3.13

WATER QUALITY, SEDIMENTS, AND OCEANOGRAPHY

3.13.1 Introduction

This section addresses the potential impacts to water quality, sediments, and oceanography resulting from the proposed Project and alternatives. This section also addresses surface water hydrology and potentials for flooding impacts. The environmental setting, applicable regulations, and impacts and mitigation measures are discussed in Sections 3.13.2 through 3.13.4, respectively. As discussed in Section 3.13.4, construction and operational impacts from the proposed Project to water and sediment quality, hydrology, and oceanography would be less than significant. In addition, loss of marine surface water due to the creation of a 9.5-acre (4-hectares) landfill in the Northwest Slip would result in a less than significant impact on water and sediment quality and oceanography.

3.13.2 Environmental Setting

3.13.2.1 Regional Setting

The proposed Project area is located in the Los Angeles Drainage Basin, which drains approximately 832 square miles (2,155 square kilometers). Los Angeles Harbor has been physically modified through previous dredging and filling projects as well as construction of breakwaters and other structures. The Los Angeles Harbor is adjacent to Long Beach Harbor. Both Harbors function oceanographically as one unit due to an inland connection via Cerritos Channel and because they share Outer Harbors behind the San Pedro, Middle, and Long Beach breakwaters.

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 treated sewage from the Terminal Island Treatment Plant (TITP) into the

Outer Harbor. Sheet runoff and storm drain discharges during and after storm events also add freshwater to the harbor.

The proposed Project site is within the Dominguez Watershed (Hydrologic Unit 405.12), which covers approximately 345 square kilometers (133 square miles) of land and water. Approximately 81 percent of the watershed is developed, and 62 percent of the land is covered by impervious surfaces. Drainage within the watershed is primarily through an extensive network of underground storm drains. This system of storm drains defines the boundaries of the watershed. More than half of this watershed drains to Dominguez Channel, and the remaining portions of the watershed drain to retention basins for groundwater recharge, into Wilmington Drain, or to the Los Angeles and Long Beach Harbors (MEC 2004). The proposed Project site is within the Harbors subwatershed, which covers 95 square kilometers (37 square miles). Surface freshwater in the proposed Project area is primarily from stormwater runoff which enters the harbor from numerous storm drains or drainage systems. The largest of these is the Dominguez Channel which drains into the East Basin of the harbor. In the West Basin, major storm drains discharge stormwater and dry weather runoff from an area of approximately five square miles of northern San Pedro and some of Rancho Palos Verdes to the Southwest Slip, and at the Northwest Slip which drains the Machado Lake/Harbor Regional Park area. Dry weather discharges from storm drains can also occur and affect the marine water quality within the West Basin. All of the developed backlands (upland areas) have storm drains that are designed for a 10-year event and comply with the standard urban storm water mitigation plan of the County of Los Angeles (see Section 3.13.3.4). These drains are inspected at least annually and maintained as necessary.

The proposed Project is located in the West Basin, which is part of the Inner Harbor. The existing beneficial uses of coastal and tidal waters in the Inner Harbor areas of 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, non-contact water recreation, commercial and sport fishing, preservation of rare and endangered species, marine habitat, and shellfish harvesting (RWQCB 1994b). Waters in the proposed Project area that are 303(d)-listed for impairment (*Proposed 2006 CWA Section 303(d) List of Water Quality Limited Segments, Los Angeles Regional Board*; approved October 25, 2006) include the Consolidated Slip, Cabrillo Marina, Fish Harbor, Inner Cabrillo Beach Area, Los Angeles/Long Beach Outer Harbor (inside breakwater), Los Angeles/Long Beach Inner Harbor, and Los Cerritos Channel (SWRCB 2006). Dominguez Channel, which drains into Consolidated Slip, is also on the current 303(d) list. The reasons for impairment of these water bodies are summarized in Table 3.13-1. Total Maximum Daily Loads (TMDLs) have not been developed for pollutants at any of these areas and are not planned until 2019. The RWQCB 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. However, this site is not listed for this stressor on the current 303(d) list.

The water and sediment quality parameters that could be affected directly by the proposed Project and project alternatives include dissolved oxygen, hydrogen ion concentration (pH), turbidity/transparency, nutrients, and contaminants. Other parameters commonly used to describe marine water quality include salinity and temperature. While the proposed Project and alternatives would not directly affect salinity and temperature, they are addressed because stormwater runoff from the project site could affect these conditions

Table 3.13-1. Section 303(d) Listed Waters in LA Harbor

Listed Waters/Reaches	*Impairments*
Los Angeles Harbor, Cabrillo Marina (77 acres; 31 ha)	DDT, PCBs
Los Angeles Harbor, Inner Cabrillo Beach Area (82 acres; 33 ha)	Cu, DDT*, PCBs*
Los Angeles/Long Beach Outer Harbor, inside breakwater (4042 acres; 1636 ha)	DDT, PCBs
Los Angeles Harbor, Fish Harbor (34 acres; 14 ha)	DDT, PAHs, PCBs, benzo[a]anthracene, chlordane, chrysene (C1-C4), Cu, dibenz[a,h]anthracene, Pb, Hg, phenanthrene, pyrene, sediment toxicity, Zn
Los Angeles/Long Beach Inner Harbor (3003 acres; 1215 ha)	Beach closures, benthic community effects, DDT, PCBs, sediment toxicity
Los Cerritos Channel (31 acres; 13 ha)	Ammonia, bis(2ethylhexyl)phthalate/DEHP, coliform bacteria, Cu, Pb, Zn, trash Sediment: chlordane
Los Angeles Harbor, Consolidated Slip (36 acres; 15 ha)	Benthic community effects, sediment toxicity, dieldrin Sediment: Cd, Cr, Cu, Pb, Hg, Zn Sediment & tissue: chlordane, DDT*, PCBs* Tissue: toxaphene
Domínguez Channel, from Vermont to Estuary (13.4 km; 8.3 miles)	Benthic community effects, Cr, Pb, Zn, pesticides, DDT, PAHs, ammonia, bacteria
Source: SWRCB 2006. *Fish consumption advisory	

in the receiving waters of West Basin. Oceanographic conditions that could be affected by the proposed Project include circulation (current patterns) as it may affect water exchange between West Basin and adjacent waters of the harbor.

3.13.2.2 Water Quality

Water quality conditions in the harbor complex and proposed Project area have been summarized from the 2000 baseline study (MEC and Associates 2002) and other sources as cited below. Water and sediment quality sampling throughout the harbor is not undertaken on an annual basis, with the most recent surveys completed in 2000. However, the Port conducts monthly sampling for selected parameters at several stations in Los Angeles Harbor, including two stations in the West Basin. Results from the monthly sampling are contained in a database, but the data have not been analyzed statistically or published in a report. Use of 2000 (and earlier for some parameters) data to approximate conditions in 2003 is appropriate because conditions in the West Basin area of the harbor have remained about the same from 2000 to 2004. This is illustrated by monthly measurements of transparency and dissolved oxygen at two sites in the West Basin – LA35, which is in the upper northwest corner between Berths 129 and 136, and LA33, which is in the southern part of the West Basin off Berth 147 (Figure 3.13-1). The transparency and dissolved oxygen measurements (POLA unpublished monthly water quality data), shown in Figure 3.13-2, indicate considerable variability (scatter), but no trend over the past several years. NPDES monitoring conducted in the West Basin in 2003 (temperature, dissolved oxygen, pH, salinity) (MBC 2003; Appendix L) are consistent with the MEC study in 2000 and within ranges considered normal for the study area. Therefore, it is reasonable to use the earlier (2000) data to assist in characterizing the 2003 baseline water quality conditions.

Marine water quality in the Los Angeles 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 dissolved oxygen and nutrients are related to local processes in addition to regional conditions. Surface runoff, effluent discharges, and historical and recent watershed inputs, affect water and sediment quality within the harbor. Data from the RWQCB indicate that there are 10 major NPDES discharge sources, one publicly owned treatment works (TITP), six refineries, 58 minor discharges, 63 general discharges, 424 discharges covered under an industrial stormwater permit, and 115 discharges under the construction stormwater permit. Active and historical NPDES permits for discharges to the harbor and Los Angeles River, as identified on the RWQCB website (www.waterboards.ca.gov/losangeles/html/permits/permits.html), are listed in Appendix L. Discharge permits typically specify maximum allowable concentrations and mass emission rates for effluent constituents. Numeric criteria for priority pollutants in discharge permits may be based on limits contained in the California Ocean Plan or by the California Toxics Rule ([CTR] USEPA 2000a). The relative contributions (i.e., loadings) to the Los Angeles Harbor from regulated point source and unregulated non-point sources are expected to vary for individual contaminants. Specific loadings for stressors identified on the 303(d) list are not well-characterized, but they are expected to be addressed by future TMDL studies.

Discharges from storm drains into the West Basin, Southwest Slip, and Dominguez Channel also can affect water quality in the West Basin. Information to characterize the quality of storm runoff from the portion of the watershed draining into West Basin is unavailable. However, Los Angeles County Department of Public Works (LACDPW 2002) evaluated water quality at a sampling location on the Dominguez Channel by comparing sampling data to the Ocean Plan, Basin Plan, California Toxics Rule, and AB411 standards. LACDPW concluded the following: coliform levels exceeded AB411 standards; ammonia levels exceeded Basin Plan objectives; dissolved copper exceeded Basin Plan objectives and total copper concentrations exceeded Ocean Plan objectives; and total zinc concentrations exceeded Ocean Plan objectives (MEC and Associates 2004). Existing conditions for runoff into West Basin are expected to be similar to those for Dominguez Channel because land uses are similar.

Surface freshwater in the proposed Project area is primarily from stormwater runoff, which drains into the West Basin (Figure 3.13-1). Following storm events, the quality of the runoff water may reflect loading from oils, grease, hydrocarbons, and particulate matter associated with the operation of rail loading facilities, industrial land uses, and urban runoff from roadways. Recently, the City of Los Angeles approved funding through Proposition O for implementation of water quality and habitat improvements in Harbor Regional Park, which drains into the West Basin at the Northwest Slip. These improvements will reduce future pollutant loadings from stormwater/urban runoff into the West Basin.

The West Basin also receives the thermal discharge from the Harbor Generating Station. Recent discharge volumes from the Generating Station were about 40 million gallons per day. The discharge consists of seawater that is pumped from the harbor and used to cool the turbines. This cooling process does not alter the chemical composition of the discharge (MBC 2006).

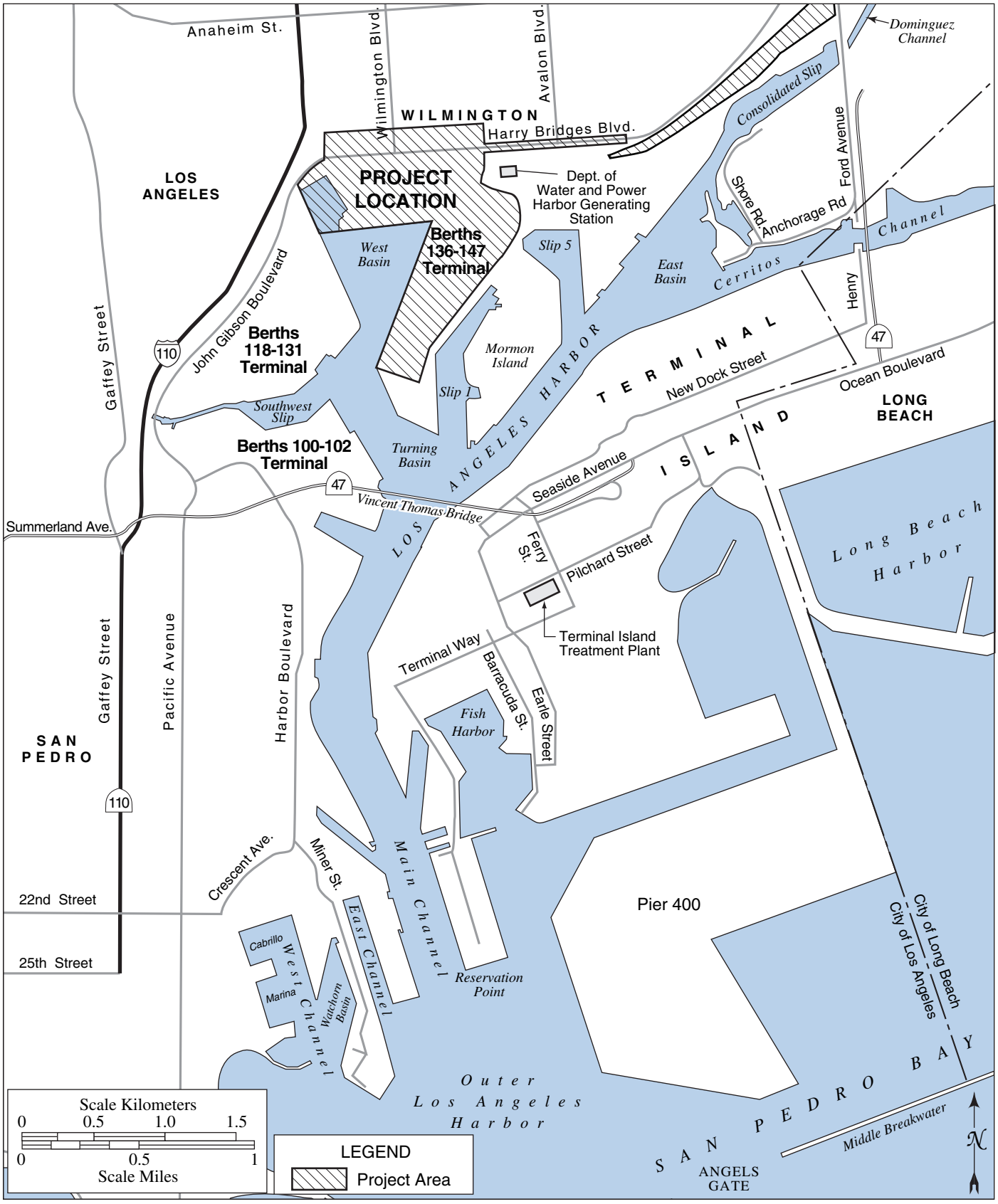
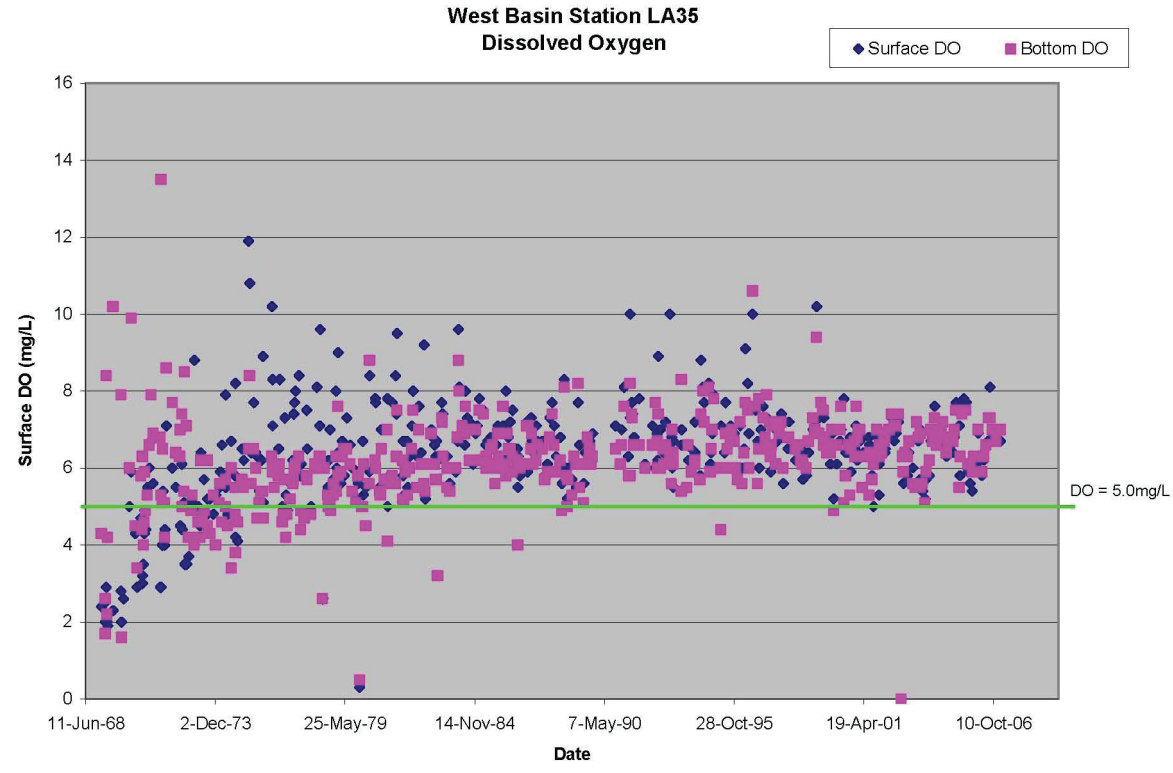


