Section 3.14
Water Quality, Sediments, and Oceanography

SECTION SUMMARY

This section identifies the existing water quality, oceanographic conditions, and sediment conditions in the area of the proposed Project and alternatives, and addresses potential impacts on those parameters that could result from implementing the proposed Project or an alternative. The primary features of the proposed Project and alternatives that could affect these resources include the following: dredging of approximately 20,000 cy at proposed Berth 306; construction of approximately 1,250 lf of wharf at proposed Berth 306; and operation of the marine terminal through 2027. In addition, the potential impact of landside improvements is evaluated in terms of water quality (i.e., development of the 41-acre backlands).

Section 3.14, Water Quality, Sediments, and Oceanography, provides the following:

- A description of the existing water and sediment quality in Los Angeles-Long Beach Harbor (Port Complex);
- A description of the existing oceanographic parameters in the Port Complex;
- A description of applicable local, state, and federal regulations and policies regarding water quality and sediment quality that could be affected by construction or operation of the proposed Project or alternatives;
- A discussion on the methodology used to determine whether the proposed Project or alternatives would adversely affect water quality or sediment quality in the 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, as applicable.

Key Points of Section 3.14:

The proposed Project would expand an existing container terminal, and its operations would be consistent with other uses and container terminals in the Project area. The alternatives evaluated included the No Project Alternative, the No Federal Action Alternative, three reduced project alternatives, and one alternative that expands the proposed Project (expanded railyard). Potential water surface and water column impacts could result from Project construction (including dredging, wharf construction, and pile driving), runoff, and accidental spills. Operational impacts could result from runoff, changes to water circulation, erosion, vessel spills, illegal discharges, and contaminant leaching. All potential impacts are considered less than significant.

3.14.1 Introduction

This section addresses the potential impacts to water quality, sediments, and oceanography that would result from implementing the proposed Project or any of its alternatives. This section also addresses surface water hydrology and potential for flooding impacts. Potential impacts to groundwater are discussed in Section 3.7, Groundwater and Soils.

3.14.2 Environmental Setting

3.14.2.1 Regional Setting

The proposed Project is located in the Dominguez Watershed, which drains approximately 132 square miles (342 square kilometers). For water quality regulatory purposes, the Dominguez Watershed includes the receiving water area of the Port Complex. Los Angeles Harbor (the Harbor) has been physically modified through previous dredging and filling projects, as well as construction of breakwaters and other structures. The Harbor consists of the Inner Harbor (channels, basins, and slips north of the Vincent Thomas Bridge), Outer Harbor (south of Reservation Point to the San Pedro and Middle breakwaters), and Main Channel (between the Vincent Thomas Bridge and Reservation Point) (refer to Figures 2-1 and 2-2). Located on Terminal Island, the APL Terminal is bounded by: the Pier 300 Turning Basin and Fish Harbor to the west; the Pier 300 Channel to the south; and the Pier 300 Shallow Water Habitat area to the east. The subtidal area that extends from the southeast corner of the 41-acre fill site to the Seaplane Lagoon is considered Shallow Outer Harbor habitat (LAHD, 2004). The waters from the southeast corner of the 41-acre fill site extending east through the Pier 300 Channel are considered Outer Harbor habitat (see Figure 2-1). However, the area north of a line drawn from the southeast corner of Reservation Point to Pier 400 is considered part of the Inner Harbor for water and sediment quality regulatory purposes, with the exception of Fish Harbor (the area is designated Inner Harbor for TMDL purposes -- the 303(d) list of impaired water bodies). The Los Angeles Harbor is adjacent to Long Beach Harbor. Both Harbors (the Port Complex) function oceanographically as one unit due to a connection via Cerritos Channel and because they share Outer Harbors behind the San Pedro and Middle breakwaters. In addition, there is an opening in the Pier 400 causeway designed to enhance tidal circulation.

The combined Los Angeles/Long Beach 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 Los Angeles 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, and spillover from the Lake Machado weir also add freshwater to the Harbor during and after storm events.

The existing beneficial uses of coastal and tidal waters of the Los Angeles Harbor, as identified in the *Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan), include: industrial service supply, navigation, water contact recreation, noncontact water recreation, commercial and sportfishing, marine habitat, preservation of rare and

endangered species, and shellfish harvesting (Los Angeles RWQCB, 1994). Waters in the area of the proposed Project that are 303(d)-listed for impairment (*Proposed 2010 Integrated Report,: Clean Water Act Sections 303(d) and 305(b), April 19, 2010*) include: Consolidated Slip, Cabrillo Marina, Fish Harbor, Inner Cabrillo Beach Area, Los Angeles/Long Beach Outer Harbor (inside breakwater), and Los Angeles/Long Beach Inner Harbor (SWRCB, 2010). Dominguez Channel, which drains into Consolidated Slip, is also on the 2008 Section 303(d) list. The reasons for impairment of these water bodies are summarized in Table 3.14-1. For those Los Angeles Harbor waters listed on the 303(d) list, the Clean Water Act (CWA) requires the establishment of Total Maximum Daily Loads (TMDLs). A TMDL is defined as "the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background"(40 CFR Section 130.2) such that the capacity of the water body to assimilate pollutant loadings is not exceeded. Upon establishment of TMDLs, the state is required to incorporate the TMDLs along with appropriate implementation measures into the state Water Quality Management Plan (40 CFR Sections 130.6[c][1], 130.7). TMDLs are divided among existing (and potentially future) loading sources through an allocation process. Point sources regulated under the NPDES program receive wasteload allocations; nonpoint sources receive load allocations. The sum of wasteload and load allocations may not exceed the TMDL. A draft TMDL, including a proposed Basin Plan Amendment and accompanying staff report and supporting information was published on December 17, 2010. A problem statement for the assessment for toxic pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbors has been released (Los Angeles RWQCB and USEPA, 2010). Within this document, the water quality is assessed, the problem statement is defined, and numeric targets are established. The draft TMDL also presents source and linkage analyses, establishes the TMDLs and allocations, and includes a proposed implementation plan.

Table 3.14-1: Final 2008/2010 Section 303(d) Listed Waters in Los Angeles Harbor

Listed Waters/Reaches	Impairments
Los Angeles Harbor, Cabrillo Marina (77 acres)	Tissue:DDT[1], PCBs[2] Benzo(a)pyrene (3,4-Benzopyrene -7-d)
Los Angeles Harbor, Inner Cabrillo Beach Area (82 acres)	Indicator Bacteria Tissue: DDT*, PCBs*
Los Angeles/Long Beach Outer Harbor, inside breakwater (4042 acres)	Tissue: DDT, PCBs Sediment: Toxicity
Los Angeles Harbor, Fish Harbor (34 acres)	Tissue: DDT, PAHs Sediment: Benzo(a)pyrene (3,4-Benzopyrene -7-d), Benzo(a)anthracene, Chlordane, Chrysene (C1-C4), Copper, DDT, Dibenz(a,h)anthracene, Lead, Mercury, PAHs[3], PCBs, Phenanthrene, Pyrene, toxicity Zinc
Los Angeles/Long Beach Inner Harbor (3003 acres)	Beach Closures, Tissue: DDT, PCBs Sediment: Benthic Community Effects, Sediment Toxicity Benzo(a)pyrene (3,4-Benzopyrene -7d), Chrysene (C1-C4), Copper, Zinc Toxicity
Los Angeles Harbor, Consolidated Slip (36 acres)	Tissue: Chlordane, Dieldrin,DDT*, PCBs* toxaphene Sediment: Cadmium, Chlordane, Chromium, Copper, DDT, Lead, Mercury, PCBs, Zinc, Benthic Community Effects, 2-Methylnaphthalene, Benzo(a)pyrene (3,4-benzopyrene -7-d), Benzo[a]anthracene, Chrysene (C1-C4) Dieldrin, Phenanthrene, Pyrene
Domínguez Channel, (unlined portion below Vermont Ave.) (140 acres)	Tissue: Chlordane, DDT, dieldrin, Lead Sediment: DDT, PCBs, Zinc, Benthic Community Effects, Coliform Bacteria, Sediment Toxicity Ammonia, Benzo(a)pyrene (3,4-Benzopyrene -7-d, Benzo[a] anthracene, Chrysene (C1-C4), PCBs, Phenanthrene. Pyrene. toxicity

Source: SWRCB, 2010.

1. Dichlorodiphenyltrichloroethane
2. Polychlorinated biphenyls
3. Polynuclear (or Polycyclic) aromatic hydrocarbons
4. Hydrogen ion concentration
5. Bis(2ethylhexyl)phthalate

*Fish consumption advisory

The Los Angeles RWQCB 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 water and sediment quality parameters that could be affected directly by the proposed Project and alternatives include dissolved oxygen (DO), hydrogen ion concentration (pH), turbidity/transparency, and contaminants. Water and sediment quality parameters that could be indirectly affected by the proposed Project and alternatives include nutrients and contaminants (dredging both releases and distributes nutrients and contaminants in the sediments during dredging operations, and dredging also removes nutrients and 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 proposed Project site could affect these conditions in the receiving waters surrounding Pier 300. Circulation (current patterns) could be affected by the proposed Project and Project alternatives because the proposed Project or alternative could potentially affect water exchange between the Inner Harbor and Fish Harbor areas and adjacent waters of the Harbor.

3.14.2.2 Water Quality

Water quality conditions in the Port Complex 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 LAHD in 2008 and 2009 (LAHD, 2009), the 2008 San Pedro Bay biological study (SAIC, 2010) and other sources as cited below. The Port conducted monthly water quality sampling at several stations in the Harbor from July 2008 to October 2009, including in the proposed Project area. These included two stations (LA 58 and LA 62) in the shallow Outer Harbor area directly south of Berths 302–305 and the proposed Berth 306 , two stations (LA 59 and LA60) in the Pier 300 Shallow Water Habitat, and one station (LA 61) in the Seaplane Lagoon (Figure 3.14-1). Use of data from 2008-2009 (and earlier for some parameters) to approximate conditions for the CEQA baseline is appropriate because the CEQA baseline period is July 2008 through June 2009.

No natural freshwater surface features occur at the proposed Project site or the remainder of Terminal Island. Surface freshwater generated at or near the proposed Project site is from storm water runoff, which occurs episodically following rain events. Some runoff from the APL Terminal drains northeast into the adjacent Harbor waters in the Seaplane Lagoon; however, as most of the runoff drains towards Pier 300 Channel south of the terminal, runoff is directed away from the Shallow Water Habitat area. The quality of the runoff water may reflect loadings from oils, grease, hydrocarbons, and particulate matter associated with the operation of vessel unloading facilities, industrial land uses, and runoff from roadways, which accumulate on the land surfaces during periods of dry weather.

Figure 3.14-1: Water Quality Monitoring Stations

Marine water quality in the Harbor is primarily affected by climate, circulation (including tidal currents), and biological activity. Parameters such as salinity, pH, temperature, and transparency/turbidity are influenced primarily by large-scale oceanographic and meteorological conditions, while DO and nutrients are related to local processes in addition to regional conditions. Results from the 2008 Baseline Study indicated that water quality characteristics within the Port Complex did not exhibit large spatial trends, and the variability for individual water quality parameters appeared to be related to water temperature rather than habitat types (SAIC, 2010).

Where impaired water bodies have been identified, waterbody-specific TMDLs are developed and adopted to address the impairment. TMDLs are calculations of the allowable loads of a single pollutant from all contributing point and nonpoint sources that a waterbody can receive and still meet water quality standards. An adopted TMDL will contain quantified reductions in the pollutant(s) of concern that can be translated into additional permit requirements for municipal, industrial, and construction permits. As discussed in Section 3.14.2.1 above, the Final TMDLs for the Harbor are under development and are expected to be adopted into the basin plan in early 2012.

Water quality data for the Dominguez Channel and Los Angeles/Long Beach Harbor have been evaluated by the Los Angeles RWQCB (Los Angeles Region) and USEPA as part of the assessment of impaired water bodies of the nation under Section 303(d) of the Clean Water Act. The Act requires that "Each State shall identify those waters within its boundaries for which the effluent limitations…are not stringent enough to implement any water quality standard applicable to such waters".[1] Consequently, the 2008 Section 303(d) List provided by the Los Angeles RWQCB identified numerous toxicants as pollutants or stressors to the Harbor waters. As summarized in Table 3.14-1, these included polynuclear aromatic hydrocarbons (PAHs; also referred to as polycyclic aromatic hydrocarbons), the pesticide DDT, PCBs, zinc, benthic community effects and sediment toxicity in most Harbor areas. 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 waters of the Port Complex are governed by the Los Angeles RWQCB Basin Plan and applicable statewide plans, which serve as the state Water Quality Management Plan. TMDLs and allocations for these types of pollutants are normally set in terms of long-term mass loading levels, and the state and USEPA work with stakeholders to weigh many factors in setting waste load and load allocations. The Los Angeles Harbor/Inner Cabrillo Beach Bacteria TMDL has been completed and approved by the USEPA (POLA and POLB, 2009). The Dominguez Channel and greater Los Angeles/Long Beach Harbor Toxics TMDLs are still being finalized.

[1] These waters do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water on the lists and develop action plans, called TMDL to improve water quality.

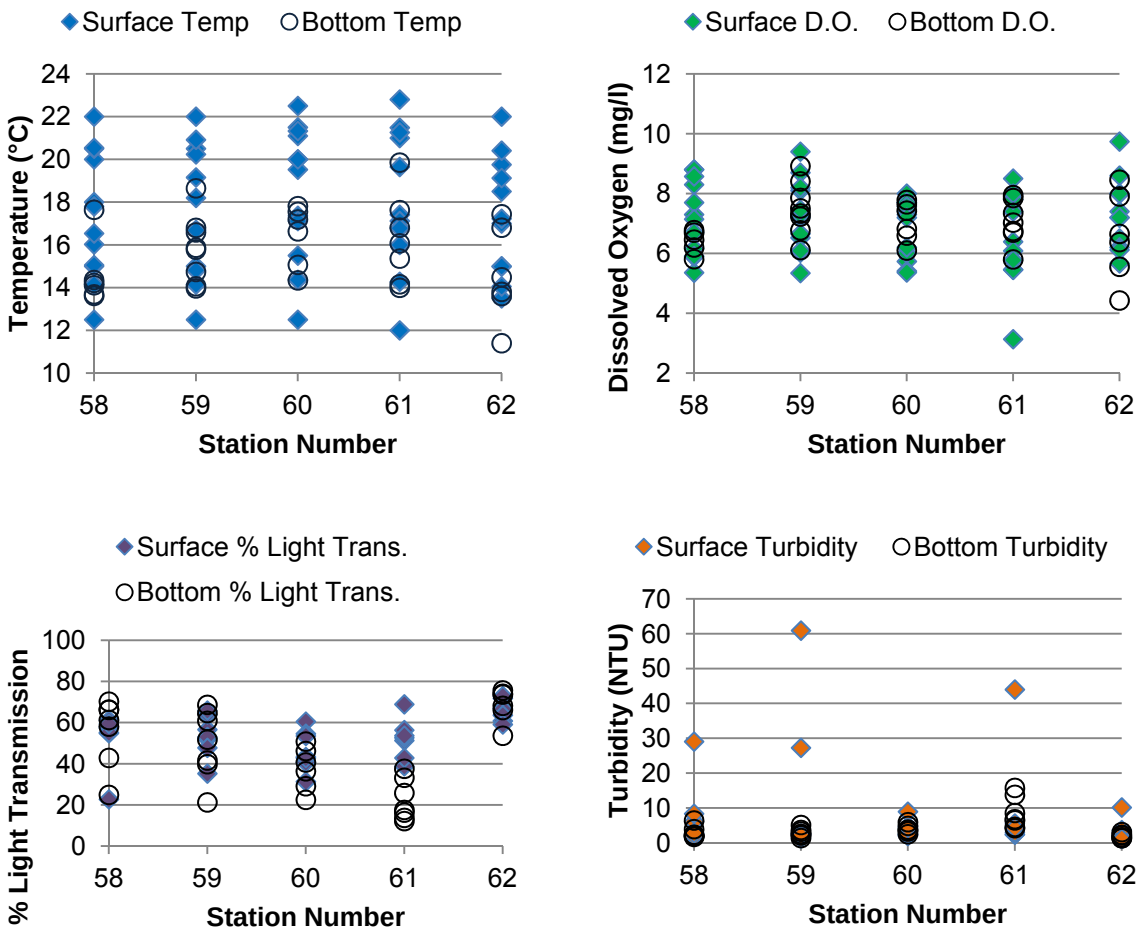
3.14.2.2.1 Dissolved Oxygen

Dissolved oxygen (DO) is a principal indicator of marine water quality. DO concentrations vary in response to a variety of processes and conditions, such as:

- Respiration of 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.

The Basin Plan (Los Angeles RWQCB, 1994) specifies that the mean annual DO concentration of waters shall be 7 milligrams per liter (mg/L) or greater with no event less than 5 mg/L, except that the mean annual DO concentration in the Outer Harbor area shall be 6 mg/L or higher. Current DO concentrations throughout the Port Complex generally exceed the 5 mg/L standard, with average values in the 6 to 8 mg/L range, with 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).

Results of quarterly water quality studies in 2000 at four stations near the proposed Project site (in the Pier 300 Channel off Berth 303, two stations in the Shallow Water Habitat area, and in the Seaplane Lagoon) indicated DO averaged 5.97 to 8.13 mg/L (MEC and Associates, 2002). In July 2008, three stations were sampled near the proposed Project site (in the Pier 300 Channel off Berth 303, in the Shallow Water Habitat area, and in the Seaplane Lagoon). During that sampling event, DO ranged from 4.38 to 9.69 mg/L (SAIC, 2010). During approximately monthly sampling between July 2008 and October 2009 at five stations off Pier 300, mean DO concentrations at each station ranged from 6.7 to 7.2 mg/L, with a maximum range of recorded values between 3.1 and 9.9 mg/L during the monitoring period (Figure 3.14-2; LAHD, 2009). Most of the lowest oxygen levels (less than 5 mg/L) were recorded near bottom at Station LA62 in the channel off Berth 305.



