feet of the water's edge are expected to be contained and cleaned up before any impacts on surface water quality can occur. Construction and industrial SWPPPs and standard BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to be transported off site and enter storm drains. Although Alternative 5 would include infrastructure construction within 100 feet of the water's edge, the unlikelihood of spills to occur, combined with established prevention measures, would reduce the probability that regulatory standards would be violated due to an accidental spill. Therefore, impacts would be less than significant.

Accidental spills from dredges or barges could directly affect water quality in the waters adjacent to the site of Alternative 5; however, the probability of an accidental spill from a construction vessel to the Harbor is low. In addition, if an accidental spill does occur, the planning effort to contain and neutralize the spill and the actual spill response by the dredging contractors (deployment of floating booms to contain and absorb the spill and use pumps to assist the cleanup) would likely prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor.

Operation

The footprint of the terminal would increase with the expansion of the 23.5 acres; however, the railyard footprint would not change. The amount of truck traffic and yard equipment operations at the site of Alternative 5 would increase to handle up to 2,379,525 TEUs annually (from about 1,818,000 TEUs annually under the NEPA baseline [2038]). Rail traffic would also increase at the existing on-dock railyard. The percentage of terminal throughput that would be handled by on-dock rail is expected to increase from approximately 18.5 percent in 2013 to approximately 27.7 percent in 2038 under this alternative. This would 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 the Harbor.

Although the terminal site under Alternative 5 would be the same as that under the NEPA baseline, terminal operations would increase over the NEPA baseline. Runoff under Alternative 5 would be similar to that under the proposed Project and managed under an industrial SWPPP to minimize the generation of particulate pollutants. The quality of any runoff would be expected to comply with the permit conditions. Runoff from the existing terminal is routed to catch basins on site, and discharged to harbor waters. Under Alternative 5, runoff would still be collected on site and discharged to the Main Channel until 2038. With increased throughput, the amount of contaminants (such as metals and PAHs) in runoff would increase. As described under the proposed Project above, receiving water standards for the Harbor are usually not exceeded due in part to mixing effects, and it is reasonable to expect that these effects would also keep pollutants in runoff under Alternative 5 from resulting in violations of receiving water quality objectives.

Upland operations associated with Alternative 5 would not result in direct discharges of wastes to Harbor waters. Stormwater runoff from the terminal site under Alternative 5 could contain particulate debris from operation of the facilities, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits and SWPPP requirements. Therefore, water quality impacts from site runoff would not be significant.

Vessel discharges under Alterative 5 would be similar to those of the NEPA baseline. The number of ship calls under Alternative 5 would be the same as those with the NEPA baseline; however, the sizes of the ships calling at the terminal would increase (and container throughput would increase). In 2012, the Ports of Los Angeles and Long Beach published “Vessel Discharge Rules and Regulations,” which summarizes the rules and regulations of ballast water discharge and other discharges (POLB and POLA, 2012). This document, which is updated as the applicable regulations change, has been distributed to all terminal operators/shipping lines to make them aware of the regulations. With international, federal, and state regulations in place, the increased terminal operations associated with Alternative 5 is not anticipated to result in significant ballast water discharge impacts from vessels.

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 rate and chemical composition of illegal discharges from commercial vessels is unknown. However, there is no evidence that illegal discharges from ships presently utilizing the Harbor are causing widespread problems in the Harbor. Over several decades, there has been a vast improvement in Harbor 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. Illegal discharges resulting from operation of Alternative 5 are not likely to occur.

As with the proposed Project, vessels under Alternative 5 would not contain TBT in their hull coatings. Therefore, TBT is not expected to leach from vessel hulls at the site of Alternative 5. The number of ship calls under Alternative 5 would be the same compared to the NEPA baseline, but the maximum size of the ships calling at the terminal would increase to 16,000 TEU vessels. Concentrations of metals in waters near the site of

Alternative 5 have been well below regulatory criteria (POLA and POLB, 2009; AMEC, 2012). Therefore, water quality impacts related to leaching of contaminants from hull coatings would be less than significant.

Even though small amounts of hazardous materials/wastes are stored on the site of Alternative 5, operation of this alternative would require compliance with all existing hazardous material/waste laws and regulations (such as the Resource Conservation and Recovery Act of 1976, Department of Transportation Hazardous Materials Regulations, and the Hazardous Waste Control Law of the California Health and Safety Code). Compliance with these laws would ensure that potentially hazardous materials handling would occur in a safe and acceptable manner. These regulations, which govern the shipping, transport, storage, and handling of hazardous materials, would limit the severity and frequency of potential releases of hazardous materials. Therefore, operation of Alternative 5 would not substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release (including spill from vessels) or explosion of a hazardous substance. Impacts would be less than significant under NEPA.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from alternative-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.

In summary, although Alternative 5 would include in-water work and infrastructure installation within 100 feet of the water's edge that would not occur under the NEPA baseline, as well as increased operational throughput, based on the analysis above, construction and operation of Alternative 5 is not expected to create pollution, contamination, or a nuisance, or result in violations of water quality standards or permit conditions. Therefore, significant water quality impacts under NEPA are not expected to occur from construction, terminal operations, or accidental spills that could occur from implementation of Alternative 5. Impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.11.4.4 Summary of Impact Determinations

Table 3.11-3 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 3.11-3: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Proposed Project	**WQ-1:** The proposed Project would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	CEQA: Less than significant	CEQA: No mitigation is required.	CEQA: Less than significant
		NEPA: Less than significant	NEPA: No mitigation is required.	NEPA: Less than significant
Alternative 1 – No Federal Action	**WQ-1:** Alternative 1 would not create pollution, contamination, or a nuisance as in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	CEQA: Less than significant	CEQA: No mitigation is required.	CEQA: Less than significant
		NEPA: No impact	NEPA: No mitigation is required.	NEPA: No impact
Alternative 2 – No Project	**WQ-1:** Alternative 2 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	CEQA: Less than significant	CEQA: No mitigation is required.	CEQA: Less than significant
		NEPA: Not applicable	NEPA: Not applicable.	NEPA: Not applicable.
Alternative 3 – Reduced Project: Reduced Wharf Improvements	**WQ-1:** Alternative 3 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	CEQA: Less than significant	CEQA: No mitigation is required.	CEQA: Less than significant
		NEPA: Less than significant	NEPA: No mitigation is required.	NEPA: Less than significant
Alternative 4 – Reduced Project: No Backlands Improvements	**WQ-1:** Alternative 4 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	CEQA: Less than significant	CEQA: No mitigation is required.	CEQA: Less than significant
		NEPA: Less than significant	NEPA: No mitigation is required.	NEPA: Less than significant
Alternative 5 – Expanded On-Dock Railyard: Wharf and Backland Improvements with an Expanded TICTF	**WQ-1:** Alternative 5 would not create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in Harbor waters.	CEQA: Less than significant	CEQA: No mitigation is required.	CEQA: Less than significant
		NEPA: Less than significant	NEPA: No mitigation is required.	NEPA: Less than significant

3.11.4.5 Mitigation Monitoring

Neither the proposed Project nor any of the alternatives would result in significant impacts on Water Quality, Sediments, and Oceanography. Therefore, no mitigation measures nor monitoring is required.

3.11.5 Significant Unavoidable Impacts

No significant unavoidable impacts on Water Quality, Sediments, and Oceanography would occur as a result of construction or operation of the proposed Project or any of the alternatives.