Figure 3.13-1. Los Angeles Harbor



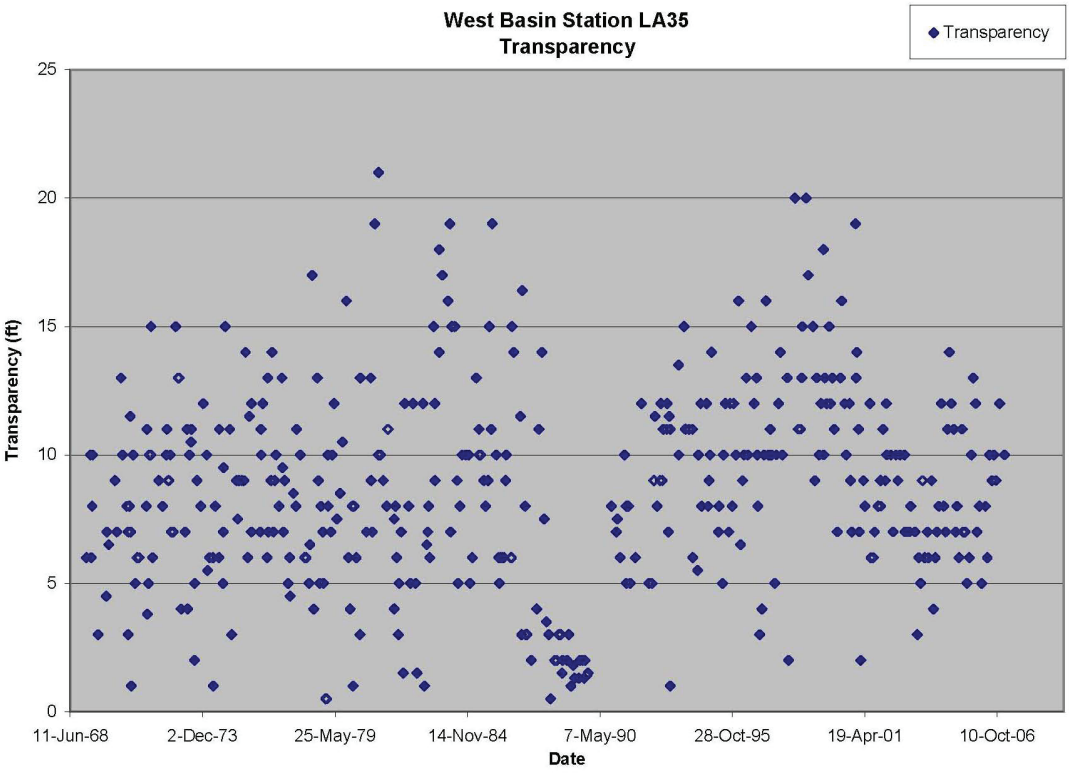


Figure 3.13-2. Examples of Long-Term Trends in Water Quality at West Basin – Dissolved Oxygen and Transparency Data for Station LA35 (Source: unpublished POLA data)

3.13.2.2.1 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 (RWQCB 1994b) specifies that the mean annual DO concentration of waters shall be 7 mg/l or greater with no event less that 5 mg/l, except that the mean annual DO concentration in the Outer Harbor area shall be 6 mg/l or higher. As recently as the late 1960s, DO levels at some locations in Los Angeles Harbor were so low that little or no marine life could survive. Since that time, regulations have reduced direct waste discharges into the harbor, resulting in improved DO levels throughout the harbor (MEC and Associates 2002).

Water quality sampling in the West Basin in 2000 and 2003 showed DO concentrations in surface, middle, and bottom waters from 5.3 to 7.2 mg/l (MEC and Associates 2002; MBC 2003). As mentioned in Section 3.13.2.2, these values measured in 2000 are considered representative of baseline conditions in 2003. Monthly monitoring (unpublished POLA monitoring data) at two locations in the West Basin (LA33 and LA35) since 1969 (Figure 3.13-2) has documented that the recent surface and bottom water DO concentrations are mostly at or above 6 mg/l, with only five measurements below 5 mg/l at each of these locations since November 1984, and only one at each location below 4 mg/l.

Algal (dinoflagellate) blooms occur occasionally within the harbor, typically associated with high solar radiation and nutrient levels, such as on sunny days following storm events. These blooms can severely reduce DO levels, but the effects are usually localized and short-lived. Disturbances of anaerobic sediments by dredging activities also result in short-term, localized DO reductions due to resuspension of materials with a high oxygen demand. Water quality monitoring associated with a dredging operation at Southwest Slip in June 2003 recorded DO concentrations from 7.8 to 7.9 mg/l throughout the water column (POLA unpublished monitoring data; included in Appendix L). In this case, dredging did not result in reduced DO concentrations.

3.13.2.2.2 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. In the Outer Harbors, pH levels have ranged from 8.1 (upper level in warmer months) to 7.4 (lower levels in cooler months). In the Los Angeles and Long Beach Inner Harbor waters, pH levels have ranged from 7.0 to 8.7. Measurements within the West Basin in 2000 and 2003 found pH to be consistently between 7.8 and 8.0 at all depths throughout the year (MEC and Associates 2002; MBC 2003). Based on the apparent absence of trends in other water quality parameters (DO and transparency) discussed in Section 3.13.2.2, the pH values measured in 2000 are considered representative of baseline conditions for pH in 2003. The 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 1994b).

3.13.2.2.3 Transparency

Transparency is a measure of the ability of water to transmit light or water clarity. Transparency is measured by the distance a black and white disk, called a secchi disk, can be seen through the water, and by a transmissometer that measures percent light transmission through water. Turbidity is the amount (mass) of suspended solids in the water column as measured in mg/l or in nephelometric turbidity units (NTUs) using a turbidimeter that measures the intensity of light scattered by particles in the water. Increased turbidity usually results in decreased transparency. Turbidity generally increases as a result of one or a combination of the following conditions: fine sediment from terrestrial runoff or resuspension of fine bottom sediments; algal blooms; and dredging activities. In addition, propeller wash from ships moving in and out of the harbor are a source of mixing in the water column, including disturbance of superficial bottom sediments, which likely affects transparency, especially in narrower channels in the Inner Harbor. One other cause of increased turbidity is algal blooms following storm runoff events, which typically provide high nutrient loadings that are efficiently utilized by plankton.

Historically, water clarity in the harbor has varied tremendously, with secchi disk readings ranging from 0.0 to 40 feet (0 to 12 m). Water clarity generally increased from 1967 to 1986-1987 (USACE and LAHD 1992), although individual readings still vary greatly. In the West Basin, transmissivity measured at one location and three depths in 2000 ranged from 50 to 73 percent and averaged over 60 percent (MEC and Associates 2002). Monthly water clarity sampling at two locations in the West Basin from 1969 through 2006 (Figure 3.13-2) showed a wide range in measurements, 0.5 to 24 feet (0.2 to 7.3 m), with an average that has been relatively consistent over the past several years. As mentioned in Section 3.13.2.2, based on the absence of apparent trends in recent water clarity values, the measurements obtained in 2000 are considered representative of baseline conditions in 2003. (Environmental studies of the harbor have not reported turbidity in NTUs.) Suspended solids concentrations in surface waters of the Outer Harbor range from less than 1 to 22.4 mg/l (USACE and LAHD 1992).

3.13.2.2.4 Contaminants

Contaminants in harbor waters can originate from a number of sources within and outside of the Port. Potential sources of trace metals and organics include municipal and industrial wastewater discharges, stormwater runoff, dry weather flows, leaching from ship hull anti-fouling 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. Dredging projects in both the Inner and Outer Harbor areas, including the Los Angeles Harbor Deepening Project (USACE and LAHD 1984), have removed contaminated sediments from the harbor. In addition, some contaminated sediment areas have been covered by less contaminated sediments as part of construction of landfills or shallow water habitat, thereby sealing them from exchange with the overlying water. Controls on other discharge sources have also contributed to decreases over time in the input of contaminants.

Recent studies have linked the atmospheric deposition of pollutants such as particulates, metals, and polycyclic aromatic hydrocarbons (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 salt. One way to regulate potential deposition is through the TMDL program (established and regulated as part of the Clean Water Act), which sets daily load standards on a pollutant by pollutant basis, and by doing so focuses on preventing pollutants at their source from entering the water bodies. TMDLs are under development in California, and therefore, an existing model could be used to develop a similar program for pollutants deposited via air transport. Impaired water body listings in the Los Angeles/Long Beach Harbor complex include constituents that may be partially deposited through aerial deposition. The USEPA and RWQCB are currently developing TMDLs to address harbor impairments and have explicitly stated that they will address aerial deposition as a component in their TMDL process. However, a number of issues related to atmospheric deposition still remain, primarily related to research and regulatory authority. Deposition mechanisms are not understood for all potential pollutants, and research on actual concentrations of such pollutants is still not complete. Additionally, there is controversy in regards to legal authority of the California Water Boards in regulating sources that are traditionally regulated by the Air Boards. Air pollutants can also travel long distances, and identifying true sources can also be complicated. The CARB and California Water Resources Control Board are in the process of examining the need to regulate atmospheric deposition for the purpose of protecting both fresh and salt water bodies from pollution. Aerial deposition of particles from sources related to the goods movement industry occurs in both local waterways and regional land areas. Emission sources from the proposed Project Alternatives would produce diesel particulate matter (DPM), which contains trace amounts of toxic chemicals. Through its Clean Air Action Plan, the Port will reduce air pollutants from its future operations, which will support the goal of reducing atmospheric deposition for purposes of water quality protection. The Clean Air Action Plan will reduce air pollutants that generate both acidic and toxic compounds, include emissions of NOx, SOx, and DPM.

Presentations at a public workshop on 9 February 2006 indicate that the primary sources of pollutants, such as zinc, in aerial deposition are paved and unpaved road dust, tire wear, and construction dust (Stolzenbach 2006; Sabin et al. 2007). Heavy metals adsorb on particulates that are greater than 10 microns in diameter that settle in the watershed and then are washed into water bodies in storm runoff (Bishop 2006). Direct aerial deposition of metals onto the water surface is a minor source of pollutants in the water.

Concentrations of trace-level contaminants in harbor waters are not monitored routinely. Therefore, information to characterize the spatial and temporal patterns in baseline concentrations of individual chemical contaminants in harbor waters is not available (AMEC 2007). Nevertheless, concentrations of metals, PAHs, and legacy contaminants such as DDTs and PCBs are expected to vary spatially and over time in response to the magnitude of the numerous source inputs. In particular, concentrations of metals and PAHs in harbor water are expected to be considerably higher following a storm event due to the higher mass loadings associated with storm water runoff. Following a large storm event, contaminant concentrations decrease as loadings decline, storm water mixes with harbor waters, and contaminants associated with particles settle out of the water column to the bottom sediments. The Port has developed numerical models that predict the effects of storm flows from selected watersheds, such as the Dominguez Channel watershed, on inputs and fate of chemical contaminants to the harbor (POLA 2007).