Source: LAHD, 2009

Figure 3.14-2: Examples of Water Quality off Pier 300, July 2008 - October 2009.

The lowest value (3.1 mg/L) recorded was at the surface in September 2009 in Seaplane Lagoon. All other values throughout the water column during that survey ranged between 6.8 and 9.6 mg/L. Dissolved oxygen values at the other four stations in September ranged between 6.1 and 9.9 mg/L, so it is possible the low value was due to instrument error.

3.14.2.2.2 pH

Hydrogen ion concentrations (pH) in the open ocean typically remain fairly constant due to the buffering capacity of seawater (Sverdrup et al., 1942). It is affected by plant and animal metabolism, 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 open ocean, pH levels typically range from 8.0 to 8.3.

The pH and buffering capacity at the proposed Project site are similar to that of the open ocean because the Harbor is directly connected to and exchanges with the Pacific Ocean. During approximately monthly sampling between July 2008 and October 2009 at five stations off Pier 300, mean station pH ranged narrowly from 8.2 to 8.4, with a maximum range between 7.8 and 8.7 units (LAHD, 2009). In July 2008, three stations were sampled near the proposed Project site (in the Pier 300 Channel off Berth 303, in the Shallow Water Habitat area, and in the Seaplane Lagoon), and pH ranged from 7.19 to 7.48 (SAIC, 2010). These values were unusually low for marine waters and were not typical of those found commonly in Los Angeles Harbor (MEC and Associates, 2002; LAHD, 2009). During the 2000 Baseline study, pH levels at the four stations nearest the proposed Project site (in the channel off Berth 303, two stations in the Shallow Water Habitat area, and in the Seaplane Lagoon) ranged from an average of 7.91 to 8.05 units (MEC and Associates, 2002). The Los Angeles RWQCB 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 (proposed Project impacts) in bays or estuaries (RWQCB, 1994).

3.14.2.2.3 Transparency

Transparency is a measure of water clarity or the ability of light to pass through water. Transparency can be measured as the depth in the water column that a black and white (secchi) disk can be seen from the surface or by a transmissometer, an electronic instrument that measures light attenuation by water as a percent of light transmission. Transparency can also be assessed indirectly by measuring turbidity, or the muddiness or cloudiness of water expressed as a standard unit of measure (Nephelometric Turbidity Units, or NTUs), which quantifies the diffraction of light by particles suspended in the water. The amount (mass) of suspended material, including sediments and organic solids, such as algae and detritus in water is expressed as total suspended solids (TSS), and is measured in mg/L.

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 are a source of mixing in the water column and may disturb bottom sediments that may 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 ft. Water clarity generally increased from 1967 to 1986-1987 (USACE and LAHD, 1992), although individual readings still vary greatly. Suspended solids concentrations in surface waters of the Outer Harbor range from less than 1.0 to 22.4 mg/L (USACE and LAHD 1992). During approximately monthly sampling between July 2008 and October 2009 at five stations off Pier 300, mean light transmission per station ranged from 37 to 71 percent, with a maximum range at those stations between 8 and 82 percent light transmission. Light transmission was usually higher at the deeper stations (to the south and east of Berths 305 and the proposed Berth 306) than in the Shallow Water Habitat area (Figure 3.14-2). Turbidity was also measured between July 2008 and December 2009. Mean turbidity at the five stations ranged between 1.9 and 6.7 NTUs, with a range throughout the water column between 0.7 and 60.8 NTUs. Highest values were recorded near the surface at the stations in the Seaplane Lagoon and in the Shallow Water Habitat area. In July 2008, three stations

sampled near the proposed Project site (in the Pier 300 Channel off Berth 303, in the Shallow Water Habitat area, and in the Seaplane Lagoon) averaged 14.4 to 72.3 percent light transmission (SAIC, 2010). Results of quarterly water quality studies in 2000 at four stations near the proposed Project site (in the channel off Berth 303, two stations in the Shallow Water Habitat area, and in the Seaplane Lagoon) indicated light transmission averaged 22.4 to 54.9 percent (MEC and Associates, 2002).

3.14.2.2.4 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 natural drainage channels (e.g., Dominguez Channel), as well as local surface and storm drain runoff from within the Port area, and municipal wastewater treatment effluents (i.e., TIWRP), dry weather flows, leaching from ship hull antifouling paints, petroleum or waste spills, atmospheric deposition, and resuspension of bottom sediments containing legacy (i.e., historically deposited) contaminants such as DDT and PCBs. Most of the metal, pesticide, and PAH contaminants that enter the Harbor have a low solubility in water and adsorb onto particulate matter that eventually settles to the bottom and accumulates in bottom sediments. Channel deepening projects in both the Inner and Outer Harbor areas, including the Deep Draft Navigation Improvement program and the Port of Los Angeles Channel Deepening Project, have removed 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. 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 Port over time.

A Harbor-wide monitoring study of contaminant levels in Harbor waters was performed beginning in 2005. For metals, with the exception of copper in 5 of 253 samples from throughout the Port Complex, 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 Los Angeles Harbor, two in the Cabrillo Marina complex (including one sample that exceeded the higher maximum exposure criteria), and one in Fish Harbor. Concentrations of organic chemicals (including chlorinated pesticides, PCBs, PAHs, phenols, and phthalates) were consistently very low, and usually below detection limits (POLA and POLB, 2009). During the Harbor-wide monitoring study of contaminants, tributyltin (TBT) was detected in 9 of 205 samples collected in Los Angeles Harbor, with concentrations of TBT in seven of those samples that exceeded the published National Ambient Water Quality Criteria chronic exposure limit (7.4 ng/L, no California-specific criteria, including CTR, exist for TBT). Those seven locations, primarily within the Inner Harbor, were in areas typified by limited water circulation, but the highest reported TBT value in the study of 17.1 ng/L occurred at Station LA62, adjacent to Berths 302-305 in 2006. Concentrations of other organic chemicals were found to be low, when detected, and concentrations of these contaminants were not a concern in the waters of the Harbor (POLA and POLB, 2009).

Water quality regulations have identified indicator bacteria evaluated 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 Port-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. 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 quarterly sampling in 2008, bacterial concentrations at five stations off Pier 300 were all well below AB 411 standards (LAHD, 2009).

3.14.2.2.4.1 Atmospheric Deposition of Organic Pollutants

Recent studies have linked the atmospheric deposition of pollutants, such as particulates, metals, phthalates, and PAHs, to pollutant loads in water bodies in the Chesapeake Bay and Great Lakes. 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 aerial deposition in pollutant transport or its contribution to pollutant loading of Harbor waters (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 California Water Resources Control Board are in the process of examining the need to regulate atmospheric deposition to protect both fresh and saltwater bodies from pollution.

3.14.2.2.4.2 Atmospheric Deposition of Metals

Indirect dry deposition of metals on land within a watershed can largely influence stormwater quality in urban areas, and can subsequently affect the water quality in downstream water bodies. Sabin et al. determined trace metal loads from indirect dry deposition to land (not directly to the water surface) of the Los Angeles River, Dominguez Channel, and Ballona Creek watersheds were far larger than the estimated trace metal loads found in stormwater emanating from the same watersheds, which agreed with results from previous studies (Sabin et al., 2005). 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). 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.

3.14.2.2.4.3 Aqueous Sources of Contaminants

Potential contaminants in the Harbor might be derived from sources such as permitted discharges, nonpoint source runoff, atmospheric deposition from nearby industries, illicit dumping of wastes, and flux into the overlying water from deposited sediment-associated contaminants. Data from the Los Angeles RWQCB indicate that permitted discharges to the Harbor include: major NPDES discharge sources (industrial sources with a yearly average flow of 0.1 million gallons per day or more); a publicly owned treatment works (TIWRP); refineries; minor discharges (discharges other than major discharges); general discharges (covered by general permits); discharges covered under an industrial stormwater permit; discharges under the construction stormwater permit; and discharges from municipal storm drains covered under the Los Angeles County MS4 Permit.

As described above, a number of segments of the bodies of water in the Dominguez Basin and the Port Complex are listed under Section 303(d) of the CWA as impaired, including Inner Cabrillo Beach, Cabrillo Marina, Dominquez Channel (estuary to Vermont), Fish Harbor, and Consolidated Slip.

3.14.2.2.4.3.1 Runoff

Runoff from the existing Project site is directed towards the wharf along Berths 302-305 for discharge into the channel. Currently, the tenant at Berths 302-305 is implementing its Best Management Practices (BMPs) and Storm Water Pollution Prevention Plan (SWPPP) to reduce levels of contaminants in stormwater runoff from the facility (EMS, 2010). Operational improvements have included training of facility staff, steam cleaning in areas of concern with capture of wash water, cleaning of drains, and regular sweeping of the facility. Structural controls include the construction of a wall to reduce overspray from a wash area and berms to divert runoff, as well as installing drain inserts and diapers to prevent trash and sediment from entering the storm drain system. The installation of nine drain insets at the facility resulted in the capture of more than 200 lbs (91 kgs) of debris between fall 2009 and spring 2010. BMPs have resulted in compliance with water quality objectives for specific conductance and oil and grease in 2010, though levels of iron, aluminum, zinc and total suspended solids still exceed benchmark levels. The tenant at Berths 302-305 has increased the number or drain inserts since their last monitoring event and are revising their BMPs and their SWPPP to continue to reduce levels of contaminants in stormwater runoff from the facility.

3.14.2.2.4.3.2 Leachate from Vessel Hulls

Antifouling coatings used on vessel hulls are another source of metals, especially copper and zinc, to Harbor waters. 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 tributyltin (TBT) were first manufactured and used in the U.S. in the late 1960s, and were found to prevent fouling on ships for approximately five 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. Tributyltin is also introduced to the aquatic environment through atmospheric deposition, but actual deposition rates have not been quantified (Mearns et al., 1991).

As discussed in Section 3.14.2.2.4 above, TBT was detected in 9 of 205 ambient samples collected in Los Angeles 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 ng/L (no California-specific standard, including CTR, exists for TBT). The highest reported TBT value in the study (17.1 ng/L) was recorded at Station LA62, adjacent to Berths 302-305 in 2006 (POLA and POLB, 2009). However, due to the relative low solubility of TBT in water (half life of several months), the numerous potential sources in the Port Complex, and the circulation patterns in the vicinity of Pier 300, there is no way to determine the source of the TBT.

In addition to TBT, there are a variety of other compounds found in antifouling coatings on vessels that may enter and dock at terminals. The paint coatings used are dependent on the type of material comprising the hull. Tributyltin 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 (GRP), and wood hulls.

Copper-based coatings contain small amounts of zinc, also used as a biocide in antifouling paints, and as such, both metals will leach from copper coatings of vessels docking at the terminal facility. Similarly, TBT-based paints often also contain small amounts of copper and zinc, and thus in addition to TBT, these paints will also leach zinc and copper into surrounding waterways. Water sampling near Pier 400 conducted in 2005-2006 as part of the Port's Enhanced Water Quality Monitoring measured copper concentrations below 1 microgram per liter (µg/l), which is below the chronic toxicity standard of 3.1 µg/l. As noted above in Section 3.14.2.2.4 above, with the exception of copper in five samples from throughout the Harbor, concentrations of dissolved metals did not exceed regulatory limits (POLA and POLB, 2009). During quarterly sampling in 2008 at five stations off Pier 300, dissolved copper concentrations were also 1 µg/l or less (LAHD, 2009).

3.14.2.2.4.4 Nutrients

Nutrients are necessary for primary production of organic matter by phytoplankton. Spatial and temporal variations in phosphates and nitrates change from day-to-day and are influenced by the local environment. Sources of nutrients to Harbor waters include wastewater discharges, such as the TIWRP in the Outer Harbor, 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 potentially be released into the water column during dredging, as well (Jones and Lee, 1981).

The following ranges were measured in 1978 by Harbors Environmental Projects (HEP, 1980): phosphate, 0.172 to 12.39 parts per million (ppm); ammonia, 0.12 to 119.28 ppm; nitrate, 0.00 to 82.97 ppm; and nitrite, 0.00 to 5.38 ppm. Nutrient concentrations were high during periods of high stormwater runoff. Compared to these nutrient concentrations measured in the 1970s, current baseline concentrations may be relatively lower due to greater restrictions on the wastewater discharges to the Harbor and operational and structural controls designed to reduce levels in stormwater runoff. However, data from long-term monitoring efforts do not exist to verify this. During quarterly sampling in 2008 at five stations off Pier 300, nitrate concentrations ranged from 0 to 0.12 ppm, and nitrate concentrations were 0.01 ppm or less (LAHD, 2009).

3.14.2.2.5 Temperature

Temperature of waters in the Harbor shows seasonal and spatial variation that reflects the influence of the ocean, local climate, physical configuration of the Harbor, 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 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 approximately monthly sampling between July 2008 and October 2009 at five stations off Pier 300, mean station temperatures ranged from 15.4 to 17.8°C (60° to 64°F), with a range throughout the water column between 11.4°C to 22.8°C (53° to 73°F) (LAHD, 2009). Lowest temperatures were recorded near bottom at the deeper stations in the Pier 300 Channel off Berth 305 and proposed Berth 306, while warmest temperatures were recorded near the surface in the Shallow Water Habitat area and the Seaplane Lagoon (Figure 3.14-2**).** In July 2008, three stations were sampled near the proposed Project site (in the channel off Berth 303, in the Shallow Water Habitat area, and in the Seaplane Lagoon). During that sampling event, water temperatures ranged between 15.8° and 23.5°C (60° to 74°F) (SAIC, 2010). Results of quarterly water quality studies in 2000 at four stations near the proposed Project site (in the channel off Berth 303, two stations in the Shallow Water Habitat area, and in the Seaplane Lagoon) indicated water temperatures averaged 15.0° to 18.9°C (59° to 66°F) (MEC and Associates 2002). Temperatures in the inner portions of the Port Complex occasionally are slightly warmer due to limited mixing with colder offshore water masses (MEC and Associates, 2002; SAIC, 2010).

3.14.2.2.6 Salinity

Salinity variations occur in the Harbor due to the effects of rainfall, stormwater and urban runoff, waste discharges, and evaporation. Harbor salinities usually range from 30.0 to 34.2 parts per thousand (ppt), but salinities ranging from less than 10.0 ppt to greater than 39.0 ppt have been reported (USACE and LAHD, 1984). Typical salinity for southern California coastal waters is around 33 ppt. Higher salinity values in the Port Complex are generally associated with evaporation in warm months in the farther recesses of the harbor (areas with a reduced rate of exchange with offshore waters), while lower values are generally found near surface as a result of freshwater input. Freshwater 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 approximately monthly sampling between July 2008 and October 2009 at five stations off Pier 300, salinity values ranged between 32.0 and 34.8 practical salinity units (psu ~ ppt) (LAHD, 2009). In July 2008, salinity ranged from 33.3 to 33.5 ppt at three stations sampled near the proposed Project site (in the Pier 300 Channel off Berth 303, in the Shallow Water Habitat area, and in the Seaplane Lagoon (SAIC, 2010). Results of quarterly water quality studies in 2000 at four stations near the proposed Project site (in the channel off Berth 303, two stations in the Shallow Water Habitat area, and in the Seaplane Lagoon) indicated salinity averaged 33.17 to 33.41 ppt (MEC and Associates, 2002).

3.14.2.3 Marine Sediments

Sediment quality in Los Angeles 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 localize contamination hotspots. Recent studies include: randomized sampling studies conducted in 1998, 2003, 2005 and 2006; hotspot characterizations reported in 2005, 2006 and 2007; and a data gap study reported in 2008 (POLA and POLB, 2009). Data from these studies were summarized in the WRAP and are used to characterize current conditions in Los Angeles Harbor. A sediment characterization study was performed in 2010 to determine the potential suitability of sediments from the proposed dredge footprint for unconfined aquatic disposal (AMEC, 2011).

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

Marine biological communities in part 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 the harbor vary in sediment toxicity from no toxicity to high toxicity in the Port Complex (Bay et al., 2005; Bay et al., 2010).

Although the proposed Project area is within the 303(d)-listed "Inner Harbor", the area is not considered a hot spot. Sediments within the project area are estimated to be "unimpacted" or "likely unimpacted" through the SQO evaluation process based on data from Bight '03, Bight '08, and the Biological Baseline 2008 evaluations. These findings are through the integration of chemical, biological, and toxicological data.

Recent sediment investigations have determined the material within the project area to be predominantly fines. As part of the Bight '08 Regional Monitoring Surveys, sediments were sampled in July 2008 at one station off Berth 305 at a depth of 18 m (SCCWRP, 2009). Mean grain size was 4.9 μm, corresponding to very fine silt. During the 2000 studies of the Port Complex, sediments in the Pier 300 Channel off Berth 305 were found to be comprised primarily of silt (52 percent) and clay (32 percent) with a mean grain size of 8 μm (MEC and Associates, 2002).

In order to assess ocean disposal suitability, sediments within the proposed dredge footprint were characterized in accordance with the USEPA/USACE guidelines outlined in "Evaluation of Dredged Material Proposed for Ocean Disposal" (the Green Book Testing Manual) (USEPA and USACE 1991) and the Inland Testing Manual. This evaluation, conducted in 2010, included Tier II chemical, toxicological, and bioaccumulation analyses (AMEC, 2011). Results from this evaluation are summarized below; the full Sediment Characterization Study Report is included as an appendix to this EIS/EIR (Appendix K).

The area off future Berth 306 encompasses portions of Composite Areas B and C (Figure3.14-3). Since the proposed dredging design depth would be -55 ft MLLW, the composites included material down to -57 ft MLLW. These composites underwent full Green Book ocean disposal analyses. Additional material below the two-foot overdredge (i.e., -52 to -54 ft MLLW in composite area B and -57 to -59 ft MLLW in composite area C were composited by area for additional chemical and grain size analysis. The results of these deeper core segments were used to evaluate general sediment quality at or near the Project depth; such analyses are normally not performed, but in this case provided additional sediment quality information in the area of the proposed Project. Post-dredge, this depth (-57 ft MLLW) would become the sediment surface (AMEC, 2011).

Unconfined disposal suitability determinations are conducted through the evaluation of sediment chemistry, toxicity, and biocummulation potential testing. In general, sediments were comprised primarily of sand and silt (Table 3.14-2). For ocean disposal testing, sediment contaminant concentrations are often compared to Long et. al, effect range low (ERL) and effect range median (ERM) values (Long et. al., 1995).

Based on the testing results, the majority of the sediments off Berth 306 proposed for dredging would not be suitable for unconfined aquatic disposal at the Cabrillo shallow water habitat or LA-2 Ocean Dredged Material Disposal Site (ODMDS) due to (1) consistently elevated concentrations of arsenic, copper, and nickel above ERL values, with nickel exceeding the ERM in one core, and (2) statistically significant toxicity to amphipods with more than a 20 percent difference in survival compared to the reference sediments. However, the eastern-most portion of Berth 306 (within testing Area C) could qualify for unconfined aquatic disposal at either of the aforementioned sites (AMEC, 2011).

Source: AMEC, 2011

Port of Los Angeles
Berths 302 - 306 [APL]
Container Terminal Project
Sampling Map
Figure 3.14-3

CDM

Table 3.14-2: Sediment Chemistry Results (from AMEC, 2011).

Sediment Parameter	ERL	ERM	Composite C	Bottom Composite C (Overdredge)
Gravel (%)			0.0	0.0
Sand (%)			25.2	49.2
Silt (%)			56.2	38.7
Clay (%)			18.7	12.1
Median Grain Size (mm)			0.024	0.071
Metals (mg/kg)				
Copper	**34**	**270**	**46.9**	**35.5**
Lead	**46.7**	**218**	18.7	15
Mercury	**0.15**	**0.71**	0.144	0.0851
Zinc	**150**	**410**	117	94.1
PAHs (mg/kg)				
Benzo(a)anthracene	**261**	**1600**	<16	<13
Benzo(a)pyrene	**430**	**1600**	<16	<13
Chrysene	**384**	**2800**	<16	<13
Dibenz(a,h)anthracene	**63.4**	**260**	<16	<13
Phenanthrene	**240**	**1500**	<16	<13
Pyrene	**665**	**2600**	<16	<13
Total PAHs	**4022**	**44792**	NA	NA
Pesticides (mg/kg)				
Chlordane			<16	<13
Total DDTs	**1.58**	**46.1**	**1.6**	1.3
Total PCBs (Aroclors) (mg/kg)			NA	NA

Note: **Bold** values are ≥ERL.
Bold and underline are ≥ERM.
NA denotes concentrations less than the detection limit(s)

3.14.2.4 Oceanography

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

3.14.2.4.1 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) and a lower-high water (LHW), and 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 3.76 ft; and the mean diurnal range, calculated by averaging the difference between all the HHW and LLW, is approximately 5.5 ft (NOAA, 2010). Mean lower-low water (MLLW) is the mean of all LLWs, equal to 2.8 ft below mean sea level (MSL) in the Port. It is the datum from which southern California tides are measured. The extreme tidal range (between maximum high and maximum low waters) is about 10.5 ft. The highest and lowest tides reported are 7.96 ft above MLLW and -2.56 ft below MLLW, respectively (USACE and LAHD, 1992). Since 2003, the highest tide measured at the Los Angeles Harbor tide station (NOAA No. 9410660) is +7.92 ft MLLW (measured in January 2005), and the lowest was -2.34 ft MLLW, measured in January 2009 (NOAA, 2010).

3.14.2.4.2 Waves

Waves impinging on the southern California coast can be divided into three primary categories according to origin: southern hemisphere swell, northern hemisphere swell, and seas generated by local winds (USACE, 1986). The Harbor is directly exposed to ocean swells entering from two main exposure windows to the south and southeast, regardless of swell origin. The more severe waves from extratropical storms (Hawaiian storms) enter from a southerly direction. The Channel Islands and Santa Catalina Island provide some sheltering from these larger waves, depending on the direction of approach. The other major exposure window opens to the south, allowing swells to enter from storms in the southern hemisphere, tropical storms (chubascos), and southerly waves from extratropical storms. Waves and seas entering the Harbor are greatly diminished by the time they reach the Inner Harbor. Most swells from the southern hemisphere arrive at Los Angeles from May through October. Southern hemisphere swells characteristically have low heights and long periods. Typical swells rarely exceed 4 ft in height in deep water. However, with periods as long as 18 to 21 seconds, they can break at over twice their deep-water wave height. Northern hemisphere swells occur primarily from November through April. Significant, deepwater wave heights have ranged up to 20 ft, but are typically less than 12 ft (3.7 m). Northern hemisphere wave periods generally range from 12 to 18 seconds.

Local wind-generated seas 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 seas are usually less than 6 ft in height, with wave periods of less than 10 seconds.

From February 1998 through December 2009, mean wave height at the Coastal Data Information Program's Buoy 92, located 5.5 nm south of Point Fermin, was 3.3 ft (1.0 m) (CDIP, 2010). The highest significant wave heights, measured as the mean height of the largest 1/3 of the waves in a specified sampling period, during that same time period ranged between 13.3 ft (4.0 m) and 15.2 ft (4.6 m), all recorded in the months of December, January, and April.

3.14.2.4.3 Circulation

To better understand circulation patterns and watershed inputs into Los Angeles and Long Beach Harbor, the Ports undertook a program to develop a hydrodynamic and water quality model for the harbor to improve their predictions of the effectiveness of current and future control measures (the WRAP Model) (POLA and POLB, 2009).

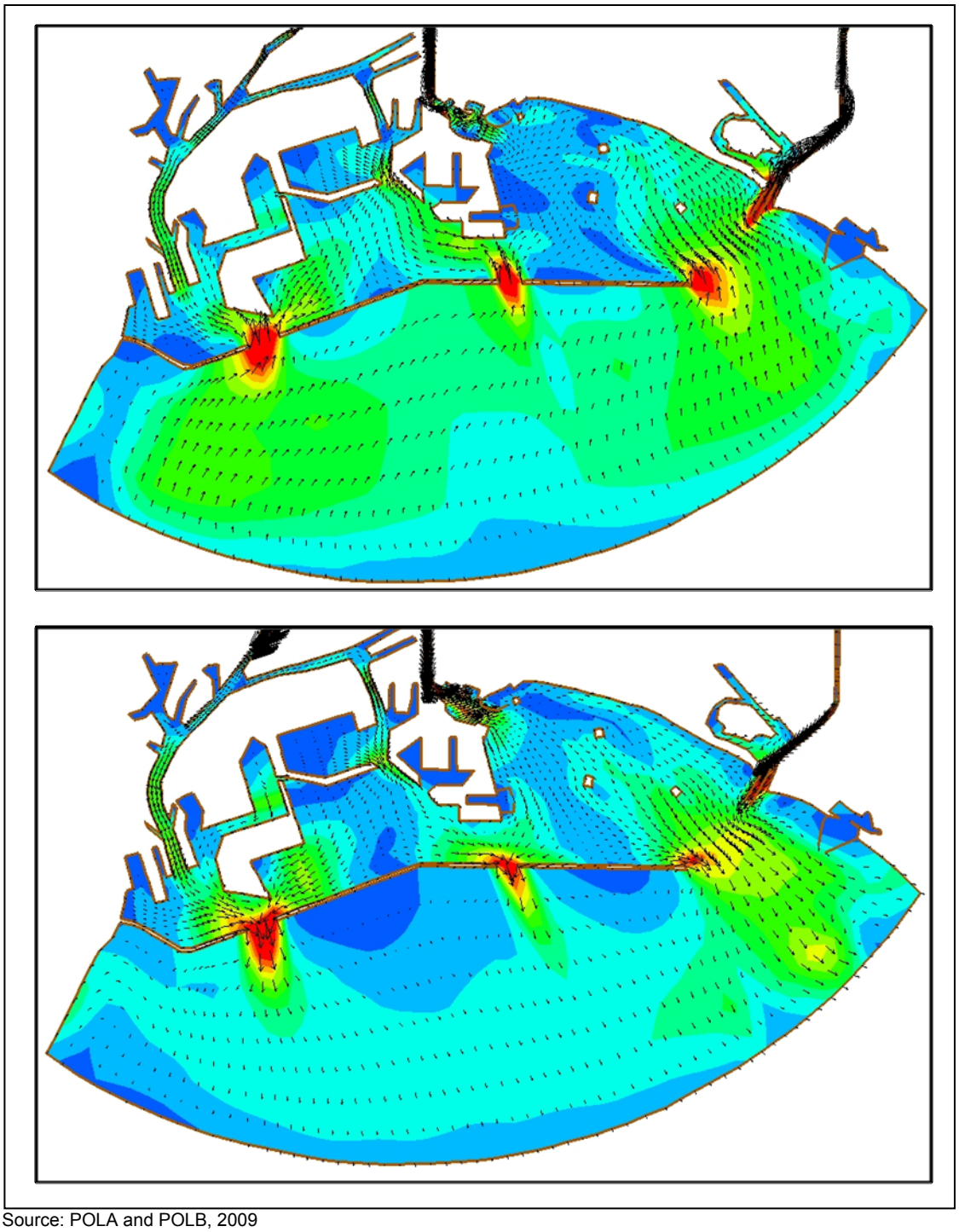
Circulation patterns are established and maintained by tidal currents. Flood tides in the Harbor flow into the Harbor and up the channels, while ebb tides flow down the channels and out of the Harbor (POLA and POLB, 2009). The Port Complex is protected from incoming waves by the Federal Breakwall, which is comprised 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 Harbor and the rest of San Pedro Bay, hence creating unique tidal circulation patterns. Modeled current direction and velocity throughout the Port Complex during both ebb and flood tides are summarized in Figure 3.14-4.

3.14.2.4.4 Flooding

The Federal Emergency Management Agency (FEMA) has identified and mapped flood hazards to support the National Flood Insurance Program. The 100-year flood zone is defined as the land that would be inundated by a flood having a one percent chance of occurring in a given year. The majority of Pier 300 is mapped by the Federal Emergency Management Agency (FEMA) as Flood Zone X (defined as areas of 0.2 percent annual chance flood; areas of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and, areas protected by levees from one percent annual chance flood) (FEMA, 2008). A portion of the pier in the vicinity of Earle and Bass Streets is mapped as Flood Zone AE (defined as special flood hazard areas that are subject to inundation by the one percent annual chance flood). The Fish Harbor area to the east of Pier 300 is also mapped as Zone AE. The AE Zones in the vicinity of the proposed Project have base flood elevations of nine feet.

The land planned for the proposed Berth 306 wharf extension and backland uses, and the Pier 300 Shallow Water Habitat area have not been mapped for flood risk by FEMA. However, waters of the Harbor near land, plus some of the landfill margins in other areas of the Harbor, are mapped within the 100-year flood zone. Adjacent areas on the landfills are generally within the 500-year flood zone.

The only sources of flooding at the proposed Project site within the 100-year and 500-year flood zones would be storm surge, tsunami, or seiche. The latter two sources are discussed in Section 3.5, Geology. The potential for future sea level rise to affect the proposed Project site is also addressed in Section 3.5, Geology. Rainfall events that result in runoff volumes exceeding the capacity of the storm drains could also cause temporary, localized ponding until the runoff drains away.



Source: POLA and POLB, 2009

Figure 3.14-4: Current patterns in Los Angeles and Long Beach Harbors predicted by the WRAP Model (Top: Flood tide. Bottom: Ebb tide.)

3.14.3 Applicable Regulations

3.14.3.1 Clean Water Act of 1972 (PL 92-500, as amended)

This Act 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 U.S. (e.g., surface waters) must be authorized through NPDES permits (under Section 402 of the CWA). In California, the SWRCB and the nine RWQCBs have authority delegated by USEPA to issue NPDES permits. California permits are also issued as Waste Discharge Requirements (WDRs) as required under California law by the Porter-Cologne Water Quality Control Act (see below). Section 301(a) 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 the USEPA issued the Vessel General Permit (described below) (USEPA, 2008).

Section 303 of the Act requires states to develop water quality standards for all waters and submit to the USEPA 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 Act 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.

All dredged material would be handled in accordance with protocols per the Los Angeles Regional Contaminated Sediments Task Force – Long Term Management Strategy (Anchor et al., 2005). The RWQCBs can issue Clean Water Act Section 401 Water Quality Certifications to certify that actions occurring in waters of the U.S. would not have adverse water quality impacts. Permits for the discharge of dredged or fill material in all jurisdictional waters of the U.S. are issued by the USACE under Section 404 of the Clean Water Act. 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 shall be free of solid dredged material.
- Compensation for loss of waters of the U.S.
- Disposal of dredged material from the proposed Project (or an alternative) could occur at the or an approved CDF at Berths 243-245 under an existing Section 404 permit. These dredged material disposal sites were previously authorized under Section 404 of the Clean Water Act by the Corps for the Port of Los Angeles Channel Deepening Project (Corps Permit No. SPL-2008-00662-AOA).

Based on the description of the proposed Project and Alternatives, no discharge of dredged or fill material is proposed and no Section 404 permit would be required.

3.14.3.2 Rivers and Harbors Appropriations Act of 1899

The Rivers and Harbors Appropriations Act of 1899 authorizes the USACE to exercise control over all construction projects in U.S. navigable waters. The intent of the Rivers and Harbors Act was originally to protect navigation and navigable capacity. These objectives were later expanded to include environmental protection. The key provision to this Act is Section 13, which makes it a crime to discharge refuse into any navigable water without the permission of the USACE. Sections 9 and 10 of the Act (33 U.S.C. Section 401 *et seq*.) regulate work and structures in navigable waters of the U.S., including dredging, filling, and bridges. Section 9 relates to bridges and causeways and is administered by the U.S. Coast Guard. Under Section 10, the USACE evaluates impacts to navigation and navigable capacity related to work and structures in navigable waters of the U.S. Work includes activities such as dredging, and structures may include piers, wharves, over water cranes, weirs, jetties, outfalls, aids to navigation, docks, and other structures.

3.14.3.3 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 transportation for the purpose of disposal of dredged material in the ocean, 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 includes all U.S. ocean waters in and beyond the territorial sea (within 12 nautical miles of the nearest shoreline), vessels flying the U.S. flag, and vessels leaving U.S. ports. Section 102 of the MPRSA authorizes the USEPA to promulgate environmental criteria for evaluation of all disposal permit actions, to retain review authority over the USACE MPRSA Section 103 permits, and to designate ocean disposal sites for dredged material disposal. Disposal of dredged material at the USEPA-approved LA-2 Ocean Dredged Material Disposal Site would be conducted only if the dredged material met the permitted volume and sediment quality requirements for this site, the disposal was separately approved by USEPA, and if beneficial reuse or disposal at another site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) were unavailable or impractical. Effects from disposal of dredged material at LA-2 were evaluated during the site designation process (prior to approval) and were determined to be insignificant (USEPA and USACE, 2005).

3.14.3.4 Coastal Nonpoint Source Pollution Control Program

This is a joint program between the USEPA and 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.

3.14.3.5 Porter-Cologne Water Quality Control Act of 1972

The Porter-Cologne Water Quality Control Act (or Porter-Cologne Act - California Water Code Section 13000 *et seq*.), which is the principal law governing receiving water quality regulation in California, establishes a comprehensive program to protect water

quality and the beneficial uses of state waters. Unlike the CWA, Porter-Cologne covers both surface water and groundwater.[2] Since 1973, the SWRCB and the nine RWQCBs were established by the 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 federal CWA, such as the NPDES permitting program. Under the 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. Pursuant to the Act, the RWQCB may then prescribe "waste discharge requirements" (WDRs) that add conditions related to control of the discharge. Porter-Cologne 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 Federal 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 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 would include conditions and requirements addressing potential impacts to the existing surface water and groundwater and sediment quality. These conditions would be addressed by complying with the requirements of the applicable permit and implementing management programs. The assessment of impacts for dredging and filling is based on these regulatory controls for dredging and filling activities that contain conditions including standard WDRs. In more recent times pilings, and other associated wharf work that does not require a Section 404 permit from the Corps, may require a Section 401 water quality certification from the RWQCB to certify these installations would not violate state water quality standards. With full implementation of these permit conditions and requirements, no significant impacts to the existing water or sediment quality conditions should occur from construction and operations.

3.14.3.6 Bays and Estuaries Plan

Under the California Bay Protection and Toxic Cleanup Act, the SWRCB is required to develop sediment quality objectives for toxic pollutants to protect the condition of enclosed bays and estuaries. The SWRCB issued Part 1 (Sediment Quality) of the *Water Quality Control Plan for Enclosed Bays and Estuaries* in August 2009. Part I of this document represents the first phase of the SWRCB's development of Sediment Quality Objectives (SQOs). This first phase 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

[2] Groundwater is discussed in Section 3.7, Groundwater and Soils.

consumption of contaminated fish and shellfish. This program is applicable to all enclosed bays and estuaries in the state, including Los Angeles Harbor.

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

The Basin Plan (*Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* [Los Angeles RWQCB, 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 constituents include: bioaccumulation, biostimulatory substances, chemical constituents, DO, oil and grease, pesticides, pH, PCBs, suspended solids, toxicity, and turbidity. With the exceptions of DO and pH, water quality objectives for most of these constituents are expressed as descriptive rather than numerical limits.

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

3.14.3.8 State Water Resources Control Board Stormwater Permits

The SWRCB has issued and periodically renews a statewide General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities and a statewide General Industrial Activity Stormwater Permit for projects that do not require an individual permit for these activities. The General Permit for Construction Activities was significantly updated and revised in 2009 and the new permit became effective July 10, 2010. All construction activities that disturb 1 acre or more must prepare and implement a construction SWPPP that specifies Best Management Practices (BMPs) to prevent pollutants from contacting stormwater. 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 U.S., and perform sampling and analytical monitoring 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 General Industrial Activities Stormwater Permit requires dischargers to develop and implement an 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. The General Industrial Permit was last issued in 1997. Update and renewal of this permit is expected within the next year.