The Port's Monthly Monitoring Program has measured water quality monthly at LA35 since 1969. For the majority of the sampling events, oil and grease was present at minimal levels or non-existent. During the last 13 years, more floating solids have been identified, but they were categorized as "unspecific." From May 2005 until March 2006 the Port conducted quarterly enhanced water quality monitoring that coincided with the monthly monitoring program. The enhanced program included chemical and microbiological parameters to compliment the basic biological and visual parameters already being measured. Overall, there were no detections of total organic carbon, oil and grease, and total petroleum hydrocarbons. Concentrations of dissolved and total metals were detected at levels similar to the study's average, and no samples had levels above the California Toxic Rule (CTR) criteria. Tributyltin was detected, but concentrations were at or below the CTR criteria. Fecal and total coliform bacteria were detected, primarily during the sampling event that took place 48 hours after a significant rain event, but levels did not exceed the AB411 criteria for either parameter (AMEC 2007). The enhanced monitoring program was not conducted in 2003. However, the results summarized above for 2005-2006 are considered representative of 2003 baseline conditions because the composition and magnitude of the primary sources were comparable.

3.13.2.2.5 Nutrients

Nutrients are necessary for primary production of organic matter by phytoplankton. Low nutrient concentrations can limit the photosynthetic production, whereas excess nutrient concentrations can cause eutrophication and promote harmful algal blooms. Major nutrients that may limit phytoplankton photosynthesis are phosphates and nitrates. Spatial and temporal variations in phosphates and nitrates change from day-to-day and are influenced by the local environment. Other sources of nutrients to harbor waters include wastewater discharges such as the TITP in the Outer Harbor, industrial discharges, and stormwater runoff. Point source discharges are regulated through discharge permits, and stormwater discharges are regulated though municipal and industrial stormwater permits. The enclosed nature of the harbor has created seasonal and spatial levels of nutrient concentrations that vary from the so-called "normal" levels found in areas outside the breakwaters.

Depending on location, depth, and season, nutrients in the Los Angeles/Long Beach Harbor complex may vary in concentration by several orders of magnitude. The following ranges were measured in 1978 by Harbors Environmental Projects (HEP 1980): phosphate, 0.172 to 12.39 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. However, data from long-term monitoring efforts do not exist to verify this.

3.13.2.2.6 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. Inter-annual or longer-term patterns in water temperatures reflect the influences of oceanographic conditions, such as those associated with El Nino/La Nina cycles (MEC and Associates 2002). In 2000, surface water temperatures in the West Basin averaged 59.4°F (15.4°C) in January, 61.9°F (16.6°C) in May, 73.4°F (23.0°C) in August, and 63.9°F (17.7°C) in November. Bottom temperatures were 0.7 to 6.3°F (0.4 to 3.5°C) lower with the larger difference in the summer (MEC and Associates 2002). These temperatures are similar to monitoring conducted by MBC in the West Basin (2003) which ranged from 15.3 to 16.5 degrees C in the winter to 19.4 to 23.5 degrees C in the summer (MBC 2006).

3.13.2.2.7 Salinity

Salinity variations occur in Los Angeles Harbor due to the effects of stormwater runoff, waste discharges, rainfall, 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). Salinity in the Outer Harbor was generally higher in the summer (due to warmer weather evaporation) than in the winter (due to less evaporation in cooler weather and freshwater inputs from to storms), and deeper Outer Harbor locations were typically more saline than shallower locations (MEC 1988). Typical salinity for coastal waters is around 33 ppt. Measurements in the West Basin during 2000 and 2003 showed salinity values ranging from 32.8 to 33.6 ppt in surface and bottom waters (MEC and Associates 2002; MBC 2003). Storm drains empty into the western end of the Southwest Slip and into the Northwest Slip. Stormwater discharges cause reduced salinity during storm runoff events, particularly in surface waters because freshwater is lighter and floats on top of the denser seawater of the West Basin. As the fresher runoff waters mix with the seawater, due to wind, vessel traffic, tidal currents, and diffusion, the salinity of the runoff plume increases (POLA 2007).

3.13.2.3 Marine Sediments

Sediments within the proposed Project area are primarily composed of nearshore marine or estuarine sediments that were either deposited in place along the margin of the early San Pedro embayment or subsequently dredged and placed at their current locations as fill material. Spills of petroleum products and hazardous substances due to long-term

industrial land use have resulted in contamination of some sediments. The State Water Resources Control Board (2006) has listed various areas within the Los Angeles/Long Beach Harbor complex, which includes West Basin, as an impaired waterbody under Section 303(d) of the Clean Water Act for specific sediment contaminants (see Table 3.13-1).

Sediments in the northern portion of the West Basin have a higher proportion of sand (51 to 63 percent) than silt and clay (37 to 48 percent) (MEC and Associates 2002; MBC 2003). For the Channel Deepening Project, bulk sediment chemical analyses were conducted on sediment samples from numerous locations in the West Basin (Kinnetic Laboratories/ToxScan 2002). The samples were analyzed for heavy metals, butyltins, chlorinated pesticides and PCBs, petroleum hydrocarbons, oil and grease, PAHs, total phthalates, percent solids, and total soluble sulfides. Elutriate samples were also analyzed for most of the same constituents. No biological (toxicity or bioaccumulation) testing was performed for these sediments. Sediments adjacent to Berths 145 to 147 were tested in 2002 for suitability for ocean or in-water disposal (AMEC 2003b). Testing was performed in accordance with standard USEPA/USACE (1991, 1998) protocols, which included bulk sediment chemical analyses, elutriate testing, solid and suspended phase bioassays, and contaminant bioaccumulation testing. Results from testing are summarized below (Sections 3.13.2.3.1.and 3.13.2.3.2). Some sediment quality data from 2003 is available for these areas (MBC 2003). The sediment quality conditions represented by sampling in 2000 and 2002 (MEC and Associates 2002 and AMEC 2003, respectively) are considered representative of baseline conditions in 2003 because the magnitude and composition of source inputs to the West Basin were comparable and no substantial disturbances of bottom sediments, such as due to dredging, occurred in the West Basin between 2000 and 2003. NPDES monitoring conducted in the West Basin in 2003 which included grain size, and metals (MBC 2003; Appendix L) is also consistent with the MEC and AMEC studies. Metals were below ERL levels except copper which was slightly higher than the ERL.

At present, no numerical sediment quality objectives exist to compare to the sediment testing results; however sediment quality objectives are being developed by the SWRCB. Therefore, recent sediment testing results are used to characterize sediment quality by comparisons to published guidelines and exceedance criteria (Long et al. 1995, USEPA/USACE 1991, USEPA 2000a) as follows:

- Effect Range Low (ERL) = concentrations in bulk sediment below which adverse biological effects are not expected
- Effect Range Medium (ERM) = concentrations in bulk sediment above which adverse biological effects are expected
- Water Quality Standards (WQSs): 1-hour and 4-day averages [elutriate test]
- Limiting Permissible Concentration (LPC) [bioassay]

The following summarizes the sediment quality of different areas within the proposed Project area.

3.13.2.3.1 Northern West Basin (Berths 126-145)

Testing results (Kinnetic Laboratories/ToxScan 2002) indicated low to moderate sediment contamination with generally higher levels near Berths 136-142. The coarse-grained top

(mudline to -52 feet [-16 m] MLLW) sediments in the northern part of the West Basin (near Berths 136 to 142) contained copper, mercury, and nickel concentrations that exceeded the respective ERL values and concentrations of DDE pesticides and PCBs that exceeded the ERM values. Sediments from other sampling locations contained DDE and PCBs, as well as total DDTs and PAHs, that exceeded the ERL values. The elutriate test results for metals were below detection limits or, when detected, well below WQS levels (Kinnetic Laboratories/ToxScan 2002). Results from testing are listed in Appendix L.

Results from testing sediments collected near Berth 145 (Site 1) by AMEC (2003) generally were consistent with those obtained for sediments near Berths 136-142 that were tested by Kinnetic Laboratories/ToxScan (2002). Sediments near Berth 145 contained mercury, total DDT, and occasionally copper, nickel, and lead concentrations that exceeded the ERL values. Concentrations of other metals and PAHs were below the ERL values, and PCBs were not detected in any of the sediment samples. Contaminant concentrations in the elutriate sample were all below detection limits. Solid phase bioassay test results indicated no significant toxicity, whereas the suspended particulate phase tests indicated no significant toxicity but slight reductions in development. Bioaccumulation tests indicated statistically significant accumulation of PAHs in tissues of test organisms. While these differences were not considered to be ecologically significant (AMEC 2003), the material was not approved by USACE for in-water disposal. Results from testing are listed in Appendix L.

3.13.2.3.2 Southern West Basin (Berths 146-149)

Testing of fine-grained sediments in the southern part of the West Basin area generally indicated concentrations of DDTs and PCBs above ERL values but below ERM values. Concentrations of a subset of metals (mercury and nickel) also were above ERL values. Solid phase bioassays of the sediments in the southwest portion of the basin (outside the proposed Project area) produced significant toxicity to a benthic amphipod, and bioaccumulation tests showed lead, mercury, DDD, and PCBs accumulated in tissues of test organisms. No toxicity or bioaccumulation occurred for the remainder of the area (Kinnetic Laboratories/ToxScan 2002).

Sediment samples collected along Berths 127-131 in 1997 contained mercury and cadmium concentrations above ERL levels (Ogden 1997). Solid phase bioassays found significant toxicity to a worm, while suspended phase tests found toxicity to a shrimp and bivalve larvae. Bioaccumulation tests showed accumulation of cadmium, lead, and PAH in tissues of a clam; selenium in a worm; and DDE in a clam and worm. Results from testing are listed in Appendix L.

Results from testing sediments collected near Berths 146-147 (Site 2) by AMEC (2003) generally were consistent with the previous testing results. Sediments contained arsenic, copper, lead, nickel, and total DDT concentrations that exceeded the ERL values, and mercury concentrations that exceeded the ERM value. Concentrations of other metals and PAHs were below the ERL values, and PCBs were not detected in any of the sediment samples. Contaminant concentrations in the elutriate sample were all below detection limits, with the exception of arsenic and zinc concentrations (0.003 mg/l and 0.009 mg/l, respectively) that were at or below the respective CTR criteria. Solid phase bioassay test results indicated no significant toxicity, whereas the suspended particulate phase tests indicated significant reductions in bivalve larvae development at the 50% and 100% elutriate

concentrations that appeared to be an artifact of high unionized ammonia concentrations in the test sediments. Bioaccumulation tests indicated statistically significant accumulation of PAHs in tissues of test organisms. While these differences were not considered to be ecologically significant (AMEC 2003), the material was considered by USACE unsuitable for in-water disposal. Results from testing are listed in Appendix L.

3.13.2.3.3 Northwest Slip

Testing of sediments collected within Northwest Slip in 1993, 1995, and 1998 (unpublished data from the Port) indicate that the sediments are contaminated with metals, PCBs, chlorinated pesticides, and semi-volatile compounds. The three samples taken in 1993 showed PCB and DDT concentrations that were above ERM levels. One sample contained mercury concentrations above the ERM level, while another sample contained flouranthene, pyrene, and phthalates (all semi-volatile compounds) above ERM levels. Metals such as copper, mercury, zinc, lead, chromium, nickel, and arsenic as well as several semi-volatile compounds exceeded ERL levels but not ERM levels in one or more of the samples. The samples in 1995 and 1998 showed similar results. Results from testing are listed in Appendix L.

3.13.2.4 Oceanography

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

3.13.2.4.1 Tides

Tides are sea level variations that result from astronomical and meteorological conditions. Tidal variations along the coast of Southern California are caused 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 Los Angeles Harbor, generating a diurnal inequality, or mixed semidiurnal tide. 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).

A greater than average range between HHW and LLW occurs when the moon, sun, and earth are aligned with each other to create a large gravitational effect. This spring tide corresponds to the phenomenon of a new or full moon. Neap tides, which occur during the first and third quarters of the moon, have a narrower range between HHW and LLW. In this situation, the moon, sun, and earth are perpendicular to each other, thereby reducing the gravitational effect on the water levels.

The mean tidal range for the Outer Harbor, calculated by averaging the difference between all high and low waters, is 3.76 feet (1.15 m); and the mean diurnal range, calculated by averaging the difference between all the HHW and LLW, is approximately 5.6 feet (1.7 m) (USACE and LAHD 1992). The extreme tidal range (between maximum high and maximum low waters) is about 10.5 feet (3.2 m). The highest and lowest tides reported are 7.96 feet (2.43 m) above mean lower low water (MLLW) and -2.56 feet (-0.78 m) below MLLW, respectively (USACE and LAHD 1992). Mean lower low water is the mean of all lower low waters, equal to 2.8 feet (0.85 m) below mean sea level (MSL); it is the datum from which Southern California tides are measured.

Available Los Angeles Harbor tide data from 1923 to 1984 indicate that the highest water elevations usually occur during November through March. This is the same period in which the more severe offshore storms usually occur along the California coast. These higher water elevations typically range from +7 to +7.5 feet (+2.1 to +2.3 m) MLLW.

3.13.2.4.2 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. Los Angeles 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 Los Angeles 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 feet (1.2 m) in height in deep water. However, with periods as long as 18 to 21 seconds, they can break at over twice their deep-water wave height. Wave period is a measurement of the time between two consecutive peaks as they pass a stationary location.

Northern hemisphere swells occur primarily from November through April. Deep water significant wave heights have ranged up to 20 feet (6.1 m), but are typically less than 12 feet (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 feet (1.8 m) in height, with wave periods of less than 10 seconds.

3.13.2.4.3 Circulation

Circulation patterns are established and maintained by tidal currents. Flood tides in Los Angeles Harbor flow into the harbor and up the channels, while ebb tides flow down the channels and out of the harbor. In the Outer Harbor, near Angels and Queens gates, maximum surface tidal velocities reach approximately 0.8 fps (24.8 cm/sec), while

minimum tidal velocities of 0.88 fps (2.68 cm/sec) occur in the Inner Harbor (Wang 1995). The maximum velocity of water entering and leaving the harbor through Angels Gate is 0.8 fps (24.8 cm-sec) on flood tides and 0.3 fps (8.1 cm/sec) on ebb tides (MEC and Associates 2002).

Circulation patterns in the harbor are determined by a combination of tide, wind, thermal structure, and local topography. The net tidal exchange is inward through Angels Gate and outward through Queens Gate and the gap between the eastern end of Long Beach Breakwater and Alamitos Bay. Thus, there is a net eastward flow within the harbor (LAHD 1993b). Overall tidal exchange rates fluctuate between 8 and 25 percent, with the flushing rate estimated at 90 tidal cycles (Maloney and Chan 1974).