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

The agencies that discharge stormwater and urban runoff to municipal separate storm sewers system (MS4) in Los Angeles County are required to obtain and comply with an NPDES Permit/Waste Discharge Requirements to meet the NPDES requirements. In Los Angeles County, all of the MS4 agencies are permitted under a single permit issued to Los Angeles County and 84 incorporated cities (this includes all cities in the Los Angeles RWQCB's jurisdiction, which excludes the high desert and does not include the City of Long Beach, which has its own MS4 Permit), referred to as the Permittees.

The intent of the MS4 NPDES permit, as stated in the permit, is to "develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) from the permitted areas in the County of Los Angeles to the waters of the U.S. subject to the Permittee's jurisdiction."

The current permit was issued on December 13, 2001. The permit was amended on September 14, 2006, August 9, 2007 and December 10, 2009, and incorporated the MS4 provisions contained in the Los Angeles River Trash TMDL, the Santa Monica Bay Beaches Bacteria Dry Weather TMDL, and the Marina del Rey Harbor Mothers' Beach and Back Basins Bacteria TMDL. Although the current permit was originally set to expire on December 12, 2006, the Los Angeles RWQCB has delayed the reissuance of the permit: therefore, all provisions remain in effect as stated in the Permit until such time that the Permit is renewed. On April 14, 2011, the Regional Board amended the Permit to set aside previous requirements adopted in 2006 to implement the Santa Monica Bay Beaches Dry Weather Bacteria TMDL. A comprehensive revision and renewal of the permit is currently projected by the Regional Board to occur in April 2012.

The following subsections summarize the components of the existing permit that are relevant to new and redevelopments:

3.14.3.9.1 Development Planning Program

The section of the MS4 permit that sets forth requirements for New Development and Significant Redevelopment projects is the Development Planning Program. This section of the permit covers a number of requirements including:

- Peak Flow Control (not applicable in Port area);
- Standard Urban Stormwater Mitigation Plans (SUSMP);
- Numerical Design Criteria;
- Site specific Mitigation;
- Redevelopment Requirements;
- Maintenance Agreement and Transfer;
- Regional Stormwater Mitigation Program and Funding; and
- Employee Training and Technical Guidance and Information.

The Development Planning Program requirements apply equally to similar private development projects and public agency capital improvement projects that are covered under the requirements.

Of particular relevance for the proposed Project are the SUSMP requirements of the existing MS4 permit apply to new and redevelopment projects. The NPDES Permit required that by August 1, 2002, each Permittee amend their own codes and ordinances to legally require that the SUSMP requirements listed in the permit be enforced.

The SUSMP requirements state that if a new development or redevelopment project is over a certain minimum size, then BMPs must be installed on-site to mitigate the negative impacts that the project could have on water quality. The BMPs installed on-site must be able to infiltrate, capture and reuse, or treat all of the runoff from the design storm (see design requirements below).

In the City of Los Angeles, the following list of new development or redevelopment categories require that SUSMP requirements be met (City of Los Angeles, 2002), and for those categories that may be applicable at the Port, a summary of the requirements that must be included are listed:

- Single-Family Hillside Residential Developments with grading on slopes of 25 percent or greater of one acre of more.
- Housing Developments of ten or more dwelling units (including single-family tract developments).
- Industrial/Commercial Developments of one acre or more of impervious area.
- Automotive Service Facilities of 5,000 square ft or more of surface area.
- Retail Gasoline Outlets of 5,000 square ft or more of impervious surface area with a projected Average Daily Traffic (ADT) of 100 or more vehicles.
- Restaurants of 5,000 square ft or more of surface area.
- Parking Lots of 5,000 square ft or larger, or with 25 or more parking spaces.
- Projects located in, adjacent to, or discharging directly to a designate Environmentally Sensitive Area (ESA), which creates 2,500 square ft or more of impervious area.

A redevelopment project is defined as a "...land-disturbing activity that results in the creation, addition, or replacement of 5,000 square ft or more of impervious surface area on an already developed site within the categories listed above. Existing single-family non-hillside structures are exempt from the redevelopment requirements. If a redevelopment results in an alteration to more than 50 percent of impervious surfaces of an existing development, then the entire project must be mitigated. If a redevelopment results in an alteration to less than 50 percent of the impervious surface of an existing development, and the existing development was not subject to storm water quality control requirements, then only the alteration must be mitigated."

New guidelines approved by the City on July 9, 2008 require developers to give top priority to BMPs that infiltrate stormwater and lowest priority to mechanical/hydrodynamic units. The order in which BMPs should be prioritized per SUSMP is therefore:

1) Infiltration Systems;
2) Biofiltration/Retention Systems;
3) Storm Water Capture and Re-Use;
4) Mechanical/Hydrodynamic Units; or
5) Combination of Any of the Above.

Design Requirements
The volume of runoff that needs to be managed is determined from one of the following methods.

Volumetric Treatment Control BMP
- The 85th percentile 24-hour runoff event determined as the maximum capture stormwater volume for the area using a 48 to 72 hour draw down time (using formula found in WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 [WEF and ASCE, 1998]);
- The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment (method recommended in the CA Stormwater BMP Handbook – Industrial/Commercial [CASQA, 1993]);
- The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system; or
- The volume of runoff produced from a historical-record based reference 24-hour rainfall criteria for "treatment" (0.75 inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

Flow Based Treatment Control BMP
- The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity;
- The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for Los Angeles County; or
- The flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

3.14.3.9.2 Site Specific Mitigation Plan

For new and redevelopments where a SUSMP is not required, the permit included, and the City adopted, a list of types of developments that need to prepare and submit a Site Specific Mitigation Plan (SSMP). The goal of the SSMP program is also to reduce the quantity and improve the quality of urban runoff that leaves the site, and the types of developments that require a SSMP were selected as types that have a higher potential to pollute. Following is the list of categories that require a SSMP:

- Vehicle or Equipment Fueling Areas;
- Vehicle or Equipment Maintenance Areas, including Washing and Repair;
- Commercial or Industrial Waste Handling or Storage;

- Outdoor Handling or Storage of Hazardous Materials;
- Outdoor Manufacturing Areas;
- Outdoor Food Handling or Processing;
- Outdoor Animal Care, Confinement, or Slaughter;
- Outdoor Horticultural Activities; or
- Major Transportation Projects.

3.14.3.9.3 Low Impact Development Ordinance

Although the Los Angeles County MS4 Permit has not yet been renewed, it is expected that the Permit will significantly revise the requirements for the Development Planning Program based on a number of other stormwater permits that have recently been renewed in California, including the Ventura County MS4 permit adopted by the Los Angeles RWQCB. All of the recent permits place much greater emphasis and priority on the incorporation of Low Impact Development (LID) practices in new development and redevelopment projects. LID refers to the method of developing or redeveloping urban areas that serves to both reduce the quantity and improve the quality of stormwater that discharges from the development, essentially seeking to maintain or restore the natural pre-development hydrologic characteristics of the site. By doing so, the negative impact that the development will have on the environment is reduced.

In anticipation of the expected Permit changes and in support of the benefits of LID practices, the City of Los Angeles has been developing an ordinance that will amend the Los Angeles Municipal Code (LAMC) to include LID requirements. On September 27, 2011, the City Council adopted the LID Ordinance, subject to reconsideration. The intention of the LID ordinance is to:

- Require the use of LID standards and practices in future developments and redevelopments to encourage use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;
- Promote rainwater harvesting;
- Reduce off-site runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

The LID ordinance will essentially expand the SUSMP requirements by increasing the number of new and redevelopment conditions under which stormwater mitigation measures must be implemented. As with SUSMP, the LID requirements would need to be met for a grading or building permit to be issued.

The requirement to incorporate SUSMP standards into a new or redevelopment project is triggered if a project is of a certain size and falls in one of eight land use categories defined by SUSMP. The requirement to incorporate LID into the design of a new or redevelopment is triggered for any new or redevelopment project that creates, adds, or replaces over 500 square ft of impervious surface, irrespective of development type.

LID Requirements

New or redevelopment projects that need to implement LID requirements are divided into two categories in the LID ordinance. The first is for residential developments of four units or less, and the second is for residential developments of five units or more as well as nonresidential developments. Because the Port has only nonresidential developments, the following are the two conditions that are relevant to nonresidential projects:

- For new development or where redevelopment results in an alteration of at least 50 percent or more of the impervious surfaces of an existing developed site, the entire site shall comply with the standards and requirements of this ordinance and of the LID section of the Development BMP Handbook; or
- Where the redevelopment results in an alteration of less than fifty percent of the impervious surfaces of an existing developed site, only such incremental development shall comply with the standards and requirements of this ordinance and the LID section of the Development BMP Handbook.

In the LID ordinance, development and redevelopment projects are defined as follows:

- Development is defined as "any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project, industrial, commercial, retail and other non-residential project, including public agency project; or mass grading for future construction."
- Redevelopment is defined as a project where "there are land disturbing activities that result in the creation, addition, or replacement of 500 square ft or more of impervious surface area on an already developed site." This includes "expansion of building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces."

BMP Categories

The LID ordinance states that if a project requires LID to be incorporated in the design, then the site needs to implement BMPs that will manage stormwater runoff in accordance with one more of the methods described below. The BMP categories are to be evaluated in the following priority order (refer to Section 4 of the ordinance for a description of City of Los Angeles approved BMPs that fall under these categories):

1) Infiltration;
2) Evapotranspiration;
3) Capture and use; and/or
4) Treatment through high removal efficiency biofiltration/biotreatment systems.

Note that this order of preference varies from the SUSMP order of preference where biofiltration/bioretention was listed second, and mechanical/hydrodynamic units were listed fourth.

The LID ordinance states that if stormwater is managed through high removal efficiency biofiltration systems that are designed as required, credit will be given as equivalent to

100 percent infiltration regardless of the runoff leaving the site. Also, multi-phased projects can either be designed as one system that complies with the LID requirements for the all phases of the project, or separately implementing BMPs during each phase.

The LID ordinance recognizes that there are on-site constraints where LID requirements are technically infeasible, either partially or fully. Where these conditions exist, they should be described in the submitted LID plan.

The ordinance further states that where LID requirements cannot be met, at a minimum SUSMP requirements would instead need to be met on-site. For the remaining runoff that cannot be managed on-site (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.

3.14.3.10 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 the USEPA in its Clean Water Act 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.

3.14.3.11 Spill Prevention, Control, and Countermeasure

The Oil Spill Prevention, Control, and Countermeasure (SPCC) regulations require that the Port have in place measures that help ensure oil spills do not occur, but if they do, that there are protocols in place to contain the spill, and neutralize the potential harmful impacts. An SPCC Plan and an Oil Spill Contingency Plan (OSCP) would be prepared that would be reviewed and approved by the Los Angeles RWQCB (SPCC) or the CDFG's Office of Spill Prevention and Response (OSPR), in consultation with other responsible agencies. The SPCC Plan and OSCP would detail and implement spill prevention and control measures to prevent oil spills from reaching navigable waters.

3.14.3.12 Oil Spill Prevention and Response

The California Office of Spill Prevention and Response (OSPR) is a multi-agency effort including the U.S. Coast Guard, the California State Lands Commission, and the California Department of Fish and Game's Marine Safety Branch (MSB is the lead agency). 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 of spill cleanup agents in California, and assisting local governments in preparing local OSCPs. The OSPR is also assisting in funding and implementing the Vessel Traffic System (VTS) for the Port Complex.

3.14.3.13 Water Resources Action Plan

The Water Resources Action Plan (WRAP) was prepared by the Ports of Los Angeles and Long Beach, in coordination with their cities, the USEPA, and the Los Angeles RWQCB (POLA and POLB, 2009). The WRAP's purpose is to provide the framework and mechanisms for the Ports to achieve the goals and targets that will be established in the relevant TMDLs and to comply with the Industrial Activities, Construction Activities, 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. At present, the Port is preparing several documents in support of the WRAP objectives, including a Vessel Guidance Manual, and SUSMP and BMP Guidance Manuals.

3.14.4 Impacts and Mitigation Measures

3.14.4.1 Methodology

Potential impacts of the proposed Project and alternatives to water and sediment quality will be 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 and flooding, potential impacts will be assessed using results from previous modeling studies for the Harbor and preparer expertise. Impacts would be considered significant if any of the significance criteria listed below occur in association with construction or operation of the proposed Project or alternative.

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

- Coverage under the General Construction Activity Storm Water Permit for the onshore portions of the proposed Project will be obtained by the Port as the "Legally Responsible Person" and delegate applicable responsibilities to the tenant. The associated SWPPP would contain the following measures:
  - Equipment shall be inspected regularly (daily) during construction, and any leaks found shall be repaired immediately.
  - Refueling of vehicles and equipment shall be in a designated, contained area.
  - Drip pans shall be used under stationary equipment (e.g., diesel fuel generators), during refueling, and when equipment is maintained.
  - Drip pans that are in use shall be covered during rainfall to prevent washout of pollutants.
  - Construction and maintenance of appropriate containment structures to prevent off-site transport of pollutants from spills and construction debris.
  - Monitoring to verify that the BMPs are implemented and kept in good working order.

- Other relevant standard operating procedures and best management practices for Port construction projects, as described in the WRAP (POLA and POLB, 2009), would be followed.
- The LAHD will prepare and submit to the Bureau of Sanitation, Watershed Protection Division, for approval a SUSMP for the stormwater BMPs to be incorporated into the Project and implement the construction and operation and maintenance of the approved BMPs into the Project.
- All onshore contaminated upland soils would be characterized and remediated in accordance with LAHD, Los Angeles RWQCB, DTSC, 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 have been evaluated using standard USEPA/USACE protocols to determine the suitability of the material for unconfined, aquatic disposal. Unsuitable dredged material will be disposed at the Port's approved confined disposal facility at Berths 243-245. Suitable material may be disposed at the Cabrillo Shallow Water Habitat Area or at Berths 243-245.
- A Section 10 permit from the USACE for dredging, crane installation, and wharf construction activities in waters of the U.S. A previously approved Section 404 permit for the Port of Los Angeles Channel Deepening Project (Corps Permit No. SPL-2008-00662-AOA) allows for in-harbor disposal of dredged material at the Berths 243-245 CDF and the Cabrillo shallow water habitat. An MPRSA Section 103 permit would be required for ocean transport and disposal of qualifying material at a designated ocean disposal site (LA-2).
- A CWA Section 401 Water Quality Certification from the Los Angeles RWQCB related to construction dredging and any in-water disposal activities that contains conditions including standard WDRs.
- A Debris Management Plan, SPCC Plan and OSCP would be prepared and implemented prior to the start of demolition, dredging, and construction activities associated with the proposed Project. The SPCC Plan and OSCP specifically identifies in-water containment and spill management in the event of an accidental spill. The plans shall require that emergency clean-up equipment is available on-site to respond to such accidental spills. All pollutants shall be managed in accordance with all applicable laws and regulations.
- The Water Quality Certification will define a "mixing zone" around the dredging and construction operations. The mixing zone will be equivalent to a zone of dilution and, per the Basin Plan (Los Angeles RWQCB, 1994) "[a]llowable zones of dilution within which high concentrations may be tolerated may be defined for each discharge in specific Waste Discharge Requirements."
- During dredge, fill, and pile-driving operations, an integrated multi-parameter monitoring program would be implemented by the LAHD in conjunction with both USACE and Los Angeles RWQCB permit requirements, wherein dredging performance would be measured in situ. The objective of the monitoring program would be adaptive management of the dredging operation, whereby potential exceedances of water quality objectives can be measured and dredging operations subsequently modified. If turbidity levels exceed the threshold established in the

WDRs issued by the Los Angeles RWQCB, water chemistry analysis would be conducted and the LAHD would immediately meet with the construction manager to discuss modifications of dredging operations to reduce turbidity to acceptable levels. This could include alteration of dredging methods, and/or implementation of additional BMPs such as a silt curtain.

- Although BMPs, SWPPP, NPDES Permit compliance, and SPCC/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.

3.14.4.1.1 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. For purposes of this Draft EIS/EIR, the CEQA baseline for determining the significance of potential Project impacts is the environmental set of conditions that prevailed at the time the NOP was published for the proposed Project - July 2009. The CEQA baseline takes into account the throughput for the 12-month period preceding July 2009 (July 2008 through the end of June 2009) in order to provide a representative characterization of activity levels throughout the year. The CEQA baseline conditions are described in Section 2.6.1. The CEQA baseline for this proposed Project includes approximately 1.13 million TEUs per year, 998,728 annual truck trips, and 247 annual ship calls that occurred on the 291-acre APL Terminal in the year prior to and including June 2009.

The CEQA baseline represents the setting at a fixed point in time and differs from the No Project Alternative (Alternative 1) in that the No Project Alternative addresses what is likely to happen at the proposed Project site over time, starting from the existing conditions. Therefore, the No Project Alternative allows for growth at the proposed Project site that could be expected to occur without additional approvals, whereas the CEQA baseline does not.

3.14.4.1.2 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 2.6.2. Briefly, the NEPA baseline condition for determining significance of impacts includes the full range of construction and operational activities the applicant could implement and is likely to implement absent a federal action, in this case the issuance of a USACE permit. The NEPA baseline includes minor terminal improvements in the upland area (i.e., conversion of a portion of the dry container storage unit area to reefers and utility infrastructure), operation of the 291-acre container terminal, and assumes that by 2027, the terminal (Berths 302 to 305) handles up to approximately 2.15 million TEUs annually and accommodates 286 annual ships calls and 2,336 on-way rail trips, without any federal action. Because the NEPA baseline is dynamic, it includes different levels of terminal operations at each study year (2012, 2015, 2020, 2025, and 2027).

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. Therefore, the

USACE could project increases in operations over the life of a project to properly describe the NEPA baseline condition. Normally, any federal permit decision would focus on direct impacts of the proposed Project 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 alternative under NEPA is defined by comparing the proposed Project or alternative to the NEPA baseline (i.e., the increment).

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, only minor terminal improvements (utility infrastructure, and conversion of dry container storage to refrigerated container storage) would occur, but no new cranes would be added, and the terminal configuration would remain as it was configured in 2008 (291 acres, 12 A-frame cranes, and a 4,000-ft wharf). However, forecasted increases in cargo throughput and annual ship calls would still occur as container growth occurs.

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, only minor terminal improvements (utility infrastructure and conversion of dry container storage to refrigerated container storage) would occur, but no new cranes would be added, no new wharf would be constructed and no dredging would occur at Berth 306, and the terminal configuration would remain as it was configured in 2008 (291 acres, 12 A-frame cranes, and a 4,000-foot wharf). However, forecasted increases in cargo throughput and annual ship calls would still occur as container growth occurs.

3.14.4.2 Thresholds of Significance

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

WQ-2 Flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources.

WQ-3 Permanent, adverse changes to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow.

WQ-4 Accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

The potential impacts are divided into construction and operation; hence the thresholds are labeled further (i.e., Impact WQ-1a, Impact WQ-1b, etc.).

3.14.4.3 Impact Determination

3.14.4.3.1 Proposed Project

3.14.4.3.1.1 Construction Impacts

Project construction would require: dredging, dredged material reuse and/or disposal, land-side development (including the 41-acre backlands), pile driving, and wharf construction. Approximately 20,000 cy of sediment would be dredged from off the proposed Berth 306. Approximately 515 concrete piles would be used for wharf construction at Berth 306. Dredge materials could be beneficially reused at an in-harbor site or upland site, disposed of at an upland site, or if found suitable, could be disposed of at the LA-2 ocean dredged material disposal site off San Pedro. Effects from sediment disposal at LA-2 were evaluated during the site designation process (USEPA and USACE, 2005). Potential water/sediment quality impacts due to construction and fill of the CDF, as well as expansion and fill of the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental EIS/EIR for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD, 2009). This evaluation included mitigation for habitat loss at the Berths 243-245 CDF. Effects from backlands runoff and from potential spills were also analyzed.

Impact WQ-1a: Project construction activities 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.

The types of water quality impacts that could occur during dredging and pile driving include short-term increases in suspended sediments and turbidity levels, decreases in DO concentrations, increases in nutrient concentrations, and increases in dissolved and particulate contaminant concentrations in areas where contaminated sediments would be disturbed. These changes to water quality would be temporary and would be expected to be confined to the immediate vicinity (e.g., within 300 ft) of in-water construction and dredging activities (USACE and LAHD, 1992) in the waters off Pier 300 and in the mixing zone defined by the water quality certification issued by the Los Angeles RWQCB and included by reference in the dredge permit issued by the USACE. Pile-installation and dredging activities at the proposed Berth 306 would suspend bottom sediments into the water column, causing localized and temporary turbidity. As shown in Table 2-2 and Figure 2-7 (Chapter 2, Project Description), Phase I in-water and over-water construction activities would extend over a 24-month period. No in-water construction would occur during Phase II.

Dredging and pile driving is not expected to result in violations of water quality standards. Receiving water monitoring studies in the Harbor (MBC, 2002; USACE and LAHD, 2008; POLA, 2009a-I, 2010a-d) and other water bodies (Parish and Wiener, 1987; Jones & Stokes 2007a, b, 2008) have documented a relatively small, turbid dredge plume that dissipates rapidly with distance from dredging operations. Because of this, the water quality standards at the specified distances in the certification/permits resulting from in-water activities are not expected to be violated, and significant impacts to water quality would not result.

The dredging permit issued by the USACE would require the dredger to minimize the amount of water in the disposal vessel that flows back to the dredging site and prohibit the flow back of dredged water from containing any solid dredged material. Dredging would resuspend some bottom sediments and create localized and temporary turbidity plumes. For continuous dredging operations, elevated turbidity conditions would occur in the immediate vicinity of the dredge for periods of days to several weeks. Following completion or interruption of dredging, the size and persistence of the turbidity plume would be determined by the time it takes for suspended materials to settle out combined with the current velocity. Dredging sediments adjacent to the proposed Berth 306 would likely generate a relatively small turbidity plume (i.e., within the mixing zone defined in the WDR) because the material is mostly coarse-grained and would settle fairly rapidly.

Dissolved oxygen levels in Harbor waters could be reduced in the immediate vicinity of dredging and pile-driving activities by the introduction of suspended sediments and associated oxygen demand on the surrounding waters. 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-driving operations. However, like pH and turbidity, any increase in contaminant levels in the water is expected to be localized in the mixing zone and of short duration. The magnitude of contaminant releases would be related to the bulk contaminant concentrations of the disturbed sediments, as well as the organic content and grain size that affect the binding capacity of sediments for contaminants. The sediment testing performed in the proposed dredge footprint detected some elevated metal concentrations (AMEC, 2011). The contaminant concentrations associated with any potentially disturbed or resuspended sediments during dredging are not expected to result in any long-term affects in the waters near the APL Terminal.

Sediments containing contaminants that are suspended by the dredging and pile installations would settle back to the bottom in a period of hours to a day. 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 localized in the channel 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). Consequently, concentrations of contaminants in sediments of the Harbor waters adjacent to the dredged area are not expected to be measurably increased by dredging activities and other in-water activities. The WDR will identify the monitoring requirements and potential BMPs that may be implemented to prevent water quality exceedances. Therefore, the risk associated with potential impacts from increased TSS or decreased light transmittance will be temporary.

Nutrients could be released into the water column during the dredging and pile driving. Release of nutrients may promote nuisance growths of phytoplankton if operations occur during warm water conditions. Phytoplankton blooms have occurred during previous dredging projects, including the Deep Draft Navigation Improvement Project (USACE and LAHD, 1992). However, there is no evidence that the plankton blooms observed were not a natural occurrence or that they were exacerbated by dredging activities. The Basin Plan (Los Angeles RWQCB, 1994) limits on biostimulatory substances are defined as "…concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses." Given the limited spatial and temporal extent of project activities with the potential for releasing nutrients from bottom

sediments, effects on beneficial uses of Harbor waters are not anticipated to occur in response to the proposed Project. Dredging and in-water construction operations are not expected to affect the temperature or salinity of waters off the APL Terminal because these activities would not involve any wastewater discharges or processes that would affect the baseline conditions.

Dredging for the proposed Project would require a permit from the USACE and a Section 401 (of the CWA) Water Quality Certification from the Los Angeles RWQCB. The Water Quality Certification would specify receiving water monitoring requirements. Monitoring requirements typically include measurements of water quality parameters such as DO, light transmittance (turbidity), pH, and suspended solids at varying distances from the dredging operations.

Analyses of contaminant concentrations (such as metals, DDT, PCBs, and PAHs) in waters during the dredging operations may also be required in the WDR if turbidity levels are elevated above certain trigger point. Monitoring data are used by the Port dredger to demonstrate that water quality limits specified in the permit are not exceeded. The dredging permit would identify corrective or adaptive actions, such as use of silt curtains, which would be implemented if the monitoring data indicate that water quality conditions outside the mixing zone could be below the permit-specified limits.

Creation of the 1,250-foot wharf at the proposed Berth 306 would increase the land surface area of the proposed Project site, which would result in proportional but small increases in volumes of stormwater runoff from the Project facilities. As discussed for Impact WQ-1b, below, while runoff from the proposed Project site would contribute to contaminant mass loadings to the Harbor, the contribution would be negligible because the volume would be small and soil and runoff control BMPs would be used during construction to prevent impacts to surface water quality.

CEQA Impact Determination

Dredging and new wharf construction activities (such as pile driving) during the construction phases of the proposed Project would not entail any direct or intentional discharges of wastes to waters off Pier 300. However, proposed Project-related in-water activities would disturb and resuspend bottom sediments, which would result in temporary and localized changes to some water quality indicators in the mixing zone defined by the Water Quality Certification. Results from previous dredge receiving water monitoring studies in Los Angeles Harbor indicate that TSS concentrations would rapidly drop to levels approaching measured background concentrations within a few hundred meters of the dredge once dredging ceases.

Water quality standards are established for constituents outside the mixing zone (at specified distances from the in-water construction). Dredging off the proposed Berth 306 may reduce DO concentrations in the immediate vicinity of the dredge, but these changes would generally not extend beyond the mixing zone or persist following the completion of the dredging operation. Changes in pH, nutrient, and contaminant levels could also occur as a result of construction activities for the proposed Project. Testing demonstrated that some of the sediments disturbed by proposed Project activities could release contaminants to surface waters near dredging operations (AMEC, 2011). The extent of sediment dispersal would depend on the dredge method, the specific sediment characteristics, and the current speed and direction during dredging.

Potential aquatic impacts from disposal of dredged sediments would depend on the disposal method and location, but could include increased turbidity, reduced DO concentrations, and introduction of contaminants. Such physical effects can affect aquatic resources, such as algae, fishes, and invertebrates. Sediments suitable for unconfined aquatic disposal would (1) be used as fill at the Cabrillo shallow water habitat, (2) potentially provide fill for the Berths 243-245 CDF, and (3) potentially be disposed of at the LA-2. For all disposal options, sediments have been evaluated to determine acceptability of disposal at different locations. Potential impacts from dredged material disposal on water/sediment quality at the Berths 243-245 CDF and the Cabrillo shallow water habitat were evaluated as part of the Port's Channel Deepening Project and are not expected to be significant. Potential impacts from dredged material disposal on water/sediment quality would be evaluated and minimized/mitigated separately as part of the fill project.

During dredge and pile-driving operations, an integrated multi-parameter monitoring program would be implemented by the LAHD in conjunction with USACE and Los Angeles RWQCB permit requirements, wherein dredging performance would be is measured in situ. The objective of the monitoring program is adaptive management of the dredging operations, including dredging modifications, so that potential violations of water quality objectives do not occur. If turbidity levels exceed the threshold established in the WDRs issued by the Los Angeles RWQCB, 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. This would include alteration of dredging methods, and/or implementation of additional BMPs to limit the size and extent of the dredge plume. Thus, proposed Project-related changes during construction are not expected to create pollution, contamination, a nuisance, or result in violations of water quality standards or permit conditions; therefore, impacts to water quality from in-water construction activities would not be significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during Project construction (from dredging and wharf construction) would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1b: Runoff from backland development/redevelopment 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.

Ground disturbances and construction activities related to backlands development could result in temporary impacts on surface water quality if uncontrolled runoff of 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 to surface water quality would be limited to potential non-stormwater discharges or discharges of stormwater runoff to waters of the Harbor that receive runoff from the Project site. Runoff from the Project site would be controlled under a construction SWPPP prepared in accordance with NPDES General Permit Construction requirements and implemented prior to start of any construction activities. This construction SWPPP would specify BMPs to control releases of soils and contaminants and avoid adverse impacts to receiving water quality. The SWPPP would be prepared by the Port (or consultant) with the Port designated as the "Legally Responsible Person." An NOI and appropriate fee is submitted to the SWRCB in accordance with construction General Permit conditions. The project proponent must keep the SWPPP on-site at all times and implement and maintain its measures.

Erosion and sediment controls would be used during construction to reduce the amount of soils disturbed and to prevent disturbed soils from entering runoff. Prior to the start of construction activities for the proposed Project, the contractor would prepare a SWPPP that specifies logistics and schedule for construction activities that would minimize potentials for erosion and standard practices that include installation, monitoring, and maintenance of control measures (see Impact WQ-4a, below). The SWPPP would be prepared and submitted prior to the start of construction and control measures would be installed at the construction sites prior to ground disturbance. Implementation of the SWPPP would minimize proposed Project-related runoff into the Harbor and impacts to water quality.

All applicable BMPs would be used during construction activities to minimize runoff of sediment and other contaminants in compliance with the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Water Quality Order 2009-0009-DWQ) and a construction SWPPP. 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.

USEPA reported that measures such as sedimentation basins, sediment traps, straw-bale barriers, and filter fabric fences were about 60 to 70 percent effective at removing soils from runoff (USEPA, 1993). Although the specific BMPs that would be used at the proposed Project site have not yet been designed, it is reasonable to estimate that erosion and runoff control BMPs would be 60 percent or more effective at removing soils from runoff that occurred during construction. Additionally, the amount of soils subject to erosion would be limited because the site is flat and runoff patterns can be easily controlled by grading and temporary berms and the duration and intensity of rainfall events in southern California typically are limited. Therefore, the amount of soil loading to the Harbor from runoff would be minimal.

In addition to soils, runoff from a construction site could contain a variety of contaminants, including metals and PAHs, associated with construction materials, stockpiled soils, and spills of oil or other petroleum products. Impacts to surface water quality from accidental spills are addressed below under Impact WQ-1d.

Runoff from the upland portions of the proposed Project site would flow into the Harbor, along with runoff from other adjacent areas of the Harbors subwatershed. Runoff at the existing Project site flows towards the wharf and is discharged to the Pier 300 Channel. Runoff from the proposed Project site would continue to be directed to the Pier 300 Channel, away from the Shallow Water Habitat area. As discussed above, the SWPPP and implementation and maintenance of construction BMPs would minimize the potential for off-site transport of soils and contaminants from the proposed Project site that could degrade water quality in the Harbor.

Runoff from the construction site during a storm could form a plume of fresh or brackish water in the waters off Pier 300. Depending on the strength and duration of the storm event, the plume could have lower salinity and DO levels compared to the receiving waters. A plume associated with runoff from the proposed Project site could conceivably overlap with plumes from other drainage systems. Nevertheless, subsequent mixing of runoff and receiving waters, and settling of particles carried by runoff into the waters off Pier 300, would prevent persistent changes in the quality of receiving waters, including the Pier 300 Shallow Water Habitat area.

As mentioned previously, water quality within the Harbor is affected episodically by stormwater runoff from the watershed. Because the area of the proposed Project site represents only a small portion of the Harbor subwatershed, runoff from the upland portion of the proposed Project area during construction would represent a very small contribution to the total mass loading from stormwater runoff to the Harbor. While runoff from the proposed Project site would be discharged to the Harbor, implementation and maintenance of all applicable BMPs during construction of the proposed Project would prevent conditions that could substantially increase the relative contribution or contaminant mass loadings relative to baseline conditions.

CEQA Impact Determination

Construction activities associated with backland improvements for the proposed Project have the potential to adversely affect the quality of stormwater runoff. However, the proposed Project would develop and follow a SWPPP and implement and maintain all applicable BMPs to prevent runoff of eroded soils and other pollutants from adversely affecting surface water quality. These measures, combined with the low potential for erosion (see Impact WQ-4a, below), would minimize any soil and contaminant loading to the Harbor resulting from construction activities. The SWPPP is a document prepared by the Project proponent (or its consultants), and as such, there are no conditions associated with a SWPPP—only BMPs and measures undertaken and maintained as part of the proposed Project to reduce potential water quality impacts. With implementation of the SWPPP and BMPs, runoff from upland construction activities would not create pollution, contamination, a nuisance, or violate any water quality standards, and impacts to water quality would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during Project construction (from backland development/redevelopment) would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1c: Accidents during construction 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.

Accidents resulting in spills of fuel, lubricants, or hydraulic fluid from equipment used during dredging, beneficial reuse, and/or disposal of dredged material, and wharf construction 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 (see Section 3.8, Hazards and Hazardous Materials). 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]). Construction and industrial SWPPPs and standard Port BMPs (e.g., use of drip pans, contained refueling areas, regular inspections of equipment and vehicles, and immediate repairs of leaks) would reduce potentials for materials from onshore construction activities to be transported off-site and enter storm drains.

Accidents or spills from in-water construction equipment could result in direct releases of petroleum materials or other contaminants to Harbor waters. The magnitude of impacts to water quality would depend on the spill volume, characteristics of the spilled materials, and effectiveness of containment and cleanup measures. Dredging contractors are responsible and liable for any accidental spills (hydraulic fluid leaks, fuel spills, or such) during dredging operations, including spills from the dredge, chase boats, the barge, and tugs. Equipment is generally available on-site to respond to such accidental spills, and the general spill response practice is to deploy floating booms (by the chase boats) made of material that would contain and absorb the spill. Vacuums/pumps may be required to assist in the cleanup depending on the size of the spill.

The Basin Plan (Los Angeles RWQCB, 1994) water quality objective for oil and grease states that "[w]aters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses." Spill prevention and cleanup procedures for the proposed Project would be addressed in a plan that would be prepared in accordance with Port guidelines and implemented by the construction contractor prior to the notice to proceed with construction operations. The plan would define actions to minimize potentials for spills and provide efficient responses to spill events to minimize the magnitude of the spill and extent of impacts.

CEQA Impact Determination

Accidental or incidental spills or leaks that occur on land are expected to be contained and cleaned up before any impacts to surface water quality can occur. Accidental spills from dredges or barges could directly affect water quality in the waters off Pier 300, resulting in a visible film on the surface of the water; 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 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, given the industrialized use of the waters off Pier 300 and in-water vicinity. Because of this, significant water quality impacts under CEQA are not expected to occur as a result of accidental spills of pollutants during in-water construction. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during proposed Project construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2a: Proposed Project construction would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

Although the proposed Project would develop the existing 41-acre undeveloped area that has not been mapped for flood risk by FEMA, it is at the same level as the existing terminal. Most of the terminal is designated by FEMA as Flood Zone X (defined as areas of 0.2 percent annual chance flood; areas of one percent annual chance flood with average depths of less than one foot or with drainage areas less than one square mile; and, areas protected by levees from one percent annual chance flood).

Construction activities would not increase the potential for flooding on-site because site elevations would remain generally the same as the baseline conditions, even though grading and backland construction would occur. During construction, BMPs would be employed to control site runoff, and an on-site storm drain system would be installed to convey runoff from the Project site to the Harbor.

CEQA Impact Determination

Because construction of the proposed Project would not increase the potential for flooding at the site, it would not substantially increase the potential for people or property to be adversely affected by flooding. Therefore, construction of the proposed Project would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during Project construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.

This impact threshold addresses changes to the water body that would inhibit circulation or water mass exchanges with adjacent water bodies, thereby promoting stagnation and adverse effects to water quality. Potential marine habitat impacts from the conversion of soft-bottom habitat to hard substrate are discussed in Section 3.3, Biological Resources. Potential impacts due to construction and fill of the CDF, as well as expansion and fill of

the Cabrillo shallow water habitat, were evaluated in the *Final Supplemental EIS/EIR for the Port of Los Angeles Channel Deepening Project* (USACE and LAHD, 2009).