3.13.2.4.4 Flooding

With the exception of most of Berths 138-140, the West Basin area lies within a 100-year flood plain, as determined by the Federal Emergency Management Agency (FEMA). The proposed Project area was formerly a marsh, which has been modified by dredging and filling, resulting in elevations of only 10 to 15 feet (3 to 4.6 m) above sea level. Flooding in this area occurs because of its location near the confluence of Cerritos Channel and Dominguez Channel, drainages discharging into the Southwest Slip, and low land elevations. The proposed Project area is predominantly paved, resulting in minimal surface water infiltration during rainfall events and flooding. The only sources of flooding at the site would be storm surge, tsunami, or seiche. The latter two sources are discussed in Section 3.5, Geology.

3.13.3 Applicable Regulations

3.13.3.1 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 wastewaters must be authorized through NPDES permits. These permits can include Waste Discharge Requirements (WDRs) and Stormwater Pollution Prevention plans (SWPPPs). 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 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 State Water Resources Control Board (SWRCB) and its regional water quality control boards implement sections of the Act through the Ocean Plan, Water Quality Control Plan, Standard Urban Stormwater Mitigation Plans, and permits for discharges. The RWQCBs typically issue conditional water quality certifications with waiver of WDRs for small projects. For larger and more complex projects, the RWQCB may issue WDRs under its State authority.

Dredge/fill permits 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.
- Detailed pre- and post-construction monitoring plan that includes disposal site monitoring.
- Flow back of dredged water at the dredging site is limited to a maximum of 60 minutes for suitable material and 15 minutes for unsuitable material per barge. Time limit is 15 minutes at the disposal site. Flow back water must meet RWQCB Waste Water Discharge and Receiving Water Monitoring Program requirements.
- Flow back water shall be free of solid dredged material.
- No flow back of water or solid dredged material shall occur during transit to the disposal site.
- Compensation for loss of waters of the U.S.

3.13.3.2 Porter-Cologne Act of 1972

The Porter-Cologne Act (California Water Code § 13000 et seq.), which is the principal law governing water quality regulation in California, establishes a comprehensive program to protect water quality and the beneficial uses of State waters. The Act established the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs), which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The Porter-Cologne Act also implements many provisions of the federal Clean Water Act, such as the NPDES permitting program. CWA § 401 gives the SWRCB the authority to review any proposed federally permitted or federally licensed activity which 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 must be included in the federal permit or license.

3.13.3.3 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* [RWQCB 1994b]) 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 which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within 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, dissolved oxygen, oil and grease, pesticides, pH, polychlorinated biphenyls, 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. For example, the Basin Plan defines limits for chemical contaminants in terms of bioaccumulation, chemical constituents, pesticides, PCBs, and toxicity as follows:

- Toxic pollutants shall not be present at levels that bioaccumulate in aquatic life to levels which are harmful to aquatic life or human health;
- Surface waters shall not contain concentrations of chemical constituents in amounts that adversely affect any designated beneficial use;
- No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life;
- All waters shall be maintained free of toxic substances in concentrations that are toxic to, or produce detrimental physiological responses in human, plant, animal, or aquatic life. There shall be no chronic toxicity in ambient waters outside mixing zones.

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.

3.13.3.4 State Water Resources Control Board Stormwater Permits

The SWRCB has developed a statewide General Construction Activity Stormwater Permit and a General Industrial Activity Stormwater Permit for projects that do not require an individual permit for these activities. All construction activities that disturb 1 acre (0.4 ha) 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 offsite into receiving waters, eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States, 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 exceedances of water quality objectives. The General Industrial Activities Stormwater Permit requires dischargers to develop and implement a SWPPP to reduce or prevent industrial pollutants in stormwater discharges, eliminate unauthorized non-storm discharges, and conduct visual and analytical stormwater discharge monitoring to verify the effectiveness of the SWPPP.

3.13.3.5 SWRCB Standard Urban Stormwater Mitigation Plans

The City of Los Angeles is covered under the Permit for Municipal Stormwater and Urban Runoff Discharges within Los Angeles County (LARWQCB Order No. 01-182). This permit incorporates the requirements of the *Standard Urban Stormwater Mitigation Plan [SUSMP] for Los Angeles County and Cities of Los Angeles County* (www.swrcb.ca.gov/rwqcb4/html/programs/stormwater/susmp/susmp_details.html). The SUSMP includes implementation of treatment control BMPs for projects falling within

certain development and redevelopment categories, such as 100,000 square foot commercial developments. The SUSMP "contains a list of the minimum required Best Management Practices (BMPs) that must be used for a designated project. Additional BMPs may be required by ordinance or code adopted by the Permittee and applied generally or on a case by case basis. The Permittees are required to adopt the requirements set herein in their own SUSMP. Developers must incorporate appropriate SUSMP requirements into their project plans. Each Permittee will approve the project plan as part of the development plan approval process and prior to issuing building and grading permits for the projects covered by the SUSMP requirements."

3.13.3.6 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 CTR also includes provisions for compliance schedules to be issued for new or revised NPDES permit limits when certain conditions are met. The numeric criteria are the same as those recommended by the USEPA in its Clean Water Act section 304(a) guidance.

3.13.3.7 Marine Protection, Research and Sanctuaries Act of 1972. Section 102 (33USC 1401 et seq.)

Allows for the siting of off-shore ocean disposal sites and use permits by the USEPA. In 2005, the USEPA redesignated two sites for limited disposal of suitable (non toxic) dredge material off the Los Angeles/Orange County shore line, identified as LA-2 and LA-3, respectively. Prior to permit issuance, the applicant must demonstrate a need of ocean disposal, have evaluated alternative beneficial re-use options and material must be deemed suitable in accordance with USEPA dumping criteria.

3.13.4 Impacts and Mitigation Measures

3.13.4.1 Methodology

Potential impacts of the proposed Project and alternatives to water and sediment quality were assessed through a combination of literature data (including applicable water quality criteria), results from past dredge and fill projects in the Port, results from previous testing of West Basin sediments, and scientific expertise of the preparers. For oceanographic resources and flooding, potential impacts were 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.

Results from previous toxicity and bioaccumulation testing (e.g., AMEC 2003) using standard sediment testing protocols (USEPA and USACE 1991) were the basis for determining the suitability of material for in-water disposal and potential for impacts to biota. Elutriate tests were compared to water quality standards to determine if pollutants

released during dredging or filling could adversely affect water quality and biota. Additional sediment testing would be required by USEPA and USACE prior to any dredging associated with the proposed Project or alternative to confirm the suitability of the material for in-water disposal.

3.13.4.1.1 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 would normally constitute the baseline physical conditions by which the CEQA lead agency determines whether an impact is significant. For purposes of this Draft EIS/EIR, the CEQA Baseline for determining the significance of potential impacts under CEQA is December 2003. CEQA Baseline conditions are described in Table 2-2 of Section 2.4.

The CEQA Baseline represents the setting at a fixed point in time, with no project growth over time, and differs from the "No Project" Alternative (discussed in Section 2.5.1) in that the No Project Alternative addresses what is likely to happen at the site over time, starting from the baseline conditions. The No Project Alternative allows for growth at the proposed Project site that would occur without any required additional approvals.

3.13.4.1.2 No Federal Action/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 No Federal Action scenario. The No Federal Action/NEPA Baseline condition for determining significance of impacts coincides with the "No Federal Action" condition, which is defined by examining the full range of construction and operational activities the applicant could implement and is likely to implement absent permits from the USACE. Therefore, the No Federal Action/NEPA Baseline would not include any dredging, filling of the Northwest Slip, wharf construction or upgrades, or crane replacement. The No Federal Action/NEPA Baseline would include construction and operation of all upland elements (existing lands) for backlands or other purposes. The upland elements are assumed to include:

- Adding 57 acres of existing land for backland area and an on-dock rail yard;
- Constructing a 500-space parking lot for union workers;
- Demolishing the existing administration building and constructing a new LEED certified administration building and other terminal buildings;
- Adding new lighting and replacing existing lighting, fencing, paving, and utilities on the backlands;
- Relocating the Pier A rail yard and constructing the new on-dock rail yard;
- Widening and realigning Harry Bridges Boulevard; and
- Developing the Harry Bridges Buffer Area.

Unlike the CEQA Baseline, which is defined by conditions at a point in time, the No Federal Action/NEPA Baseline is not bound by statute to a "flat" or "no growth" scenario; therefore, the USACE may project increases in operations over the life of a project to properly analyze the No Federal Action/NEPA Baseline condition. Normally, any ultimate permit decision would focus on direct impacts 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 is defined by comparing the proposed Project or alternative to the No Federal Action/NEPA Baseline (i.e., the increment). The No Federal Action/NEPA Baseline conditions are described in Table 2-2 of Section 2.4.

The No Federal Action/NEPA Baseline also differs from the "No Project" Alternative, where the Port would take no further action to construct and develop additional backlands (other than the 176 acres that currently exist). Under this alternative, no construction impacts would occur. However, forecasted increases in cargo throughput would still occur as greater operational efficiencies are made.

3.13.4.2 Thresholds of Significance

The following criteria are based on the *Los Angeles 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 development.

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

WQ-1 Discharges which 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 which would not be contained or controlled on-site.

3.13.4.3 Impacts and Mitigation

The assessment of impacts is based on the assumption that the proposed Project would include the following:

- An individual NPDES permit for construction stormwater discharges or coverage under the General Construction Activity Storm Water Permit for the onshore portions of the proposed Project will be obtained by 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 offsite transport of pollutants from spills and construction debris.
    - Monitoring to verify that the BMPs are implemented and kept in good working order.
- Other standard operating procedures and best management practices for Port construction projects would be followed, such as: basic site materials and methods (02050); earthworks (02300); excavating, stockpiling, and disposing of chemically impacted soils (02111); temporary sediment basin (ESC 56); material delivery and storage (CA010); material use (CA011); spill prevention and control (CA012); solid waste management (CA020); contaminated soil management (CA022); concrete waste management (CA023); sanitary-septic waste management (CA024); and employee-subcontractor training (CA040).
- All onshore contaminated upland soils would be characterized and remediated in accordance with LAHD, RWQCB, DTSC, and Los Angeles County Fire Department protocol and clean-up standards.
- The tenant will obtain and implement the appropriate stormwater discharge permits for operations.
- A Section 404 (of the Clean Water Act) permit from the USACE for dredging, filling, and wharf construction activities in waters of the Harbor.
- A Section 401 (of the Clean Water Act) Water Quality Certification from the RWQCB for construction dredging and filling activities that contains conditions including standard WDRs.
- Sediments from the proposed dredging units would be re-tested using standard USEPA/USACE protocols prior to dredging to determine the suitability of the material for unconfined, aquatic disposal.
- Approvals in accordance with the Marine Protection, Research and Sanctuaries Act, Section 102 if ocean disposal of suitable (non toxic) dredge material at an EPA-approved disposal site (LA-2, LA-3).
- A Debris Management Plan and Spill Prevention, Control, and Countermeasure (SPCC) Plan would be prepared and implemented prior to the start of demolition, dredging, and construction activities associated with the proposed Project.

- 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 (RWQCB 1994b) "[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 and fill operations, an integrated multi-parameter monitoring program shall be implemented by the Port's Environmental Management Division in conjunction with both USACE and RWQCB permit requirements, wherein dredging performance is measured *in situ*. The objective of the monitoring program shall be adaptive management of the dredging operation, whereby potential exceedances of water quality objectives can be measured or predicted and dredging operations subsequently modified. If exceedances are observed, the Port's Environmental Management Division shall 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.
- Plans and specifications for fill placement in the Northwest Slip will include measures to prevent turbidity from leaving the fill site and entering the West Basin with monitoring to verify that turbidity levels just outside the containment dike during and immediately following discharges of fill remain below WQS. If monitoring shows exceedance of WQS, discharge shall stop until measures are implemented to reduce turbidity entering the West Basin.
- Dredged contaminated sediments would be placed in an approved confined disposal site(s) at either the Port of Los Angeles or the Port of Long Beach, or at an appropriate upland site such as the Anchorage Road Disposal Site that is engineered and constructed in such a manner that the contaminants cannot enter harbor waters after the fill is complete. The specific confined disposal facility would be determined at the time of dredging and would depend on the capacity of available sites.

3.13.4.3.1 Proposed Project

The following sections first describe the nature and extent of possible project-related impacts to water and sediment quality, hydrology, and oceanography, followed by the CEQA and NEPA impact determinations, mitigation measures, and residual impacts for each of the thresholds of significance listed in Section 3.13.4.2.

3.13.4.3.1.1 Construction Impacts

Impact WQ-1a: Wharf demolition and construction activities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Phase I construction activities would require dredging, dredged material disposal, rocky dike construction/reconstruction, pile removal, and pile and sheet pile installation. Dredging of soft sediments during the Phase I reconstruction of Berths 145-147 would occur between the pierhead line and the federal channel dredging limits (approximately 1.6 acres [0.7 ha]). Dredging would also occur where the timber wharf and part of the existing

concrete wharf would be removed at Berths 146-147 (approximately 3.7 acres [1.5 ha]). About 2.1 acres (0.9 ha) of this area subsequently would be covered by riprap as part of the new 705-foot (215-m) wharf construction. Phase I activities at Berths 136-139 would require driving sheet piles and dredging to a depth of –53 feet (16 m) along 2,000 feet (610 m) of wharf. This would remove soft sediments from an area of approximately 2.3 acres (0.9 ha) between the pierhead line and the federal channel dredging limits. Dredging would remove approximately 300,000 cubic yards (cy) of bottom sediments along the existing berths which could take up to 99 days that may or may not be continuous. In addition, 230,000 cy of rock for dikes and 36,000 cy of fill would be placed behind the new dikes. Selection and handling of fill materials would comply with procedures specified by the Port's best management practices (e.g., basic site materials and methods [02050]; earthworks [02300]; excavating, stockpiling, and disposing of chemically impact soils [02111]; material delivery and storage [CA010]; and material use [CA011]).

Sediments dredged from the West Basin for Phase I wharf upgrades and construction would be disposed at an approved site or re-used as fill within the Port. Prior to dredging, sediment testing would be conducted and the Port would work with USACE and other regulatory agencies to identify an acceptable disposal location based on the sediment testing results. If results from testing indicated that sediments dredged from the vicinity of Berths 145-147 are unsuitable for unconfined in-water disposal, likely disposal options would include placement in a permitted confined disposal facility (CDF) or upland disposal site. The selected disposal method would have to be approved by the agencies prior to the start of dredging operations. The remaining dredged materials that are demonstrated to be suitable for in-water disposal would be placed at the Pier 400 underwater storage site, the upland Anchorage Road Soil Storage Site (ARSSS), a confined disposal site to be identified at the time of dredging, or used as fill for the 9.5-acre expansion area during Phase II (see Section 2.5.1). The ARSSS is a 31-acre site adjacent to Pier A West, and it has been used for the past 15 years to dispose or store dredged material from various maintenance dredging projects. However, the capacity of ARSSS to hold dredged materials from channel deepening and maintenance projects in addition to dredged materials from the proposed project is uncertain. Additionally, following completion of the Channel Deepening Project, the Pier 400 underwater storage site must remain unused per a Port interagency agreement. The Channel Deepening Project is expected to be complete in early 2009, pending approval of a Supplemental EIR/EIS being completed for the Project. Therefore, this site would not be available until 2012 at the earliest.

Phase II activities at the Northwest Slip would include construction of a rock dike, placement of fill (dredged materials) behind the dike, and installation of concrete piles for the new wharf. An additional 3,000 cy of sediments would be dredged for this phase of the proposed Project. Phase II impacts to water quality are addressed under **Impact WQ-1c**.

Dredging, dredged material disposal, dike construction/reconstruction, fill placement, pile removal, and pile and sheet pile installation for Phase I would affect water quality in the West Basin. The types of water quality impacts that could occur 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 by demolition and construction activities. These changes to water quality would be temporary and expected to be confined to the immediate vicinity (e.g., within 300 feet [92 meters]) of the demolition,

construction, and dredging activities (USACE and LAHD 1992) in the West Basin and within the mixing zone defined by the water quality certification issued by the RWQCB and included by reference in dredge permit issued by the USACE. Dredging would also remove some sediment-associated contaminants from the West Basin, which would provide some long term benefits to the health of the harbor environment.

Pile removal, pile installation, and sheet pile installation activities at Berths 136-139 and 145-147 would suspend bottom sediments into the water column, causing localized and temporary turbidity. Each of these construction operations would occur over periods up to about 137 days. Resuspended sediments would settle rapidly (within hours) and turbidity levels would decrease once activities were completed. Contaminants already present in those sediments could be released to the water (see discussion below) or settle to the bottom with the sediments. Because pile removal would occur prior to dredging, some or most of the sediment that settles out from this activity subsequently would be removed by the dredging.

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 turbidity plumes. For continuous dredging operations, elevated turbidity conditions would occur within the immediate vicinity of the dredge for periods of days to several weeks. Following completion or interruption of dredging, the time it takes for the suspended materials to settle-out, combined with the current velocity, would determine the size and persistence of the turbidity plume. Settling rates are largely determined by the grain size of the suspended material but are also affected by the chemistry of the particle and the receiving water (USACE and LAHD 1992). Dredging sediments adjacent to Berths 136-139 and 144-147 would generate a relatively small turbidity plume (i.e., within the mixing zone defined in the WDR) because the material is mostly coarse-grained and will settle rapidly. Previous studies have shown that concentrations of suspended solids return to background levels within 1 to 24 hours after dredging stops (Parish and Wiener 1987). Water quality parameters in West Basin were monitored in the vicinity of clamshell and suction dredges during the Los Angeles Channel Deepening Project in June 2003. The suspended solids concentrations within the clamshell and suction dredge areas ranged from 11-46 mg/l and from 5-77 mg/l, respectively, but the corresponding reduction in light transmittance did not exceed the 40 percent reduction criterion listed in the monitoring work plan for uncontaminated sediments. Consequently, turbidity plumes generated during dredging operations are expected to affect a small proportion of the West Basin and dissipate before reaching the Turning Basin.

Dissolved oxygen (DO) levels in harbor waters could be reduced in the immediate vicinity of dredging and pile removal activities by the introduction of suspended sediments and associated oxygen demand on the surrounding waters. Reductions in DO concentrations, however, would be brief. A study in New York Harbor measured a small reduction in DO concentrations near a dredge, but no reductions in DO levels 200 to 300 feet (61 to 91 m) away from the dredging operations (Lawler, Matusky, and Skelly 1983). These results are consistent with the findings and conclusions from studies of the potential environmental impacts of open water disposal of dredged material conducted as part of the USACE Dredged Material Research Program (Lee et al. 1978; Jones and Lee 1978). As mentioned in Section 3.13.2.2.1, measurements

conducted 90 feet (27 m) and 300 feet (92 m) from dredging operations at Southwest Slip (POLA unpublished monitoring data; Appendix L) did not exhibit any reductions in DO concentrations. Therefore, reductions in DO levels below 5 mg/l associated with project construction and dredging activities are not expected to persist or cause detrimental effects to biological resources.

Changes in pH may occur in the immediate vicinity of dredging operations due to reducing conditions in sediments resuspended into the water column. Seawater, however, is a buffer solution (Sverdrup et al. 1942) that acts to repress any change in pH. Therefore, any measurable change in pH would likely be highly localized and temporary, and would not result in persistent changes to ambient pH levels of more than 0.2 units. Thus, the water quality objective for pH would likely not be exceeded outside the mixing zone.

Contaminants, including metals and organics, could be released into the water column during the dredging and pile removal/driving operations. However, like pH and turbidity, any increase in contaminant levels in the water is expected to be localized within 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 which affect the binding capacity of sediments for contaminants. Because the sediment characteristics vary across the project site, the magnitude of contaminant releases, and water quality effects, would also vary. Nevertheless, elutriate test results for the coarse-grained sediments to be dredged near Berths 136-139 and 144-147 in Phase I showed metal concentrations in the elutriate (water) phase that were well below water quality standards (Kinnetic Laboratory/Toxscan 2002; AMEC 2003). Similarly, elutriate tests of sediments from Berths 145 through 147 (AMEC 2003) indicated only minor possible releases of selected metals from dredged sediments. These results demonstrated that contaminant releases from sediments disturbed by dredging and other demolition and construction activities would not substantially affect the concentrations or bioavailability of contaminants in West Basin waters.

As discussed in Section 3.13.3.3, the Basin Plan (RWQCB 1994b) defines limits for chemical contaminants in terms of bioaccumulation, chemical constituents, pesticides, PCBs, and toxicity. Results from sediment testing to determine suitability for aquatic disposal (discussed in Sections 3.13.2.3) demonstrated that sediments within the project area would not cause significant toxicity, contaminant bioaccumulation, or degrade water quality and affect beneficial uses. These results are also applicable to assessments of impacts from contaminant releases from demolition, dredging, and construction-related activities associated with the proposed Project, and indicate that water quality objectives likely would not be exceeded.

Sediments containing contaminants which are suspended by the dredging and pile removal would settle back to the bottom within a period of several hours. 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 within the West Basin 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 West Basin adjacent to the dredged area are not expected to be measurably increased by dredging activities.

Nutrients could be released into the water column during the dredging operations. 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. 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 (RWQCB 1994b) 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 the West Basin are not anticipated to occur in response to the proposed Project.

Demolition, dredging, and construction operations are not expected to affect the temperature or salinity of waters within the West Basin because these activities would not involve any waste water discharges or processes that would affect the baseline conditions.

Placement of clean dredged materials at the Pier 400 underwater storage site would result in temporary and localized increases in suspended sediment concentrations and turbidity levels within the immediate vicinity of the site. Settling would result in rapid (within hours) decreases in suspended solids and turbidity levels within the water column. Increases in contaminant concentrations, decreases in DO concentrations, or other changes to water quality conditions relative to water quality objectives would not occur because only sediments suitable for in-water disposal, as demonstrated by results from standardized sediment testing protocols, would be placed at this site. Alternatively, placement of dredged materials at a confined disposal site or the Anchorage Road upland site would be in accordance with existing permit conditions.

Dredging for the proposed Project would require a permit from the USACE and a Section 401 (of the Clean Water Act) Water Quality Certification from the 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 (metals, DDT, PCBs, and PAHs) in waters near the dredging operations may also be required if the contaminant levels in the dredged sediments are known to be elevated and represent a potential risk to beneficial uses. Monitoring data are used by the Port's dredger to demonstrate that water quality limits specified in the permit are not exceeded. The dredging permit could identify corrective actions, such as use of silt curtains, which would be implemented if the monitoring data indicate that water quality conditions outside of the mixing zone exceed the permit-specified limits.

CEQA Impact Determination

Dredging, new wharf construction, and wharf reconstruction and upgrades during the construction phases of the proposed Project would not entail any direct or intentional discharges of wastes to waters of West Basin. However, project-related activities would disturb and resuspend bottom sediments, which would result in temporary and localized changes to some water quality indicators within the mixing zone defined by the Water Quality Certification. The proposed dredging along Berths 136-147 is expected to depress DO concentrations in the immediate vicinity of the dredge, but these changes

would 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. Previous testing demonstrated that sediments disturbed by project activities would not cause significant toxicity, contaminant bioaccumulation, or releases of contaminants to surface waters.

The project description includes an adaptive management program. Consistent with this portion of the project description, these impacts would be confined to the mixing zone specified by the dredging permit. During dredge and fill operations, an integrated multi-parameter monitoring program shall be implemented by the Port's Environmental Management Division in conjunction with both USACE and RWQCB permit requirements, wherein dredging performance is measured *in situ*. The objective of the monitoring program is adaptive management of the dredging operation, so that potential exceedances of water quality objectives are measured or predicted and dredging operations subsequently modified. If exceedances are observed, the Port's Environmental Management Division will immediately meet with the construction manager to discuss modifications of dredging operations to reduce turbidity to acceptable levels. This will include alteration of dredging methods, and/or implementation of additional BMPs such as a silt curtain. Thus, project-related changes are not expected to create pollution, contamination, a nuisance, or violate any water quality standards, and impacts to water quality from in-water construction activities would be less than significant under CEQA.

Mitigation Measures

Although the impact is less than significant, the above adaptive management program will be included in the proposed Project as a condition of approval and is subject to monitoring provisions for enforcement and compliance purposes.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts from dredging, new wharf construction, and wharf reconstruction and upgrades during the construction phases of the proposed Project would be the same as described for the CEQA determination, and they are not anticipated to create pollution, contamination, a nuisance, or violate any water quality standards. Therefore, impacts to water quality from in-water construction activities would be less than significant under NEPA.

Mitigation Measures

No mitigation measures would be required for impacts of offshore construction to water quality.

Residual Impacts

Residual impacts would be less than significant.

Impact WQ-1b: Runoff from backland development/redevelopment could 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 the new on-dock rail yard, Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I could result in temporary impacts on surface water quality through runoff of soils, asphalt leachate, concrete washwater, and other construction materials. No upland surface water bodies currently exist within the proposed Project boundaries. Thus, project-related impacts to surface water quality would be limited to storm water runoff and, eventually, waters of the harbor that receive runoff from the watershed. Runoff from onshore construction sites would enter the harbor primarily through storm drains. Most runoff would occur during storm events, although some runoff could occur from water use as part of construction activities, such as dust control. Runoff from the project site would be regulated under a construction SWPPP issued by the RWQCB and implemented prior to start of any construction activities. This construction SWPPP will specify BMPs to control releases of soils and contaminants and adverse impacts to receiving water quality.

Erosion controls are used during construction to reduce the amount of soils disturbed and to prevent disturbed soils from entering runoff. Erosion controls can include both logistical practices, such as scheduling construction during seasons with the least potential for erosion (e.g., non-storm seasons), and sediment control practices. Typically, erosion control programs consist of a system of practices that are tailored to site-specific conditions. The combined effectiveness of the erosion and sediment control systems is not easily predicted or quantified (USEPA 1993).

The WDRs for storm water runoff in the County of Los Angeles and incorporated cities covered under NPDES Permit No. CAS004001 (13 December 2001) require implementation of runoff control from all construction sites. Prior to the start of construction activities for the proposed Project, the tenant would prepare a pollutant control plan that specifies logistics and schedule for construction activities that will minimize potentials for erosion and standard practices that include monitoring and maintenance of control measures (see **Impact WQ-4a**). Control measures, such as those identified in Section 3.13.4.3, would be installed at the construction sites prior to ground disturbance. Implementation of all conditions of proposed Project permits would minimize project-related runoff into the Harbor and impacts to water quality.

Standard BMPs, such as soil barriers, sedimentation basins, site contouring, and others listed in Section 3.13.4.3, would be used during construction activities to minimize runoff of soils and associated contaminants in compliance with the State General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and a construction SWPPP. Sediment basins and sediment traps are engineered impoundments that allow soils to settle out of runoff prior to discharge to receiving waters. Filter fabric fences and straw bale barriers are used under different site conditions to filter soils from runoff. Inlet protection consists of a barrier placed around a storm drain drop inlet to trap soils before they enter a storm drain. One or more of these 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.