Dredging activity for the proposed Project would alter the existing bathymetry. Dredging would slightly increase the tidal prism in the waters off the proposed Berth 306. Placement of pilings for the new wharf at Berth 306 would reduce water movement beneath the wharf, but due to the distance between pilings and the continual tidal action in the Harbor, this would not result in stagnation or cause adverse impacts to marine water quality within the Project area or vicinity.

Hydrodynamic and water quality modeling conducted by the USACE for the Pier 300 expansion in the Outer Harbor indicated that the fill options would have only minor effects on water circulation in both the Inner and Outer Harbors, and the fill size (40 or 80 acres) and fill configuration (narrow or wide) would have little effect on water quality (Bunch et al., 2000).

CEQA Impact Determination

Construction activities for the proposed Project would not result in a permanent adverse change in surface water movement because these activities would not impose barriers to water movement into and out of the waters off Pier 300, and impacts to water quality and oceanography would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Although the proposed Project would include upland and in-water construction that would not be included in the NEPA baseline, construction activities for the proposed Project would not result in a permanent adverse change in surface water movement because these activities would not impose barriers to water movement into and out of the waters off Pier 300. Thus, and impacts to water quality and oceanography would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

Ground disturbances and construction activities related to the development of backlands would have the potential to increase erosion and deposition of soils in the Harbor. The baseline potential for erosion of soils in the proposed Project site is low due to the flat terrain, infrequent rainfall events, and moderate wind velocities. Therefore, the natural processes that could accelerate erosion can be controlled effectively by the use of temporary berms, barriers, and grading. As discussed above under Impact WQ-1b, the Port would prepare a SWPPP with the Port designated as the "Legally Responsible Person" who is responsible for the preparation and implementation of a SWPPP that specifies logistics and schedule for construction activities that would minimize the potential for erosion and standard practices that include monitoring and maintenance of control measures. This would include measures to minimize wind or water erosion from the site during construction and minimize any potential for eroded sediment to be transported to the Harbor receiving waters. Standard practices would follow guidance developed by the Port for soil management (e.g., temporary sediment basin [ESC 56], solid waste management [CA 020], and contaminated soil management [CA 022]) to minimize potentials for soil erosion and off-site transport that would be followed during construction operations for the proposed Project. Additionally, runoff of soils from these facility sites would be controlled by use of BMPs as required by the construction SWPPP for the proposed Project. Thus, construction activities would not be expected to accelerate erosion or increase loadings to the Harbor of soils carried by stormwater runoff.

CEQA Impact Determination

Construction activities for the proposed Project would not accelerate natural processes of wind and water erosion because all applicable BMPs and other standard soil management procedures would be implemented to minimize erosion from the construction site. Therefore, 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

Impacts during proposed Project construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.14.4.3.1.2 Operational Impacts

Operation of the new facilities would result in increased vessel traffic, runoff of pollutants from redeveloped terminal surfaces, and increased potential for accidental spills of pollutants into Harbor waters. All of these effects would occur in the waters of the Pier 300 Channel (south of Berths 302-306). In addition, the proposed Project would result in the permanent addition of hard substrate (concrete piles).

Impact WQ-1d: Operation of proposed Project facilities 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.

Runoff

Operation of the proposed Project facilities would not involve any direct point source discharges of wastes or wastewaters to the Harbor. However, stormwater runoff from the proposed Project site would be collected on site by the on-site storm drain system and either retained, infiltrated, treated, or otherwise managed in compliance with applicable permits and ordinances (including SUSMP requirements) prior to discharge to the Harbor (to the Pier 300 Channel). The operation of marine terminals and backland container facilities on land, partially used for container storage purposes, would add particulates and other pollutants to the site. Transport of these materials by runoff from the Project site could contribute incrementally to changes in receiving water quality. The amount of truck traffic and yard equipment operations at the Project site would increase to handle the 3.2 million TEUs annually (from about 1.2 million TEUs annually under the CEQA baseline and 2.15 million annually under the NEPA baseline [2027]). 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 to the storm drain system.

Additionally, operations of non-electric equipment and vehicles for the proposed Project would 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. As noted above, runoff would be either retained, infiltrated, treated, or otherwise managed (consistent with applicable permit and ordinance requirements) prior to discharge into Harbor waters. The BMPs, associated with the proposed Project would be operated in accordance with the industrial SWPPP to minimize the generation of particulate pollutants, and the BMPs would provide significant retention or treatment of the pollutants prior to discharge. In addition, monitoring would be conducted under the SWPPP to observe the quality of the stormwater runoff discharged to the Harbor. This will allow the tenant and the Port to ensure that the quality of any runoff would comply with the permit conditions and verify that the BMPs are performing as anticipated.

One of the improvements to the marine terminal is the installation of equipment for AMP at Berth 306 (AMP will be installed at Berths 302-305 as a related project regardless if the Project is approved or not). A portion of the vessels calling at Berths 302-306 would use AMP at berth. AMP allows vessels to turn off their auxiliary diesel generators and support hoteling needs with shoreside electrical power. This would reduce air emissions from vessels at Berths 302-306, and associated contaminants from those emissions.

The design and operation of the proposed Project would comply with the *2010 Stormwater Quality Post-Construction Guidance Manual* (2010 Guidance Manual). This draft manual has been prepared to guide the planning and design of projects in the Port area to comply with both the current SUSMP requirements and the proposed City of Los Angeles LID ordinance requirements. Applicable BMPs would be incorporated into the proposed Project plan that must be approved by the Bureau of Sanitation, Watershed Protection Division, prior to issuance of building and grading permits. The SUSMP requires minimization of the pollutants of concern by incorporating "a BMP or combination of BMPs best suited to maximize the reduction of pollutant loadings in that runoff to the maximum extent possible." 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 area and anticipated 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 Project design. A list of potentially applicable Source Control BMPs from the Guidance Manual includes the BMPs shown in Table 3.14-3:

Table 3.14-3: Source Control Design Features for Container Terminal Facility Activities

Facility Activity	Source Control Design Feature													
	Storm Drain Stenciling (S-1)	Outdoor Material Storage Area Design (S-2)[2]	Outdoor Trash Storage Area Design (S-3)	Outdoor Loading/ Unloading Dock Area Design (S-4)	Outdoor Repair/ Maintenance Bay Design (S-5)[3]	Outdoor Vehicle Equipment/ Accessory Wash Area Design (S-6)	Vehicle/ Equipment Storage Area Design (S-7)	Fuel Area Design (S-8)	Alternative Building Materials (S-9)	Waste Handling and Disposal Area Design (S-10)[2]	Efficient Irrigation Systems and Landscape Design (S-11)	Outdoor Processing/ Manufacturing Area Design (S-12)	Parking Area Design (S-13)	Food and Related Products Facilities (S-14)
Chassis Shop & Roadability	X	X	X		X	X	X		X	X		X		
Crane Shops	X	X	X		X	X	X		X	X		X		
Employee Parking Area	X										X		X	
Fueling Area	X	X	X					X	X	X				
Outdoor Gen Set Staging Areas	X	X					X							
Power Shops	X	X	X		X	X	X		X	X		X		
Reefer Wash	X					X								
Truck Queuing and Parking Areas	X		X								X		X	

Feasible treatment Control BMPs would be selected from for the list of Treatment Control Categories in the Guidance Manual as shown in Table 3.14-3. 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 new area. For the other isolated areas within the existing APL Terminal area, the BMPs only need to retain or treat the limited individual areas where redevelopment is proposed. For the backland portion, the POLA Trench Drain Concept may be incorporated if determined feasible. For the other smaller areas, BMPs would be selected from either infiltration BMPs or biotreatment/biofiltration BMPs if possible depending upon localized conditions at each of the proposed improvement areas.

These BMPs must meet the specified design standards in the Guidance Manual to mitigate (infiltrate or treat) stormwater runoff. For the Structural or Treatment Control BMPs included in the Project plan, the tenant would be required to provide verification of maintenance provisions. The controls and BMPs for runoff and storm drain discharges described above are designed to reduce impacts to 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, such as compliance with Non-Point Source Pollution Control Program requirements.

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. Atmospheric deposition related to Port operations emissions may provide an increased localized impact to 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.

However, the contribution of 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 likely accumulate during dry weather conditions and are later washed off during storm events. For suspended zinc and copper pollutants from the proposed 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 disposition would not allow for a significant build-up of these pollutants before entering Harbor waters.

Ambient monitoring and stormwater monitoring in Long Beach Harbor in 2008-9 (MBC, 2009) showed that pollutants, such as metals and semivolatile organic compounds, were present in Harbor waters during both dry-weather surveys and storm surveys. However, only copper and mercury occurred in samples at concentrations that exceeded the standards for marine waters at a few locations; copper exceeded regulatory standards during one dry-weather and one wet-weather survey, while mercury exceeded regulatory standards during one wet-weather survey. 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 proposed Project site, and runoff would not cause violations of receiving water quality objectives, given compliance with Non-Point Source Pollution Control Program requirements, as well as SWPPP and SUSMP requirements.

Ballast Water

The amount of vessel traffic at the proposed Project site would increase by up to 143 annual ship calls (for 2027) compared to the CEQA baseline and up to 104 annual ship calls (for 2027) compared to the NEPA baseline as a result of the proposed Project. Discharges of polluted water or refuse directly to the Harbor are prohibited. Current practices by APL to reduce the likelihood for discharge of ballast water at and near the proposed Project site include:

- Training of seagoing staff on environmental awareness, ballast water management, and all applicable laws and regulations;
- Ballast water is exchanged mid-ocean for APL vessels en route to Los Angeles;
- APL ship crews perform routine inspections of ballast tanks and properly dispose of any accumulated sediments; and
- All APL vessels comply with ballast water reporting requirements, and this is verified through routine audits.

Discharges to the Harbor of clean ballast waters are not prohibited; however, during 2006, only 13 percent of container ships discharged clean ballast waters while in Port. Thus, the increased vessel traffic and terminal operations associated with proposed Project would not result in increased ballast water discharges from vessels.

Contaminants from Vessels

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. APL does not expect vessels coated with TBT to call at their terminal, and based on this, even though the proposed Project would result in increased vessel traffic, water quality impacts related to leaching of TBT from hull coatings would therefore not occur. All but one of APL's existing fleet uses silicon-based anti-fouling coatings. Therefore, leaching from vessel hulls is not expected to appreciably increase water column metal concentrations.

The propeller (prop) wash from vessel traffic within the Harbor creates turbulence sufficient to resuspend bottom sediments. However, sediment resuspension from propeller wash can occur from any shipping activities within the Port, not just those associated with the proposed Project. Although resuspended sediments may release small amounts of metals and other contaminants to the water column through desorption while in suspension, the levels would be minimal and are not expected to increase toxicity or bioavailability, as demonstrated by decreasing toxicity in the Harbor despite increased vessel calls.

Accidental Spills

Other potential operational sources of pollutants that could affect water quality in the waters off Pier 300 include accidental spills on land that enter storm drains, as well as accidental spills or illegal discharges from vessels at the proposed Project site. If spilled material in upland areas were not captured prior to reaching the storm drain system, such materials could reach the Pier 300 Channel south of Berths 302-306. Spills or illegal discharges from vessels could also occur in the same waters, or during their transit to and from the APL Terminal from the Harbor entrance at Angel's Gate. Impacts to water and sediment quality would depend on the characteristics of the material spilled, such as volatility, solubility in water, and sedimentation rate, and 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 controls and are unlikely to occur during the life of the proposed Project.

As described in Section 3.8, Hazards and Hazardous Materials, activities that involve hazardous liquid bulk cargoes at the Port are governed by the Los Angeles Harbor District Risk Management Plan (RMP) (LAHD, 1983). This plan provides for a methodology for assessing and considering risk during the siting process for facilities that handle substantial amounts of dangerous cargo, such as liquid bulk facilities. The Release Response Plan prepared in accordance with the Hazardous Material Release Response Plans and Inventory Law (California Health and Safety Code, Chapter 6.95), which is administered by the City of Los Angeles Fire Department (LAFD), also regulates hazardous material activities within the Port. These activities are conducted under the review of a number of agencies and regulations including the RMP, U.S. Coast Guard (USCG), fire department, and state and federal departments of transportation (49 CFR Part 176). As discussed in Section 3.8, Hazards and Hazardous Materials, the Oil Pollution Prevention regulations at Title 40 of the Code of Federal Regulations, Part 112 (40 CFR 112) describe the requirements for certain facilities to prepare, amend, and implement SPCC Plans. These plans ensure that facilities include containment and other countermeasures that would prevent oil spills that could reach navigable waters. In addition, oil spill contingency plans are required to address spill cleanup measures after a spill has occurred.

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.

As discussed in Section 3.8, Hazards and Hazardous Materials, approximately 39 spills occurred between 2006 and 2009 (31,423,871 TEUs) for the entire Port Complex. For the proposed Project and based on prorated TEU throughput, this would translate into approximately 1.2 spills above baseline conditions (from 2.7 to 3.9 spills per year for both vessel and land-based sources), which is considered acceptable. The increased number of ship calls associated with the proposed Project could contribute to a comparatively higher number of spills compared to baseline 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. Based on compliance with applicable regulations, and the nature and frequency of past spill events (see Section 3.8, Hazards and Hazardous Materials), impacts due to accidental spills are considered less than significant.

Illegal Discharges from Vessels

The number or severity of illegal discharges, and corresponding changes to water and sediment quality, from increased vessel traffic cannot be quantified because the rate and chemical composition of illegal discharges from commercial vessels are unknown. However, there is no evidence that illegal discharges from ships presently are causing widespread problems in the Harbor. Over several decades, there has been an improvement in water quality despite an overall increase in ship traffic. In addition, the Port Police are authorized to cite any vessel that is in violation of Port tariffs, including illegal discharges. Illegal discharges resulting from operation of the proposed Project are not likely to occur, and impacts are considered less than significant.

CEQA Impact Determination

Upland operations associated with the proposed Project would not result in direct discharges of wastes to Harbor waters. However, stormwater runoff from the proposed Project site 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, SWPPP requirements, and would be subject to treatment via SUSMP devices prior to discharge to Harbor waters. As a consequence, water quality impacts from site runoff would not be significant. Potential impacts resulting from atmospheric deposition, ballast water discharge, leaching from vessel hulls, accidental spills and illegal discharges to Harbor waters are considered less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Water quality impacts during proposed Project operation would be similar to those described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2b: Operation of proposed Project facilities would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

Although the majority of the proposed Project site is located in Flood Zone X, proposed Project operations would not increase the potential for flooding compared to the CEQA baseline, because on-site storm drains would be installed as part of the proposed Project (see Impact WQ-2a above), because site elevations and the flat site topography would remain generally the same subsequent to construction, and because the site is located adjacent to Harbor waters. However, operation of the proposed Project would result in an increase in containers stored at the site compared to baseline conditions, which would subject the containers to some sheet flow or ponding of water if a large enough storm occurred that generated more rainfall than could be accommodated by the capacity of the on-site drainage system.

Although proposed Project operations would not increase the risk of flooding at the site, operations would result in increased risks to people and property due to an increase in employees and containers at the site, compared to baseline conditions. However, because the proposed Project site is relatively flat, is located along the water's edge (which would allow excess runoff to flow off-site), and would be graded to direct runoff to the drainage system, flood water on the proposed Project site from a large storm event is not expected to be deep enough to cause employees to be harmed or to cause substantial damage to property within stored containers on-site.

CEQA Impact Determination

Although operation of the proposed Project would increase the amount of property and people exposed to potential flooding, site topography and the stormwater management system at the terminal would control flood conditions to minimize harm to people and property. Therefore, operation of the proposed Project would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during proposed Project operation would be the same as described above under the CEQA Impact Determination. Therefore, operation of the proposed Project would not result in significant impacts from flooding under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Once construction of facilities for the proposed Project is completed, proposed Project operations would not cause a permanent adverse change to the movement of surface water because the proposed Project would not install barriers to prevent or impede water movement around Pier 300. Therefore, impacts to surface water flow would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Although the proposed Project would include in-water features not included in the NEPA baseline, once construction of facilities for the proposed Project is completed, proposed Project operations would not cause a permanent adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow because the proposed Project would not install barriers to prevent or impede water movement around Pier 300 Therefore, impacts to surface water flow would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

Operation of expanded terminal facilities on the 347-acre proposed Project site (including development of the vacant 41-acre area as backlands, an additional 11 acres of improvements, and 4 acres of wharf at proposed Berth 306) would exceed the operational area that existed under the CEQA baseline (291 acres) and NEPA baseline (291 acres through 2027). Although the proposed Project would operate on a larger area than baseline conditions, the Project site would be completely paved, which would prevent erosion from occurring during terminal operations, especially on the backlands adjacent to Berths 302–305 and the proposed Berth 306. As described above under Impact WQ-1d, BMPs would be implemented and site runoff would infiltrated, managed in accordance with permits and ordinances, and/or treated and discharged, which would prevent or minimize the impacts from sediment in runoff to the Pier 300 Channel from the proposed Project site. As a consequence, proposed Project operation would not result in significant impacts related to erosion or sedimentation.

CEQA Impact Determination

Proposed Project-related operations would not accelerate erosion and soil deposition in the Harbor due in part to implementation of BMPs and SUSMP control measures that retain or treat and remove pollutants and solids from site runoff. Although the proposed Project would operate on a larger footprint than the CEQA baseline, all backlands would be paved, which would minimize the potential for erosion. Impacts to water quality would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during proposed Project construction would be the same as described above under the CEQA Impact Determination. Impacts to water quality would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.14.4.3.2 Alternatives

3.14.4.3.2.1 Alternative 1 – No Project

Under Alternative 1, no further Port action or federal action would occur. The Port would not construct and develop additional backlands, wharves, or terminal improvements. No new cranes would be added, no gate or backland improvements would occur, and no infrastructure for AMP at Berth 306 or automation in the backland area adjacent to Berth 306 would be provided. This alternative would not include any dredging, new wharf construction, or new cranes. The No Project Alternative would not include development of any additional backlands because the existing terminal is berth-constrained and additional backlands would not improve its efficiency.