Most BMPs used to treat urban runoff are designed to remove or reduce trash, nutrients, or contaminants associated with suspended particles (Brown and Bay 2007). Studies by Caltrans (2004) determined that BMPs that used infiltration or sand filtration methods were most effective at reducing levels of suspended solids, nutrients, and metals in runoff. USEPA (1993) 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. In contrast, recent studies by Brown and Bay (2007) showed that effectiveness at removing suspended solids and reducing toxicity varied among BMPs tested, including hydrodynamic and biofiltration methods, and results for individual BMPs were also inconsistent. In particular, BMPs designed to remove suspended particles are not effective at reducing toxicity associated with dissolved components in the runoff (Brown and Bay 2007). Nevertheless, although the specific BMPs that would be used, as well as the effectiveness of the BMPs under conditions at the proposed Project site, are uncertain, 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**. Specific concentrations and mass loadings of contaminants in runoff will vary greatly depending on the amounts and composition of soils and debris carried by the runoff. Also, the phase of the storm event and period of time since the previous storm event will affect storm water quality because contaminant loadings typically are relatively higher during the initial phases (first flush) of a storm. As discussed in Section 3.6 (Groundwater and Soils), upland portions of the proposed Project site have been affected historically by spills of hazardous materials and petroleum products. However, all existing Port tenants have contractually agreed to complete restoration of the premises, including clean-up of any hazardous materials contamination on or arising from the premises, before the expiration or earlier termination of each tenant agreement. Also, mitigation measure GW-1 specifies that the Port shall remediate all contaminated soils within the proposed Project boundaries for the site, such that contamination levels are below action levels established by the lead regulatory agency, prior to or during demolition and grading activities. Therefore, historical soil contamination would not be expected to contribute to contaminant loading from runoff into the harbor.

The potential for encountering groundwater requiring extraction and disposal during onshore construction of the proposed Project is uncertain. The Port generally does not allow dewatering. However, if dewatering is deemed necessary and is approved by the Port, the dewatering effluent would be tested to determine specific contaminant levels as this would affect the feasibility of various disposal options. Depending on the contaminant concentrations, dewatering effluent would be discharged into the sanitary sewer, under permit with the City of Los Angeles Sanitation Bureau. Such permit requirements typically include on-site treatment to remove pollutants prior to discharge.

Alternatively, the dewatering effluent could be temporarily stored on-site in holding tanks, pending off-site disposal at a facility approved by the RWQCB. Standard Port BMPs (e.g., excavating, stockpiling, and disposing of chemically impacted soils [02111]; solid waste management [CA020]; contaminated soil management [CA022]) specify procedures for handling, storage, and disposal of contaminated materials encountered during excavation. These procedures would be followed for upland construction activities associated with the proposed Project to ensure that soil or groundwater contaminants were not transported off-site by runoff.

Runoff from the upland portions of the project site will flow into the harbor, along with runoff from other adjacent areas of the Harbors subwatershed. As discussed above, the pollutant control plan and implementation and maintenance of construction BMPs would minimize potentials for offsite transport of soils and contaminants from the proposed Project site that could degrade water quality within the harbor.

Runoff from the construction site would form a plume of fresh or brackish water in the West Basin. Depending on the strength and duration of the storm event, the plume could be more turbid and have lower salinity and DO levels compared to the receiving waters. A plume associated with runoff from the proposed Project site could overlap with plumes from other drainage systems (e.g., Dominguez Channel) and storm drains discharging to the harbor. Nevertheless, subsequent mixing of runoff and receiving waters, and settling of particles carried by runoff into the West Basin, will prevent persistent changes in the quality of receiving waters.

Runoff from the Pier A railyard would be discharged to Consolidated Slip area of the harbor. Water quality characteristics of Consolidated Slip following storm events are strongly affected by inputs from Dominguez Channel. This portion of the proposed Project area is paved, and runoff presently flows into the harbor. The volume of runoff from the railyard would not be expected to change during the construction phase, although the composition may vary from baseline conditions depending on the small amounts of soil and construction debris that are not removed from the runoff by the BMPs. Nevertheless, runoff from the railyard into Consolidated Slip would mix with harbor receiving waters over a period of one to several tidal cycles (less than one to several days), and runoff-derived contaminants would be diluted or settle with particles to the bottom of the harbor (POLA 2007).

As mentioned, water quality within the harbor is affected episodically by stormwater runoff from the watershed. Because the 57 acre area of the Project site represents only 0.2 percent of the area of the Harbor subwatershed, runoff from the upland portion of the proposed Project area would represent a small (less than 1 percent) contribution to the total mass loading from stormwater runoff to the harbor. Similarly, runoff and associated mass loadings from the Pier A railyard would be negligible in comparison to mass loadings from the Dominguez Watershed that flows into the Channel. While runoff from the proposed Project site would contribute to changes in receiving waters that could cause water quality standards to be exceeded, the proposed Project would not create conditions that increase the relative contribution or contaminant mass loadings relative to baseline conditions. Also, the receiving waters for runoff from the proposed Project do not support submerged aquatic vegetation, coral reefs, or other sensitive species (see Section 3.3). Therefore, construction runoff would not affect biological resources.

CEQA Impact Determination

Construction activities associated with backland and road improvements for the proposed Project have the potential to adversely affect the quality of stormwater runoff. However, the proposed Project would implement a pollutant control plan and BMPs, such as sediment basins or traps and fabric filter fences or straw bale barriers, to control runoff of eroded soils and pollutants. These measures, combined with the low potential for erosion (see **Impact WQ-4a**), would limit the soil and contaminant loading to the harbor. Releases of stormwater runoff to the harbor would also comply with specific conditions contained in the construction SWPPP that would control releases of contaminants to receiving waters. 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 CEQA,

Mitigation Measures

No mitigation measures would be required for impacts of onshore construction to water quality.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts of backland development and road improvements are part of the No Federal Action/NEPA Baseline and are not considered in the impact analysis under NEPA. Consequently, there would be no impacts under NEPA.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1c: Fill, development, and wharf extension in the Northwest Slip could 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 dredging, dike construction, fill placement, and wharf construction activities in the Northwest Slip during Phase II of the proposed Project would cause temporary and localized impacts to water quality similar to those discussed for Phase I activities under **Impact WQ-1a**. Dredging would occur during keying-in the dike for containing the 10-acre (4-ha) fill in the Northwest Slip. ("Keying in the dike" refers to creating a shallow ditch at the base of the dike to act as a footing to secure the dike.) A narrow strip of approximately 19 feet (5.8 m) wide would be dredged to key-in the new containment dike along approximately 625 feet (191 m) (about 0.3 acre; 0.1 ha) for the 10-acre (4-ha) fill. Dredging would take about one day. Approximately 800,000 cy of fill material

from the Pier 400 submerged storage site or from an unrelated dredging project would be placed behind the dike. The duration of the fill placement operations would be about 25 days. New wharf construction for the Berth 136 extension would involve driving about 215 piles, which would require 14 days, and sheetpile driving which would occur over approximately 20 days.

Dredging, fill placement, and sheet and piling installation operations would disturb bottom sediments, causing localized and short-term increases in suspended sediment concentrations and turbidity in the near-bottom water layers. Fill placement using bottom-dump barges and pumping would also increase suspended sediment concentrations in surface waters of the fill area and immediately outside of the dike. The amount and distribution of suspended sediments and turbidity from these activities would vary with methods used and duration of the work, but changes to water quality conditions are expected to be temporary and localized as described in **Impact WQ-1a** but 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. Turbidity would occur within the Northwest Slip and in the adjacent West Basin throughout the filling process, but a turbidity plume would not persist once filling is complete (USACE and LAHD 1992). Construction of the base layers of the containment dike prior to fill placement would help to contain the suspended sediments within the Northwest Slip. During filling in the northern part of the slip, turbidity would likely remain within the slip, which is about 950 feet (290 m) long, and only as the filling approached the southern end of the slip would a turbidity plume extend into West Basin. Effects would be expected to extend approximately 650 feet (200 m) or less from the discharge location (USACE 2002a).

Sediments used for fill would be tested to demonstrate suitability for unconfined aquatic disposal. Therefore, placement of suitable fill materials would not release contaminants, affect water quality, or cause biological effects. Similarly, fill placement would cause only minor, temporary changes in DO levels or pH conditions. For example, a study of dredged material releases in San Francisco Bay showed reductions in DO levels near the point of release that lasted for only 3 to 4-minutes (USACE and LAHD 1973). Contaminant releases to the water above California Ocean Plan objectives were not observed during the placement of contaminated sediments at a pilot fill site in Long Beach Harbor (USACE 2002a). Consequently, fill placement would not result in exceedance of any WQS.

Fill placement in the Northwest Slip would cover bottom sediments that are contaminated with DDT and PCBs (see Section 3.13.2.3.3). The fill layer would act as an isolation cap for the contaminated sediments and eliminate the potential for exchanges between existing bottom sediments with overlying harbor water. This would be considered a benefit for water and sediment quality within the West Basin.

Harvesting fill materials from the Pier 400 submerged site would also cause minor disturbances to water quality in the immediate vicinity of this site. These effects would be similar to those experienced by other sediment harvesting operations at this site. Because these materials are clean, dredging sediments would not release contaminants or cause biological impacts. Minor suspended sediment/turbidity plumes would dissipate rapidly as suspended particles settle to the bottom.

Creation of the 9.5-acre (4-ha) Northwest Slip fill, along with extension of the Berth 136 wharf by 400 feet (122 m), 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**, while runoff from the proposed Project site would contribute to contaminant mass loading to the harbor, the contribution would be negligible because the volume would be small and soil and runoff control BMPs (see Section 3.13.4.3) would be used during construction to prevent impacts to surface water quality.

CEQA Impact Determination

Filling the 10-acre Northwest Slip and construction of a new wharf would not result in any waste discharges. Some temporary and localized increases in suspended sediment and turbidity levels would occur as a result of dredging, dike construction, fill placement, and wharf construction activities. However, these conditions are not expected to extend outside of the West Basin. Dredging and fill placement operations would be conducted in compliance with proposed Project permits (e.g., USACE Section 404 and RWQCB Section 401), and the chemical and toxicological properties of the fill material would have to be tested to demonstrate suitability prior to use. Pursuant to the project description, the plans and specifications for fill placement in the Northwest Slip will include specific measures to prevent turbidity from leaving the fill site and entering the West Basin with monitoring to verify that turbidity levels just outside the containment dike during and immediately following discharges of fill remain below applicable Water Quality Standards. If monitoring shows exceedance of these standards, discharge shall stop until measures are implemented to reduce turbidity entering the West Basin. Runoff from backland improvements on the completed fill would be governed by a construction SWPPP that would prevent adverse impacts to the receiving water quality. Therefore, the Northwest Slip construction activities are not expected to create pollution, contamination, a nuisance, or violate any water quality standards. Consequently, impacts on water quality would be less than significant under CEQA.

Mitigation Measures

Although the impact is less than significant, the above monitoring program will be included in the proposed Project as a condition of approval and is subject to monitoring provisions for enforcement and compliance purposes.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts under NEPA would be the same as described for the CEQA determination. Dredging, dike construction, fill placement, and wharf construction would result in short-term increases in suspended solids and turbidity levels within and adjacent to the fill area, but these activities are not expected to create pollution, contamination, a nuisance, or violate any water quality standards. Therefore, the impacts to water quality would be less than significant under NEPA.

Mitigation Measures

No mitigation measures would be required for impacts to water quality that are less than significant.

Residual Impacts

Residual impacts would be less than significant.

Impact WQ-1d: Accidents during construction could 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, fill placement, and wharf demolition and construction could occur during the proposed Project. Based on past 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 3.7). Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes which can be effectively contained within the work area and cleaned up immediately (POLA Spill Prevention and Control procedures [CA012]). Construction and industrial SWPPPs and standard Port BMPs listed in Section 3.13.4.3 (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 offsite 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.

The Basin Plan (RWQCB 1994b) 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

Spills or leaks that occur on land are expected to be contained and cleaned up before any impacts to surface water quality can occur. Spills from dredges or barges could directly affect water quality within West Basin, resulting in a visible film on the surface of the water; however, the probability of an accidental spill from a vessel to the Harbor that

would cause a nuisance or adversely affect beneficial uses is low. Therefore, accidental spills of pollutants would cause less than significant impacts under CEQA.

Mitigation Measures

No mitigation measures are necessary.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Onshore construction operations at the existing backlands would be part of the NEPA baseline and result in no impacts. Impacts from in-water construction activities for the proposed Project would be similar to those under CEQA and would be less than significant for accidental spills of pollutants.

Mitigation Measures

No mitigation measures are necessary.

Residual Impacts

Residual impacts would be less than significant.

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

Although most of the proposed Project site is located within a 100-year flood zone, construction activities would not increase the potential for flooding onsite because drainage would be maintained as described in **Impact WQ-3a**. Site elevations would remain generally the same as a result of proposed Project, but construction of the 9.5-acre (4-ha) fill for Phase II would increase the land surface area upon which precipitation would fall. Conversion of portions of the existing backlands to container storage would also increase the coverage with impermeable surfaces, which would result in slightly higher runoff volumes compared to baseline conditions. However, the proposed Project would remove buildings from these areas (Section 2.5.1), which eliminates risks to structures from flooding. Project site grading would direct runoff from the site to storm drains designed for a 10-year event, which is the standard design capacity for the storm drain systems in the vicinity of the harbor. Runoff associated with larger storm events (e.g., 50-year or 100-year events) could exceed the capacity of the storm drain system, resulting in temporary ponding of water on-site. However, because the project site terrain is flat, and the runoff velocity would not increase by construction activities, the proposed Project would not increase the risk of flooding or severity of flooding impacts relative to the baseline conditions. The Harry Bridges Buffer Area would include both permeable and impermeable surfaces, and would be regraded to provide topographic relief. These design features would not increase the potential for flooding within this portion of the proposed Project area. Similarly, relocation of the

railyard facilities would not alter runoff volumes or flow patterns in a manner that would increase the potential for flooding.

CEQA Impact Determination

The proposed Project would not increase potentials for flooding or increase risks to humans, property, or sensitive biological resources. Therefore, impacts from flooding would be less than significant under CEQA.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Potentials for flooding on existing backlands would be part of the NEPA baseline, and no impacts would occur. Construction of the 10-acre fill would not increase the flooding potential for this portion the project, and impacts to humans, property, or sensitive biological resources would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Residual 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 (hydromodifications) 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. Impacts from loss of marine habitat are discussed in Section 3.3.

Dredging and filling activities for the proposed Project would alter the existing bathymetry and slightly reduce the volume of the tidal prism within the West Basin. Construction of the containment dike on the south side of the fill would further restrict circulation in the Northwest Slip during filling operations. Blind slip areas, such as the Northwest Slip, tend to be areas of lower circulation due to their morphology. Given that Northwest Slip is a dead-end channel with less circulation potential than the West Basin itself, the loss of a small portion of the northwest corner of the basin would not restrict circulation relative to baseline conditions in the West Basin to an extent that would promote stagnation or adversely affect water quality. Placement of pilings for the new wharf facilities would reduce water movement beneath the wharfs, 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 West Basin.

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; 16 or 32 ha) and fill configuration (narrow or wide) would have little effect on water quality. By comparison, the proposed fill in the Northwest Slip would be smaller in size and proportion to the Inner Harbor area. By extrapolation, effects of the proposed fill in the Northwest Slip on circulation and water quality in the West Basin and the Inner Harbor would be minor.

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 West Basin, and impacts to water quality and oceanography would be less than significant under CEQA.

Mitigation Measures

No mitigation is required for impacts to water quality; however, **Mitigation Measure BIO-1** (Section 3.3) would compensate for the loss of marine habitat.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Dredging and filling for the proposed Project would not result in a permanent adverse change to surface water movement because these activities would not impose barriers to water movement into and out of the West Basin. Consequently, impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation is required for impacts to water quality; however, **Mitigation Measure BIO-1** (Section 3.3) would compensate for the loss of marine habitat.

Residual Impacts

Residual impacts would be less than significant.

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

Ground disturbances and construction activities related to the new on-dock rail yard, Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I would have the potential to increase erosion and deposition of soils in the harbor. The baseline potential for erosion of soils within 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. The WDRs for storm water runoff in the County of Los Angeles and incorporated cities in NPDES Permit No. CAS004001 (13 December 2001) require implementation of runoff control from all construction sites. As discussed under **Impact WQ-1a**, the tenant would prepare a pollutant control plan that specifies logistics and schedule for construction activities that will minimize potentials for erosion and standard practices that include monitoring and maintenance of control measures. 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 offsite 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, such as sediment basins or traps, fabric filters or straw bale barriers, and inlet protection. These soil control measures, which are described in **Impact WQ-1a,** provide an average removal efficiency of 60% to 70%. Thus, construction activities are not expected to accelerate erosion or increase loadings to the harbor of soils carried by stormwater runoff.

Runoff from onshore construction sites, including the Harry Bridges Buffer Area and Pier A railyard, would enter harbor waters primarily through storm drains. Eroded soils that reach harbor waters via storm drains would be rapidly dispersed by mixing with receiving waters in the immediate vicinity of the drain discharge. As discussed in Section 3.6 (Soils and Groundwater), upland portions of the proposed Project site have been affected historically by spills. Erosion of soils would not increase loadings of residual contaminants to the harbor, because in accordance with **Mitigation Measures GW-1 and GW-2**, all contamination would be remediated prior to or during proposed Project demolition, grading, and construction. In addition, no excavations that might encounter contaminated soil would be completed as part of proposed Project operations. Runoff of landfill soils would not affect sediment quality in the harbor because the materials consist of clean soils that do not contain contaminant levels in excess of the corresponding action levels.

CEQA Impact Determination

Construction activities for the proposed Project would not accelerate natural processes of wind and water erosion because BMPs, such as sediment basins and traps, barriers, inlet protection, and other standard soil management procedures, would be implemented to minimize erosion from the construction site. Runoff from general construction activities would cause short-term, localized changes in receiving water quality, and impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation measures would be required for impacts of onshore construction to water or sediment quality due to soil erosion.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts of backland development and road improvements, except the Northwest Slip fill, are part of the No Federal Action/NEPA Baseline and are not considered in the impact analysis under NEPA. Consequently, there would be no impacts for development on existing backlands under NEPA. Development on the Northwest Slip fill would not accelerate natural processes of wind and water erosion or promote soil runoff or deposition outside of the immediate construction site. Soils disturbed by construction activities would be contained or controlled on-site through implementation of BMPs to control runoff. Runoff from general construction activities would have short-term, localized impacts on water and sediment quality that would be less than significant under NEPA.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

No impacts would occur for improvements of existing backlands. Residual impacts for development on the Northwest Slip fill would be less than significant.

3.13.4.3.1.2 Operational Impacts

Impact WQ-1e: Operation of proposed Project facilities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

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 Project site would be collected onsite by the storm drain system and discharged to the harbor, similar to existing conditions. The operation of marine terminals and backland container facilities on the 10 acres (4 ha) of new landfill and portions of the 57 acres (23 ha) of redeveloped backlands not previously used for terminal purposes would add particulates and other debris to the site. Transport of these materials by runoff from the site could contribute incrementally to changes in receiving water quality. The amount of truck traffic at the facilities would increase to handle the increased throughput beyond what the rail facilities can handle. Rail traffic would also increase at the Berths 136-147 terminal and at the new rail yard. 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 into Harbor waters. However, the facilities associated with the proposed Project would be operated in accordance with the industrial SWPPP that contains monitoring requirements to ensure that the quality of the stormwater

runoff complies with the permit conditions. Also, stormwater runoff associated with terminal operations would be governed by SUSMP requirements that would be incorporated into the project plan that must be approved prior to issuance of building and grading permits. The SUSMP for the Los Angeles County Urban Runoff and Stormwater NPDES Permit (www.swrcb.ca.gov/rwqcb4/html/programs/storwater/susmp/susmp_details.html) 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." Examples of BMPs used for minimizing the introduction of pollutants of concern from site runoff include oil/water separators, catch basin inserts, storm drain inserts, and media filtration. These BMPs must meet specified design standards to mitigate (infiltrate or treat) stormwater runoff and control peak flow discharges. If structural or treatment control BMPs are included in the project plan, the tenant would be required to provide verification of maintenance provisions. Regulatory controls for runoff and storm drain discharges are designed to reduce impacts to water quality and would be fully implemented for the proposed Project. Tenants will be required to obtain and meet all conditions of applicable stormwater discharge permits as well as meet all Port pollution control requirements.

Stormwater sampling in the Port of Long Beach in 2005 (MBC 2005) showed that pollutants such as metals and semivolatile organic compounds were present in runoff from the Port facilities. Copper, lead, mercury, nickel, and zinc occurred in stormwater samples at concentrations that exceeded the standards for marine waters at a few locations. However, the study concluded that mixing with the harbor receiving waters would rapidly dilute the pollutants so that the receiving water standards would not be 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 exceedances of receiving water quality objectives, assuming that constituents in the stormwater were in compliance with the permit limits.

The amount of vessel traffic in the West Basin would increase by 88 and 84 annual ship calls (for Year 2025) compared to the CEQA and NEPA baselines as a result of the proposed Project. 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 ballast waters while in port. Thus, the increased vessel traffic and terminal operations associated with proposed Project would not result in increased waste discharges from vessels. Project-related increases in vessel traffic could result in higher mass loadings of contaminants such as copper that are released from vessel hull anti-fouling paints. Portions of the Los Angeles Harbor are impaired with respect to copper; thus increased loadings associated with increases in vessel traffic relative to baseline conditions could exacerbate water and sediment quality conditions for copper.

The other potential operational source of pollutants that could affect water quality in the West Basin is accidental spills on land that enter storm drains and accidental spills or illegal discharges from vessels while in the West Basin. 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 3.7, 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 3.6, 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 contractor would prepare a SPCC Plan and an Oil Spill Contingency Plan (OSCP), which would be reviewed and approved by the California Department of Fish and Game Office of Spill Prevention and Response, 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 3.7 (Hazards and Hazardous Materials), only five small hazardous waste spills have occurred since 2000 at the TraPac facility. The probability of an accident is classified as "periodical" (once every 10 years), based on the Port's accident history of containers containing hazardous materials. 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 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. Regardless, any spill event would addressed according to procedures described in the SPCC Plan.

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. It is reasonable to assume that increases in the frequency of illegal discharges would be proportional to the change in numbers of ship visits. In this case, loadings from illegal discharges from the proposed Project operations would increase over baseline conditions. 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.

CEQA Impact Determination

Upland operations associated with the proposed Project would not result in direct discharges of wastes. However, stormwater runoff from the project site could contain particulate debris

from operation of the project facilities. Discharges of stormwater would comply with the NPDES discharge permit limits. However, there is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore, the impact to water quality from in-water vessel spills, discharges and leaching is significant under CEQA.

Mitigation Measures

Although the impact from upland spills and stormwater is less than significant, the following measures are included in the proposed Project as conditions of approval and are subject to monitoring provisions for enforcement and compliance purposes. Beyond legal requirements, there are no available mitigations to eliminate in-water vessel spills and leaching of contaminants.

MM WQ-2: The tenant shall conform to applicable requirements of the Non-Point Source (NPS) Pollution Control Program. The tenant shall design all terminal facilities whose operations could result in the accidental release of toxic or hazardous substances (including sewage and liquid waste facilities, solid and hazardous waste disposal facilities) in accordance with the state Non-Point Source Pollution Control Program administered by the State Water Resources Control Board (SWRCB). As a performance standard, the measures shall be selected and implemented using the Best Available Technology that is economically achievable such that, at a minimum, relevant water quality criteria as outlined by the California Toxics Rule and the Basin Plan are maintained, or in cases where ambient water quality exceeds these criteria, maintained at or below ambient levels. The applicable measures include:

- Solid Waste Control - Properly dispose of solid wastes to limit entry of these wastes to surface waters.
- Liquid Material Control - Provide and maintain the appropriate storage, transfer, containment, and disposal facilities for liquid materials.
- Petroleum Control - Reduce the amount of fuel and oil that leaks from container and support vessels.

MM WQ-3: The tenant shall develop an approved Source Control Program with the intent of preventing and remediating accidental fuel releases. Prior to their construction, the tenant shall develop an approved Source Control Program (SCP) in accordance with Port guidelines established in the General Marine Oil Terminal Lease Renewal Program. The SCP shall address immediate leak detection, tank inspection, and tank repair.

As a condition of their lease, the tenant will be required to submit to the Port an annual compliance/performance audit in conformance with the Port's standard compliance plan audit procedures. This audit will identify compliance with regulations and BMPs recommended and implemented to ensure minimizing of spills that might affect water quality, or soil and groundwater.

Residual Impacts

Residual impacts for upland spills and stormwater would be less than significant. There will be a significant unavoidable impact from in-water vessel spills, illegal discharges and leaching of contaminants.

NEPA Impact Determination

Operation of proposed Project facilities on existing backlands would be part of the NEPA baseline and no impacts would occur under NEPA. Operation of proposed Project facilities on the 10-acre fill would be as described for CEQA, and impacts would be less than significant impacts under NEPA. However, there is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint, could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore, impacts to water quality from vessel spills, discharges and leaching are significant under NEPA.

Mitigation Measures

No mitigation is required for upland impacts under NEPA. Beyond legal requirements, there are no available mitigations to eliminate in-water vessel spills and leaching of contaminants.

Residual Impacts

Residual impacts would be less than significant for upland impacts under NEPA. There will be a significant unavoidable impact from in-water vessel spills, illegal discharges and leaching of contaminants.

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

Although the majority of the proposed Project site is located within a 100-year flood zone, proposed Project operations would not increase the potential for flooding on-site due to the presence of existing and installed storm drains (see **Impact WQ-2a**). Site elevations would remain generally the same subsequent to construction. In addition, project operations would not increase the runoff velocity and the small increase in runoff volumes would be handled by the storm drains. Therefore, project operations would not increase the risk of flooding or the risks to people, property, or biological resources. In addition, the most likely affected biological resources are the harbor waters of the West Basin which, while valuable, are not identified as a sensitive resource in the Port, and under existing conditions are subject to run-off from annual storm events.

CEQA Impact Determination

Operation of the proposed Project facilities would not increase the potential for flooding to harm people or damage property or sensitive biological resources beyond the baseline because the Project operations would not substantially increase impermeable surfaces, alter

the topography of the site, or reduce the capacity of the existing stormwater conveyance systems. Therefore, flooding impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Operation of proposed Project facilities on the 9.5-acre fill would not affect flooding. Therefore, flooding impacts associated with the fill would be less than significant under NEPA. Operation of the existing backland facilities is part of the NEPA baseline. Therefore, no impacts would occur under NEPA for this portion of the proposed Project. Overall, impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Residual 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.

Once construction of facilities for the proposed Project is completed, operations within the in-water portions of the site would not affect water circulation within the West Basin.

CEQA Impact Determination

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 project would not install barriers to prevent or impede water movement in the West Basin or harbor. Therefore, impacts to water quality, hydrology, and oceanography would be less than significant under CEQA.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Similar to impacts under CEQA, operations for the proposed Project 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. Changes in surface flows on the fill in the Northwest Slip would be minor. Therefore, impacts to surface water flow would be less than significant under NEPA.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

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

Operation of terminal facilities on the new landfill and upgraded existing backlands associated with Berths 136-147 would add approximately 16 acres (6.5 ha) of paved area that would increase the amount of impervious surface. Paving these surfaces would reduce the amount of soil that could be eroded and run off to harbor waters from these areas. The reduction in unpaved surface area and implementation of BMPs to control soil runoff (e.g., temporary sediment basins [ESC 56], contaminated soil management [CA 022]) as required by existing regulations would minimize erosion and soil runoff from the proposed Project operations. Existing regulatory controls for runoff and storm drain discharges are designed to reduce impacts to water quality and would be fully implemented. Tenants would be required to obtain and meet all conditions of applicable stormwater discharge permits as well as meet all Port pollution control requirements.

CEQA Impact Determination

Project-related operations would not accelerate erosion and soil deposition in the harbor due in part to implementation of required soil control measures, such as soil stabilization or traps. Impacts to water quality would be less than significant under CEQA.

Mitigation Measures

No mitigation measures would be necessary.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts to water quality from operation of facilities on the Northwest Slip fill would be less than significant under NEPA, and similar to those described for CEQA. Impacts from operations of facilities on the existing backland would be part of the NEPA baseline; therefore, no impacts would occur for these operations under NEPA. Overall, impacts would be less significant.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

3.13.4.3.2 Alternatives

3.13.4.3.2.1 Alternative 1: No Project Alternative

No dredging, filling, wharf construction, or development on the existing backlands would occur under the No Project Alternative (Alternative 1). Existing storm drains would continue to collect and discharge stormwater runoff as under baseline conditions. Operations would continue as under baseline conditions, but the amount of vessel traffic during the year 2038 would increase by 4 vessels per year compared to the CEQA baseline and none compared to the NEPA baseline (see Table 2-4 in Chapter 2). No CEQA or NEPA actions would occur under Alternative 1.