Under the No Project Alternative, the existing APL Terminal would continue to operate as an approximately 291-acre container terminal. Based on the throughput projections, terminal operations are expected to grow over time as throughput demands increase. Under Alternative 1, the existing APL Terminal would handle approximately 2.15 million TEUs by 2027, which would result in 286 annual ship calls at Berths 302-305. In addition, this alternative would result in up to 7,273 peak daily one-way truck trips (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Under Alternative 1, cargo ships that currently berth and load/unload at the Berths 302-305 terminal would continue to do so.

The No Project Alternative would not preclude future improvements to the proposed proposed site. However, any future changes in use or new improvements with the

potential to significantly impact the environment would need to be analyzed in a separate environmental document.

Impact WQ-1a: No construction activities would occur or 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 Impact Determination

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

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-1b: No runoff from backland development/redevelopment would occur or 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 Impact Determination

Because there would be no backland development at the proposed site as part of Alternative 1, there would be no pollution, contamination, or nuisance, or violation of regulatory standards due to runoff from backland development/redevelopment.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-1c: Accidents during construction would not occur or 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 Impact Determination

Because there would be no construction at the proposed site as part of Alternative 1, accidental spills resulting from construction would not occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-2a: No construction would occur or result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Because there would be no construction at the proposed site as part of Alternative 1, construction-related flooding impacts would not occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-3a: No construction activities would occur or result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Because there would be no in-water construction at the proposed site as part of Alternative 1, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-4a: No construction activities would occur or accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Because there would be no construction or backland development at the proposed site as part of Alternative 1, there would be no acceleration of erosion or sedimentation.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-1d: Operation of 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.

Runoff

Operation of the marine terminal would not involve any direct point source discharges of wastes or wastewaters to the Harbor. However, stormwater runoff from the marine terminal would be collected on-site by the on-site storm drain system and discharged to the Harbor (Pier 300 Channel). Runoff would be similar to that which occurred as part of the CEQA baseline. Regulatory controls for runoff and storm drain discharges that are currently in place are designed to reduce impacts to 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, such as compliance with Non-Point Source Pollution Control Program requirements.

Atmospheric Deposition

For suspended zinc and copper pollutants from the proposed site (tire and brake wear from equipment and trucks) under Alternative 1, direct impacts are not expected to significantly affect water quality due to the likely limited and dispersed nature of direct deposition on Harbor waters, and because direct aerial disposition would not allow for a significant build-up of these pollutants before entering Harbor waters. 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 marine terminal, and runoff would not cause violations of receiving water quality objectives, given compliance with Non-Point Source Pollution Control Program requirements, as well as SWPPP and SUSMP requirements.

Ballast Water

Under Alternative 1, the amount of vessel traffic at the proposed site would increase by 39 annual ship calls (in 2025 and 2027) compared to the CEQA baseline. Discharges of polluted water or refuse directly to the Harbor are prohibited. Discharges to the Harbor of clean ballast waters are not prohibited; however, during 2006 only 13 percent of container ships discharged clean ballast waters while in port. Thus, the increased vessel traffic and terminal operations associated with Alternative 1 would not result in increased ballast water discharges from vessels.

Contaminants from Vessels

APL does not expect vessels coated with TBT to call at their terminal, and based on this, even though the proposed Project would result in increased vessel traffic, water quality impacts related to leaching of TBT from hull coatings would therefore not occur. All but one of APL's existing fleet uses silicon-based anti-fouling coatings. Therefore, leaching from vessel hulls is not expected to appreciably increase water column metal concentrations. The propeller (prop) wash from vessel traffic creates turbulence sufficient to resuspend bottom sediments. However, sediment resuspension from propeller wash can occur from any shipping activities within the Port, not just those associated with the Project. Although resuspended sediments may release small amounts of metals and other contaminants to the water column through desorption while in suspension, the levels would be minimal and are not expected to increase toxicity or bioavailability, as demonstrated by decreasing toxicity in the Harbor despite increased vessel calls.

Accidental Spills

Other potential operational sources of pollutants that could affect water quality in the waters off Pier 300 include accidental spills on land that enter storm drains, as well as accidental spills or illegal discharges from vessels at the proposed site. If spilled material was not captured prior to reaching the storm drain system, such materials could reach the Pier 300 Channel south of Berths 302-306. Spills or illegal discharges from vessels could also occur in the same waters, or during their transit to and from the APL Terminal from the Harbor entrance at Angel's Gate. As with the proposed Project, under Alternative 1 the tenant/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.

The increased number of ship calls associated with Alternative 1 could contribute to a comparatively higher number of spills compared to baseline conditions. However, the increase would be substantially lower than with the proposed Project. Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from 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. Based on compliance with applicable regulations, and the nature and frequency of past spill events (see Section 3.8, Hazards and Hazardous Materials), impacts due to accidental spills are considered less than significant.

Illegal Discharges from Vessels

The number or severity of illegal discharges, and corresponding changes to water and sediment quality, from increased vessel traffic cannot be quantified because the rate and chemical composition of illegal discharges from commercial vessels are unknown. However, there is no evidence that illegal discharges from ships presently are causing widespread problems in the Harbor. Over several decades, there has been an improvement in water quality despite an overall increase in ship traffic. In addition, the Port Police are authorized to cite any vessel that is in violation of Port tariffs, including illegal discharges. Illegal discharges resulting from operation of Alternative 1 are not likely to occur, and impacts are considered less than significant.

CEQA Impact Determination

Implementation of Alternative 1 would result in an increase in vessel traffic (up to 286 vessel calls in 2025 and 2027) compared with the CEQA baseline of 247 vessel calls. However, this is lower than with the proposed Project (from 234 vessel calls in 2012 to 390 vessels in 2027). Alternative 1 would not result in direct discharges of wastes to Harbor waters. Discharges of stormwater would comply with the NPDES discharge permit limits, SWPPP requirements, and would be subject to treatment via SUSMP devices prior to discharge to Harbor waters. As a consequence, water quality impacts from site runoff would not be significant. Impacts resulting from accidental spills would be less than significant based on compliance with applicable regulations, and the nature and frequency of past spill events. Impacts resulting from atmospheric deposition, leaching from vessel hulls, and ballast water discharge would be less than significant based on the discussion above. Illegal discharges are not likely to occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-2b: Operation of Alternative 1 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Under Alternative 1, slightly greater container throughput and people would be exposed to potential flood conditions at the terminal compared to the CEQA baseline; however, site topography and the storm water management system at the terminal would control flood conditions to minimize harm to people and property. Therefore, operation of Alternative 1 would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Operations under Alternative 1 would not install barriers to prevent or impede water movement around Pier 300; therefore, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Terminal operations under Alternative 1 would not accelerate erosion and soil deposition in the Harbor due in part to existing regulatory controls. Under Alternative 1, the proposed site would operate with the same acreage as with the CEQA baseline. Impacts to water quality from erosion and sedimentation would be the same as with the CEQA baseline, and no impact would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

3.14.4.3.2.2 Alternative 2 – No Federal Action

The No Federal Action Alternative would be the same as the NEPA baseline and would include only the activities and impacts likely to occur absent further USACE federal approval but could include improvements that require a local action. Under Alternative 2, no federal action would occur; however, minor terminal improvements in the upland area of the existing APL Terminal would be implemented. These minor upland improvements would include conversion of a portion of the dry container storage area to an additional 200 reefers, associated electrical lines, and installation of utility infrastructure at locations in the existing backland areas. Beyond these minor upland improvements, the Port would not construct and develop additional backlands or wharves. No gate or additional backland improvements would occur, and no in-water features such as dredging or a new berth, wharf extension, or over-water features such as new cranes would occur under the No Federal Action Alternative.

Under the No Federal Action Alternative, the existing APL Terminal would continue to operate as an approximately 291-acre container terminal, and up to approximately 2.15 million TEUs could be handled at the terminal by 2027. Based on the throughput projections, the No Federal Action Alternative would result in 286 annual ship calls at Berths 302-305. In addition, this alternative would result in up to 7,273 peak daily truck trips (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Cargo ships that currently berth and load/unload at the Berths 302-305 terminal would continue to do so.

Impact WQ-1a: Construction activities 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 Impact Determination

Because there would be only minor terminal improvement and construction at the proposed site as part of Alternative 2, the potential for impacts would be lower than with the proposed Project, and there would be no pollution, contamination, or nuisance, or violation of regulatory standards due to Project construction. 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

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-1b: No runoff from backland development/redevelopment would occur or 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 Impact Determination

Because there would be no backland development at the proposed site as part of Alternative 2 (only minor terminal improvements), there would be no pollution, contamination, or nuisance, or violation of regulatory standards due to runoff from backland development/redevelopment.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-1c: Accidents during construction 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 Impact Determination

Because there would be only minor terminal improvement and construction at the proposed site as part of Alternative 2, the potential for impacts would be lower than with the proposed Project, and accidental spills resulting from construction would not occur. 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

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-2a: Construction would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Because there would be only minor terminal improvement and construction at the proposed site as part of Alternative 2, the potential for impacts would be lower than with the proposed Project, and significant construction-related flooding impacts would not occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Because there would be no in-water construction at the proposed site as part of Alternative 2, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Because there would be only minor improvements to the backlands at the proposed site as part of Alternative 2 (only minor terminal improvements), the potential for impacts would be lower than with the proposed Project, and there would be no acceleration of erosion or sedimentation. 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

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-1d: Operation of 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 Impact Determination

Under Alternative 2, the number of vessels calling at the APL Terminal would be the same as with Alternative 1. Regulatory controls for runoff and storm drain discharges that are currently in place are designed to reduce impacts to water quality and would be fully implemented for Alternative 2. Potential impacts from atmospheric deposition, ballast water discharges, vessel contaminants, accidental spills, and illegal discharges would be the same as for Alternative 1. Water quality impacts would not be significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-2b: Operation of Alternative 2 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Under Alternative 2, slightly greater container throughput and people would be exposed to potential flood conditions at the terminal compared to the CEQA baseline; however, site topography and the storm water management system at the terminal would control flood conditions to minimize harm to people and property. Therefore, operation of Alternative 2 would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Operations under Alternative 2 would not install barriers to prevent or impede water movement around Pier 300; therefore, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Terminal operations under Alternative 2 would not accelerate erosion and soil deposition in the Harbor due in part to existing regulatory controls. Under Alternative 2, the marine terminal would operate with the same acreage as with the CEQA baseline and Alternative 1. Impacts to water quality from erosion and sedimentation would be the same as with the CEQA baseline, and would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no

incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

3.14.4.3.2.3 Alternative 3 – Reduced Project: Four New Cranes

Under Alternative 3, four new cranes would be added to the existing wharf along Berths 302-305 and only minor improvements to the existing APL Terminal would be made utility infrastructure and conversion of dry container storage to reefers). No other upland terminal improvements would be constructed. The existing terminal is berth-constrained, and adding the additional four cranes would improve the terminal's efficiency.

The total acreage of backlands under Alternative 3 would remain at approximately 291 acres, which would be less than the proposed Project. This alternative would not include the extension of the existing wharf, construction of a new berth, dredging, or the relocation and improvement of various gates and entrance lanes.

Based on the throughput projections, TEU throughput under Alternative 3 would be less than the proposed Project, with an expected throughput of approximately 2.58 million TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305. In addition, this alternative would result in up to 8,725 peak daily truck trips (2,306,460 annual), and up to 2,544 annual one-way rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

Impact WQ-1a: Construction activities 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 Impact Determination

Because there would be only minor terminal improvement and construction at the proposed site as part of Alternative 3, the potential for impacts would be lower than with the proposed Project, and with adherence to construction-related control plans and permits (i.e., NPDES permit, SWPPP, SPCC Plan, BMPs, and Debris Management Plan as described in Section 3.14.4.1), there would be no substantial pollution, contamination, or nuisance, or violation of regulatory standards due to Project construction. 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 3 would include construction of minor terminal improvements in the uplands not included in the NEPA baseline. Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1b: Runoff from backland development/redevelopment 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 Impact Determination

Because there would be only minor backland improvements at the proposed site as part of Alternative 3 (only minor terminal improvements), there would be no substantial pollution, contamination, or nuisance, or violation of regulatory standards due to runoff from backland development/redevelopment. 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

Impacts associated with the minor backland improvements would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1c: Accidents during construction 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 Impact Determination

Because there would be only minor terminal improvement and construction at the proposed site as part of Alternative 3, the potential for impacts would be lower than with the proposed Project, and accidental spills resulting from construction are not expected to occur. 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

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2a: Construction would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Because there would be only minor terminal improvement and construction at the proposed site as part of Alternative 3, the potential for impacts would be lower than with the proposed Project, and significant construction-related flooding impacts would not occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, the potential for impacts would be lower than with the proposed Project, and significant construction-related flooding impacts would not occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Because there would be no in-water construction at the proposed site as part of Alternative 3, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Because there would be only minor improvements to the backlands at the proposed site as part of Alternative 3 (only minor terminal improvements), the potential for impacts would be lower than with the proposed Project, and there would be no acceleration of erosion or sedimentation. 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

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1d: Operation of 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 Impact Determination

Under Alternative 3, the number of vessels calling at the APL Terminal (up to 286 vessels in 2020 and 338 vessels in 2025 and 2027) would be the higher than the CEQA baseline (247 vessel calls annually) and Alternatives 1 and 2 (up to 286 vessel calls by 2025 and 2027), but lower than with the proposed Project (up to 390 vessel calls by 2027). Regulatory controls for runoff and storm drain discharges that are currently in place are designed to reduce impacts to water quality and would be fully implemented for Alternative 3. Potential impacts from atmospheric deposition, ballast water discharges, leaching from vessel hulls, stormwater, accidental spills, and illegal discharges would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Under Alternative 3, the number of vessels calling at the proposed site (up to 286 vessels in 2020 and 338 vessels in 2025 and 2027) would be the higher than the NEPA baseline (234 vessel calls annually through 2020, and 286 vessel calls annually in 2025 and 2027), but lower than with the proposed Project (up to 390 vessel calls by 2027). Regulatory controls for runoff and storm drain discharges that are currently in place are designed to reduce impacts to water quality and would be fully implemented for Alternative 3. Potential impacts from atmospheric deposition, ballast water discharges, leaching from vessel hulls, stormwater, accidental spills, and illegal discharges would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2b: Operation of Alternative 3 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Under Alternative 3, greater container throughput and people would be exposed to potential flood conditions at the terminal compared to the CEQA baseline; however, site topography and the storm water management system at the terminal would control flood conditions to minimize harm to people and property. Therefore, operation of Alternative 3 would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, operation of Alternative 3 would not result in significant impacts from flooding under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Operations under Alternative 3 would not install barriers to prevent or impede water movement around Pier 300; therefore, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination; therefore, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Terminal operations under Alternative 3 would not accelerate erosion and soil deposition in the Harbor due in part to existing regulatory controls. Under Alternative 3, the marine terminal would operate with the same acreage as with the CEQA baseline. Impacts to water quality from erosion and sedimentation would be the same as with the CEQA baseline, and would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operations under the NEPA baseline through 2027 would be the same as described above under the CEQA Impact Determination. Therefore, impacts to water quality from erosion and sedimentation would be the same as with the NEPA baseline, and would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.14.4.3.2.4 Alternative 4 – Reduced Project: No New Wharf

Under Alternative 4, six cranes would be added to the existing terminal wharf at Berths 302-305, and the 41-acre fill area adjacent to the APL Terminal would be developed as container yard backlands. EMS would relinquish the 30 acres of backlands under space assignment. EMS would not add the nine acres of land behind Berth 301 or the two acres at the main gate to its permit. Because no new wharf would be constructed at Berth 306,

the 41-acre backland would be operated using traditional methods and would not be expected to transition to use of automated equipment. As the existing wharf would not be extended to create Berth 306, no dredging would occur.

Under Alternative 4, the total terminal acreage would be 302 acres, which is less than the proposed Project. Based on the throughput projections, TEU throughput would be less than the proposed Project, with an expected throughput of approximately 2.78 million TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305. In addition, Alternative 4 would result in up to 9,401 peak daily truck trips (2,485,050 annual), and up to 2,563 annual one-way rail trip movements. Configuration of all other landside terminal components (i.e., Main Gate improvements) would be identical to the proposed Project.

Impact WQ-1a: Construction activities 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 Impact Determination

Under Alternative 4, the 41-acre backlands would be developed as with the proposed Project. However, remaining terminal improvements and construction would be less than with the proposed Project. Therefore, the potential for impacts would be lower than with the proposed Project, and with adherence to construction-related control plans and permits (i.e., NPDES permit, SWPPP, SPCC Plan, BMPs, and Debris Management Plan as described in Section 3.14.4.1), no substantial pollution, contamination, or nuisance, or violation of regulatory standards due to Project construction is anticipated. 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

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1b: Runoff from backland development/redevelopment 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 Impact Determination

Under Alternative 4, backlands development would be slightly less than with the proposed Project. The 41-acre fill area would be developed; however, total backlands area under this alternative (302 acres) would be less than with the proposed Project (347 acres). Under this alternative, there would be no pollution, contamination, or nuisance, or violation of regulatory standards due to runoff from backland development/redevelopment, and 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

Impacts during terminal development would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1c: Accidents during construction 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 Impact Determination

Because there would be fewer terminal improvements and less construction at the proposed site as part of Alternative 4, the potential for impacts would be lower than with the proposed Project, and accidental spills resulting from construction are not expected to occur. 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

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2a: Construction would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Because there would be fewer terminal improvements and less construction at the proposed site as part of Alternative 4, the potential for impacts would be lower than with the proposed Project, and significant construction-related flooding impacts would not occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during Project construction would be the same as described above under the CEQA Impact Determination. Therefore, the potential for impacts would be lower than with the proposed Project, and significant construction-related flooding impacts would not occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Because there would be no in-water construction at the Proposed site as part of Alternative 4, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

As with the NEPA baseline, there would be no in-water construction at the Proposed site as part of Alternative 4. Therefore, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Under Alternative 4, backlands development would be slightly less than with the proposed Project. The 41-acre fill area would be developed; however, total backlands area under this alternative (302 acres) would be less than with the proposed Project (347 acres). The potential for impacts would be lower than with the proposed Project, and there would be no acceleration of erosion or sedimentation. 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

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1d: Operation of Project facilities 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 Impact Determination

Under Alternative 4, the number of vessels calling at the APL Terminal (up to 286 vessels in 2020 and 338 vessels in 2025 and 2027) would be the same as under Alternative 3. They would be the higher than the CEQA baseline (247 vessel calls annually) and Alternatives 1 and 2 (up to 286 vessel calls by 2025 and 2027), but lower than with the proposed Project (up to 390 vessel calls by 2027). Regulatory controls for runoff and storm drain discharges are designed to reduce impacts to water quality and would be fully implemented for Alternative 4. Potential impacts from atmospheric deposition, ballast water discharges, leaching from vessel hulls, stormwater, accidental spills, and illegal discharges would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Under Alternative 4, the number of vessels calling at the Proposed site (up to 286 vessels in 2020 and 338 vessels in 2025 and 2027) would be the same as under Alternative 3. They would be the higher than the NEPA baseline (234 vessel calls annually through 2020, and 286 vessel calls annually in 2025 and 2027), but lower than with the proposed Project (up to 390 vessel calls by 2027). Regulatory controls for runoff and storm drain discharges are designed to reduce impacts to water quality and would be fully implemented for Alternative 4. Potential impacts from atmospheric deposition, ballast water discharges, leaching from vessel hulls, stormwater, accidental spills, and illegal discharges would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2b: Operation of Alternative 4 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Under Alternative 4, greater container throughput and people would be exposed to potential flood conditions at the terminal compared to the CEQA baseline; however, site topography and the storm water management system at the terminal would control flood

conditions to minimize harm to people and property. Therefore, operation of Alternative 4 would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, operation of Alternative 4 would not result in significant impacts from flooding under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Operations under Alternative 4 would not install barriers to prevent or impede water movement around Pier 300; therefore, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

NEPA Impact Determination

Operations under Alternative 4 would not install barriers to prevent or impede water movement around Pier 300; therefore, there would be no change in movement of surface water in the Harbor.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Terminal operations under Alternative 4 would not accelerate erosion and soil deposition in the Harbor due in part to implementation of regulatory controls (i.e., BMPs and SUSMP) that treat and remove pollutants and solids from site runoff. Under Alternative 4, the marine terminal would operate with a slightly higher acreage (302 acres by 2015) than with the CEQA baseline (291 acres), but lower than with implementation of the proposed Project (up to 347 acres by 2027). Paving the 41-acre backlands would minimize the potential for erosion. Impacts to water quality from erosion and sedimentation would be lower than with the proposed Project, and would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.14.4.3.2.5 Alternative 5 – Reduced Project: No Space Assignment

Alternative 5 would improve the existing terminal, construct a new wharf (1,250 ft) creating Berth 306, add 12 new cranes to Berths 302-306, add 56 acres for backlands, wharfs, and gates improvements, construct electrification infrastructure in the backlands behind Berths 305-306, and relinquish the 30 acres currently on space assignment. This alternative would be the same as the proposed Project, except that EMS would relinquish the 30 acres of backlands under space assignment. As with the proposed Project, the 41-acre backlands and Berth 306 under Alterative 5 could utilize traditional container operations, electric automated operations, or a combination of the two over time. Dredging of the Pier 300 Channel along the new wharf at Berth 306 (approximately 20,000 cy) would occur, with the dredged material beneficially reused, and/or disposed of at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal site (i.e., LA-2).

Under Alternative 5, the total gross terminal acreage would be 317 acres, which is less than the proposed Project. TEU throughput would be the same as the proposed Project,

with an expected throughput of approximately 3.2 million TEUs by 2027. This would translate into 390 annual ship calls at Berths 302-306. In addition, this alternative would result in up to 11,361 peak daily truck trips (3,003,157 annual) including drayage, and up to 2,953 annual one-way rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

Impact WQ-1a: Construction activities 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 Impact Determination

Under Alternative 5, construction impacts would be similar to those associated with the proposed Project. Therefore, impacts to water quality from construction activities would not be significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Under Alternative 5, construction impacts would be similar to those associated with the proposed Project but greater than the NEPA baseline. Therefore, impacts to water quality from construction activities would not be significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1b: Runoff from backland development/redevelopment 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 Impact Determination

Construction activities associated with backland improvements for Alternative 5 have the potential to adversely affect the quality of stormwater runoff. However, construction under Alternative 5 would implement a SWPPP and BMPs to control runoff of eroded soils and pollutants. These measures, combined with the low potential for erosion, would limit the soil and contaminant loading to the Harbor. As with the proposed Project, runoff from upland construction activities would not create pollution, contamination, a nuisance, or violate any water quality standards, and impacts to water quality would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction (from backland development/redevelopment) would be the same as described under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1c: Accidents during construction 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 Impact Determination

Under Alternative 5, there would be the same level of in-water construction (20,000 cy of dredging and wharf construction) and upland construction as for the proposed Project. Spills or leaks that occur on land are expected to be contained and cleaned up before any impacts to surface water quality can occur. Significant water quality impacts under CEQA are not expected to occur as a result of accidental spills of pollutants during in-water construction. 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

Impacts during construction would be the same as described under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2a: Construction would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

As with the proposed Project, Alternative 5 would develop the existing 41-acre undeveloped area as backlands. Because Alternative 5 construction would not increase the potential for flooding at the site, it would not substantially increase the potential for people or property to be adversely affected by flooding. Therefore, construction of Alternative 5 would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, construction of Alternative 5 would not result in significant impacts from flooding under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Under Alternative 5, the wharf at proposed Berth 306 would be built and dredging (20,000 cy) and wharf construction would occur. Construction activities for Alternative 5 would not result in a permanent adverse change in surface water movement because these activities would not impose barriers to water movement into and out of the waters off Pier 300, and impacts to water quality and oceanography would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, construction activities for Alternative 5 would not result in a permanent adverse change in surface water movement because these activities would not impose barriers to water movement into and out of the waters off Pier 300, and impacts to water quality and oceanography would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Construction activities associated with backland improvements for Alternative 5 would be similar to the proposed Project. Construction activities for Alternative 5 would not accelerate natural processes of wind and water erosion because BMPs would be implemented to minimize erosion from the construction site. Therefore, 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

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1d: Operation of 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 Impact Determination

Upland operations associated with Alternative 5 would be similar to those resulting from the proposed Project. The number of vessel calls would be the same as those from the proposed Project, as well. Stormwater runoff from the Proposed site could contain particulate debris from operation of the marine terminal, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits, SWPPP requirements, and would comply with SUSMP requirements prior to discharge to Harbor waters (to the Pier 300 Channel). As a consequence, water quality impacts from site runoff would not be significant. Potential impacts resulting from atmospheric deposition, ballast water discharges, leaching from vessel hulls, accidental spills and illegal discharges to Harbor waters are considered less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2b: Operation of Alternative 5 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Although operation of Alternative 5 would increase the amount of property and people exposed to potential flooding, site topography and the storm water management system at the terminal would control flood conditions to minimize harm to people and property. Therefore, operation of Alternative 5 would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, operation of Alternative 5 would not result in significant impacts from flooding under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Once construction of facilities for Alternative 5 is completed, marine terminal operations would not cause a permanent adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow because the terminal would not install barriers to prevent or impede water movement around Pier 300. Therefore, impacts to surface water flow would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, impacts to surface water flow would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Operation of expanded terminal facilities on the 317-acre Proposed site would exceed the operational area that existed under the CEQA baseline (291 acres). Although the marine terminal under Alternative 5 would operate on a larger area than CEQA baseline conditions, the acreage would still be lower than with the proposed Project (347 acres). The proposed site would be completely paved, which would prevent erosion from occurring during terminal operations, especially on the backlands adjacent to Berths 305-306. As described above, BMPs would be implemented and site runoff to the Pier 300 Channel would be subject to SUSMP requirements, which would prevent or minimize sediment runoff from the proposed site. As a consequence, marine terminal operations would not result in significant impacts related to erosion or sedimentation. Impacts to water and sediment quality would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be greater than the operational area that existed under the NEPA baseline (291 acres through 2027). Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, impacts to water and sediment quality would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.14.4.3.2.6 Alternative 6 – Proposed Project with Expanded On-Dock Railyard

Alternative 6 would be the same as the proposed Project; however, the existing on-dock railyard on the terminal would be redeveloped and expanded. Under this alternative, approximately 10 acres of backlands would be removed from container storage for the railyard expansion. Alternative 6 would improve the existing terminal, develop the existing 41-acre fill area as backlands, add 1,250 ft of new wharf creating Berth 306, and dredge the Pier 300 Channel along Berth 306. Under this alternative, 12 new cranes would be added to the wharves along Berths 302-306, for a total of 24 cranes. As with the proposed Project, the 41-acre backlands and Berth 306 under Alterative 6 could utilize traditional container operations, electric automated operations, or a combination of the two over time. Dredging of the Pier 300 Channel along Berth 306 would occur (removal of approximately 20,000 cy of material), with the dredged material beneficially

reused and/or disposed of at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal site (i.e., LA-2). Total terminal acreage (347) would be the same as the proposed Project. Based on the throughput projections, TEU throughput would be the same as the proposed Project, with an expected throughput of approximately 3.2 million TEUs by 2027. This would translate into 390 annual ship calls at Berths 302-306. In addition, Alternative 6 would result in up to 10,830 peak daily truck trips (2,862,760 annual), and up to 2,953 annual rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

Impact WQ-1a: Construction activities 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 Impact Determination

Under Alternative 6, construction impacts would be similar to those associated with the proposed Project. Expansion of the on-dock railyard is not expected to create water quality impacts. Therefore, construction-related impacts due to construction are expected to be with the same as the proposed Project. There is no anticipated construction-related pollution, contamination, nuisance, or violations of water quality standards or permit conditions resulting from Alternative 6. Therefore, impacts to water quality from construction activities would not be significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts to water quality from construction activities would not be significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1b: Runoff from backland development/redevelopment 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 Impact Determination

Construction activities associated with backland improvements for Alternative 6 would be the same as those for the proposed Project. As with the proposed Project, runoff from

upland construction activities would not create pollution, contamination, a nuisance, or violate any water quality standards, and impacts to water quality would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, runoff from upland construction activities would not create pollution, contamination, a nuisance, or violate any water quality standards, and impacts to water quality would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1c: Accidents during construction 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 Impact Determination

Under Alternative 6, there would be essentially the same amount of dredging and upland development as the proposed Project. Spills or leaks that occur on land are expected to be contained and cleaned up before any impacts to surface water quality can occur. Significant water quality impacts under CEQA are not expected to occur as a result of accidental spills of pollutants during in-water construction. 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

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2a: Construction would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

As with the proposed Project, Alternative 6 would develop the existing 41-acre undeveloped area as backlands. Construction activities would not increase the potential for flooding on-site because site elevations would remain generally the same as the baseline conditions, even though grading and backland construction would occur. During construction, BMPs would be employed to control site runoff, and an on-site storm drain system would be installed to convey runoff from the proposed site to the Harbor. The on-site drainage system would represent an improvement over the baseline conditions, where the majority of the 41-acre undeveloped area does not have an on-site drainage system.

Because Alternative 6 construction would not increase the potential for flooding at the site, it would not substantially increase the potential for people or property to be adversely affected by flooding. Therefore, construction of Alternative 6 would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, construction of Alternative 6 would not result in significant impacts from flooding under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Under Alternative 6, the wharf at proposed Berth 306 would be built and dredging (20,000 cy) along Berth 306 would occur. Construction activities for Alternative 6 would not result in a permanent adverse change in surface water movement because these

activities would not impose barriers to water movement into and out of the waters off Pier 300, and impacts to water quality and oceanography would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Construction activities associated with backland improvements for Alternative 6 would be similar to the proposed Project. Construction activities for Alternative 6 would not accelerate natural processes of wind and water erosion because BMPs would be implemented to minimize erosion from the construction site. Therefore, 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

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-1d: Operation of Alternative 6 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 Impact Determination

Upland operations associated with Alternative 6 would be similar to those resulting from the proposed Project. The number of vessel calls would be the same as those from the proposed Project, as well. Stormwater runoff from the proposed site could contain particulate debris from operation of the marine terminal, including aerially deposited pollutants. Discharges of stormwater would comply with the NPDES discharge permit limits, SWPPP requirements, and would comply with SUSMP requirements prior to discharge to Harbor waters (to the Pier 300 Channel). As a consequence, water quality impacts from site runoff would not be significant. Potential impacts resulting from atmospheric deposition, ballast water discharges, leaching from vessel hulls, accidental spills and illegal discharges to Harbor waters are less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-2b: Operation of Alternative 6 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Although operation of Alternative 6 would increase the amount of property and people exposed to potential flooding, site topography and the storm water management system at the terminal would control flood conditions to minimize harm to people and property. Therefore, operation of Alternative 6 would not result in significant impacts from flooding under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, operation of Alternative 6 would not result in significant impacts from flooding under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.

CEQA Impact Determination

Once construction of facilities for Alternative 6 is completed, marine terminal operations would not cause a permanent adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow because the terminal would not install barriers to prevent or impede water movement around Pier 300. Therefore, impacts to surface water flow would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during operation would be the same as described above under the CEQA Impact Determination. Therefore, impacts to surface water flow would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.

CEQA Impact Determination

Operation of expanded terminal facilities on the 347-acre proposed site would exceed the operational area that existed under the CEQA baseline (291 acres), but would be the same as for the proposed Project. The proposed site would be completely paved, which would prevent erosion from occurring during terminal operations, especially on the backlands

adjacent to Berths 305-306. As described above, BMPs would be implemented and site runoff would comply with SUSMP requirements, which would prevent or minimize sediment runoff from the marine terminal. As a consequence, marine terminal operations would not result in significant impacts related to erosion or sedimentation. Impacts to water quality would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Impacts during construction would be the same as described above under the CEQA Impact Determination. Therefore, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.14.4.3.3 Summary of Impact Determinations

Table 3.14-4 summarizes the CEQA and NEPA impact determinations for the proposed Project and its alternatives related to Water Quality, Sediments, and Oceanography, 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, Port 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 3.14-4: 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	Impacts after Mitigation
Proposed Project	**WQ-1a**: Project construction activities 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1b: Runoff from backland development/redevelopment 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1c: Accidents during construction 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-2a: Proposed Project construction would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1d: Operation of proposed Project facilities 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.14-4: 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	Impacts after Mitigation
	WQ-2b: Operation of proposed Project facilities would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
Alternative 1: No Project	**WQ-1a**: No construction activities would occur or 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: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-1b: No runoff from backland development/redevelopment would occur or 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: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-1c: Accidents during construction would not occur or 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: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-2a: No construction would occur or result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable

Table 3.14-4: 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	Impacts after Mitigation
	WQ-3a: No construction activities would occur or result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-4a: No construction activities would occur or accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-1d: Operation of 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.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-2b: Operation of Alternative 1 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable

Table 3.14-4: 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	Impacts after Mitigation
Alternative 2: No Federal Action	**WQ-1a**: Construction activities 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 NEPA: No impact	Mitigation not required	CEQA: Less than significant NEPA: No impact
	WQ-1b: No runoff from backland development/redevelopment would occur or 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: No impact NEPA: No impact	Mitigation not required	CEQA: No impact NEPA: No impact
	WQ-1c: Accidents during construction 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 NEPA: No impact	Mitigation not required	CEQA: Less than significant NEPA: No impact
	WQ-2a: Construction would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant NEPA: No impact	Mitigation not required	CEQA: Less than significant NEPA: No impact
	WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: No impact NEPA: No impact	Mitigation not required	CEQA: No impact NEPA: No impact
	WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant NEPA: No impact	Mitigation not required	CEQA: Less than significant NEPA: No impact
	WQ-1d: Operation of 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 NEPA: No impact	Mitigation not required	CEQA: Less than significant NEPA: No impact

Table 3.14-4: 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	Impacts after Mitigation
	WQ-2b: Operation of Alternative 2 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: No impact		NEPA: No impact
	WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: No impact		NEPA: No impact
Alternative 3: Reduced Project – Four New Cranes	**WQ-1a**: Construction activities 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1b: Runoff from backland development/redevelopment 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1c: Accidents during construction 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-2a: Construction would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.14-4: 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	Impacts after Mitigation
	WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1d: Operation of 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-2b: Operation of Alternative 3 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.14-4: 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	Impacts after Mitigation
Alternative 4: Reduced Project – No New Wharf	**WQ-1a**: Construction activities 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1b: Runoff from backland development/redevelopment 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1c: Accidents during construction 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-2a: Construction would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1d: Operation of 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.14-4: 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	Impacts after Mitigation
	WQ-2b: Operation of Alternative 4 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
Alternative 5: Reduce Project – No Space Assignment	**WQ-1a**: Construction activities 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1b: Runoff from backland development/redevelopment 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1c: Accidents during construction 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-2a: Construction would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.14-4: 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	Impacts after Mitigation
	WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1d: Operation of 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-2b: Operation of Alternative 5 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.14-4: 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	Impacts after Mitigation
Alternative 6: Proposed Project with Expanded On-Dock Railyard	**WQ-1a**: Construction activities 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1b: Runoff from backland development/redevelopment 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-1c: Accidents during construction 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-2a: Construction would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-3a: Construction activities would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-4a: Construction activities would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.14-4: 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	Impacts after Mitigation
	WQ-1d: Operation of Alternative 6 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	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-2b: Operation of Alternative 6 would not result in increased flooding that would have the potential to harm people or damage property or sensitive biological resources.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	WQ-4b: Operations would not accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

3.14.4.4 Mitigation Monitoring

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

3.14.5 Significant Unavoidable Impacts

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