CEQA Impact Determination

No impacts to water quality from construction would occur under CEQA.

Operations of the backlands facilities (**Impact WQ-1e**) would not create pollution, contamination, or a nuisance or violate water quality standards, and impacts would be less than significant. However, there is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore, impacts to water quality from vessel spills, discharges and leaching are significant under CEQA.

Mitigation Measures

Beyond legal requirements, there are no available mitigations to eliminate vessel spills and leaching of contaminants.

Residual Impacts

Impacts to water quality from vessel spills, discharges and leaching remain significant under CEQA

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.13.4.3.2.2 Alternative 2 – Reduced Project: Proposed Project without 10-Acre Fill

The Reduced Project (Alternative 2) would include all components of the proposed Project with the exception of the Phase II fill of Northwest Slip and the Berth 136 wharf extension along that fill. Consequently, impacts to water quality from the Northwest Slip fill and wharf extension would not occur for Alternative 2.

Impact WQ-1a: Wharf demolition and construction activities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Dredging, dike construction/reconstruction, pile removal, and pile and sheet pile installation associated with wharf demolition at Berths 146-147, reconstruction of wharves at Berths 145-147, and dredging at Berths 136-139 in Phase I of Alternative 2 would have the same effects on water quality as for the proposed Project.

Dredging would take about 91 days for Berths 144-147 and about 7 days for Berths 136-139. Pending the results from sediment testing, and issuance of required dredge and fill permits, materials dredged from the West Basin for wharf upgrades and construction would be used within the Port for fill, temporarily stored in the Pier 400 submerged storage site or taken to a confined disposal facility or the Anchorage Road upland disposal site.

Pile removal would take approximately 28 days during wharf demolition at Berths 144-147, and pile driving operations associated with wharf reconstruction would take about 33 days for Berths 145-147, while driving sheet piles would take 137 days at Berths 145-147 and 100 days at Berths 136-139. These activities, and particularly pile removal, would cause localized and temporary suspension of sediments. Pollutants in those sediments could be released to the water (see discussion below) or settle to the bottom with the sediments. Pile removal would occur prior to dredging, and much of the sediment that settles out from this activity would be removed by the dredging.

Dredging of bottom sediments for reconstruction of Berths 145-147 and for increasing water depths adjacent to Berths 136-139 would cause temporary and localized changes in water quality conditions similar to those for the proposed Project. Dredging would resuspend bottom sediments, which would generate a turbidity plume near the dredge. Because bottom sediments are primarily coarse-grained, suspended sediments would settle and the turbidity plume would disperse rapidly. Removal of contaminated sediments through dredging could cause short-term impacts as described below but would be a beneficial impact in the long term.

Turbidity levels would also increase during construction activities, accompanied by decreased water clarity, due to the suspension of bottom sediments. Turbidity plumes would not persist after construction operations are completed. The presence of turbidity plumes would not substantially affect water quality outside the mixing zone. Thus, only a small proportion of the West Basin near the dredging site would be affected at any time during the construction phase for Alternative 2.

DO levels in harbor waters would be reduced in the immediate vicinity of dredging and pile removal activities due to the oxygen demand of suspended particulates. Reductions in DO levels, however, would be brief and limited to the mixing zones in the vicinities of the pile removal/installation and dredging operations. The pH of waters within the West Basin also may decrease in the immediate vicinity of dredging and construction locations. Change in pH would be highly localized, and no water quality objectives would be exceeded outside the mixing zone. Contaminants, including metals and organics, could be released into the water column during the dredging and pile removal/driving operations. However, like pH and turbidity, any increase in contaminant levels in the water is expected to be localized and of short duration. Results from previous elutriate tests using West Basin sediments (AMEC 2003; Kinnetic Laboratories/Toxscan 2002) detected only minor releases of selected metals from sediments that did not exceed water quality criteria. Therefore, as described above for the proposed Project, the release of contaminants would not cause water quality standards or objectives to be exceeded for Alternative 2.

Nutrients released into the water column during the dredging or in-harbor disposal operations are unlikely to promote nuisance growths of phytoplankton, even if operations occur during warm water conditions for the reasons described above for the proposed Project (see Section 3.13.4.3.1.1). Effects on phytoplankton populations and beneficial uses of the West Basin are not expected in response to Alternative 2.

Similar to the proposed Project, disposal options for sediments dredged for Alternative 2 could include placement at the Pier 400 underwater storage site, disposal at a CDF, or disposal at the Anchorage Road upland disposal site. Placement of clean materials dredged near Berths 136-139 and Berths 145-147 at the Pier 400 underwater storage site would result in temporary and localized increases in suspended sediment concentrations and turbidity levels within the immediate vicinity of the site. Settling would result in rapid (within hours) decreases in suspended solids and turbidity levels within the water column. Increases in contaminant concentrations, decreases in DO concentrations, or other changes to water quality conditions relative to water quality objectives would not occur because only sediments suitable for in-water disposal, as demonstrated by results from standardized sediment testing protocols, would be placed at this site. Placement of dredged materials at a CDF or the Anchorage Road upland disposal site would not result in any disposal-related impacts to water quality within the harbor.

Impacts to water and sediment quality from leaks or spills from equipment working in or over the water during dredging and wharf reconstruction/construction are addressed below under **Impact WQ-1d**.

CEQA Impact Determination

Dredging, new wharf construction, and wharf reconstruction and upgrades during the construction phases of Alternative 2 would not create pollution, contamination, a nuisance, or violate any water quality standards. The project description includes an adaptive management program. Consistent with this portion of the project description, these impacts would be confined to the mixing zone specified by the dredging permit. During dredge and fill operations, an integrated multi-parameter monitoring program shall be implemented by the Port's Environmental Management Division in conjunction with both USACE and RWQCB permit requirements, wherein dredging performance is measured *in situ*. The objective of the monitoring program is adaptive management of the dredging operation, so that potential exceedances of water quality objectives are measured or predicted and dredging operations subsequently modified. If exceedances are observed, the Port's Environmental Management Division will immediately meet with the construction manager to discuss modifications of dredging operations to reduce turbidity to acceptable levels. This will include alteration of dredging methods, and/or implementation of additional BMPs such as a silt curtain. Therefore, impacts to water and sediment quality would be less than significant under CEQA and similar in magnitude to those expected for the proposed Project.

Mitigation Measures

Although the impact is less than significant, the above adaptive management program will be included in the proposed Project as a condition of approval and is subject to monitoring provisions for enforcement and compliance purposes.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts from the construction phases of Alternative 2 would be the same as described for the CEQA determination and they would not create pollution, contamination, a nuisance, or violate any water quality standards. Therefore, impacts to water and sediment quality would be less than significant under NEPA and similar in magnitude to those of the proposed Project.

Mitigation Measures

No mitigation measures would be required for impacts of offshore construction to water quality.

Residual Impacts

Residual impacts would be less than significant.

Impact WQ-1b: Runoff from backland development/redevelopment could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Construction activities related to the new on-dock rail yard, Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I of Alternative 2 would disturb soils within the project area. Erosion of exposed soils, along with runoff of asphalt leachate, concrete washwater, and other construction materials, would result in temporary impacts on surface water quality as described for the proposed Project.

The WDRs for storm water runoff in the County of Los Angeles and incorporated cities in NPDES Permit No. CAS004001 (13 December 2001) require implementation of runoff control from all construction sites. These control measures would be installed at the construction sites prior to ground disturbance. The tenant, or its contractors, would prepare a pollutant control plan that includes standard Port guidance and BMPs for construction (e.g., basic site materials and methods [02050]; earthworks [02300]; excavating, stockpiling, and disposing of chemically impacted soils [02111]; temporary sediment basin [ESC 56]; material delivery and storage [CA010]; material use [CA011]; spill prevention and control [CA012]; and solid waste management [CA020]), as well as monitoring and maintenance of the control measures. All conditions of Alternative 2 permits would be implemented and monitored by the Port for compliance.

Standard BMPs, such as barriers, sedimentation basins, and site contouring, would also be used during construction activities for Alternative 2 in compliance with the State General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and the construction SWPPP to minimize runoff of soils and construction-related contaminants. As discussed in Section 3.13.4.3.1, BMPs that are typically used to treat urban runoff achieve average removal efficiencies for total suspended solids from stormwater runoff of 60 to 70 percent (USEPA 1993). While the specific BMPs required by the construction SWPPP for Alternative 2 are unknown, it is reasonable to expect that measures required by the SWPPP would achieve suspended particle removal efficiencies for runoff the project site. Further, these BMPs would also be expected to remove similar proportions of the loadings for various trace metals and PAHs derived from construction debris or spills/leaks of petroleum products associated with the project site soils. Stormwater monitoring, as required by the permits, would be conducted to ensure that contaminant concentrations comply with the permit limits.

As discussed in Section 3.6 and for the proposed Project (Section 3.13.4.3.1.1), historical soil contamination would not be expected to contribute to contaminant loading from runoff into the harbor. The need for dewatering activities at the construction sites are not expected and generally not allowed by the Port. If dewatering activities were required for Alternative 2 construction, shallow groundwater collected from the dewatering may contain unacceptable levels of contaminants, thereby affecting the ability to discharge this water into nearby drainages and harbor waters. Any dewatering operations would be required to either discharge into the sanitary sewer, under permit with the City of Los Angeles Sanitation Bureau, or comply with the NPDES permit regulations and an associated SWPPP regarding discharge into storm drains and/or directly into harbor waters. Such permit requirements typically include on-site treatment to remove pollutants prior to discharge. Alternatively, the water could be temporarily

stored on-site in holding tanks, pending off-site disposal at a disposal facility approved by the RWQCB. Standard Port BMPs (e.g., excavating, stockpiling, and disposing of chemically impacted soils [02111]; solid waste management [CA020]; contaminated soil management [CA022]) specify procedures for handling, storage, and disposal of contaminated materials encountered during excavation. These procedures would be followed for upland construction activities associated with Alternative 2 to ensure that soil or groundwater contaminants were not transported off-site by runoff.

Runoff from onshore construction sites would enter the harbor primarily through storm drain discharges. Effects of runoff on DO, pH, nutrient, and trace contaminant levels would be minor and limited to the vicinity of the drain discharge locations because inputs would mix rapidly with receiving waters and suspended particles would settle to the bottom.

CEQA Impact Determination

Construction activities associated with Alternative 2 would expose soils and generate debris that could be transported offsite by runoff following a storm event. However, implementation of BMPs to control runoff of soils and pollutants, as required by an NPDES-mandated construction SWPPP, would help to ensure that the quality of the runoff meets stormwater discharge permit limits and would not adversely affect the quality of receiving waters. Consequently, runoff from the project site and impacts to water quality would be less than significant under CEQA because measures listed in Section 3.13.4.3 are included in the SWPPP. These impacts would be similar in magnitude to those associated with the proposed Project.

Mitigation Measures

No mitigation measures would be required for impacts of onshore construction to water quality.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts of backland development and road improvements are part of the No Federal Action/NEPA Baseline and are not considered in the impact analysis under NEPA. Consequently, there would be no impacts under NEPA for Alternative 2.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1c: Fill, development, and wharf extension in the Northwest Slip could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Alternative 2 would not fill the Northwest Slip. Consequently, no impacts to water and sediment quality would occur.

CEQA Impact Determination

No impacts to water and sediment quality would occur under CEQA. Therefore, Alternative 2 would have less of an effect under this threshold of significance than the proposed Project.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No impacts to water and sediment quality would occur under NEPA. Therefore, Alternative 2 would have less of an effect under this threshold of significance than the proposed Project.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1d: Accidents during construction could 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 and wharf demolition and construction could occur during construction of Alternative 2 facilities. However, based on past history for this type of work in the harbor, the probability of a large spill is low. Spills associated with construction equipment, such as oil/fluid drips or gasoline/diesel spills during fueling, typically involve small volumes which can be effectively contained within the work area and cleaned up immediately (POLA Spill Prevention and Control procedures [CA012]). Construction and industrial SWPPPs and standard Port BMPs listed in Section 3.13.4.3 (e.g., stockpiling cleanup equipment, personnel training for spill response, use of drip pans, contained refueling areas, regular inspections of equipment and vehicles and immediate repairs of leaks,

minimizing use of water for cleanups) would reduce potentials for materials from onshore construction activities to be transported offsite 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. The Basin Plan (RWQCB 1994b) water quality objective for oil and grease is "[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." Small spills from in-water construction equipment could result in a temporary but visible film (sheen) on the water surface, but this would not be expected to cause nuisance or affect beneficial uses.

CEQA Impact Determination

Accidental spills of pollutants would not create pollution, contamination, or a nuisance because the probability of a large volume spill is low, and small volume spills can be contained and cleaned up using spill response measures. Therefore, impacts to water quality would be less than significant impacts under CEQA and similar in magnitude to impacts associated with the proposed Project.

Mitigation Measures

No mitigation measures would be necessary.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts to water quality from accidental spills would be less than significant under NEPA and similar in magnitude to impacts associated with the proposed Project.

Mitigation Measures

No mitigation measures would be necessary.

Residual Impacts

Residual impacts would be less than significant.

Impact WQ-1e: Operation of Alternative 2 facilities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Operation of terminal facilities under Alternative 2 could affect water quality by increasing contaminant loading from stormwater runoff, accidental spills, or illegal/accidental releases from vessels.

Project-related increases in truck and rail traffic 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 settle and accumulate on backland surfaces. Aerial deposition of pollutants from project-related, non-electric equipment, vehicles, and vessel operation would also occur on upland portions of the project site. Pollutants deposited on land could be washed into the harbor by storm runoff as described for the proposed Project. Runoff into the harbor has the potential to increase contaminant loadings and adversely affect receiving water quality. However, BMPs implemented per the SWPPP would reduce contaminant loadings and stormwater permits will regulate contaminant concentrations in runoff.

Other operational sources of pollutants that could affect water quality and accumulate in sediments of the West Basin include accidental spills on land that enter storm drains and accidental spills or illegal discharges from vessels in the West Basin. As discussed for **Impact WQ-1d**, impacts to water and sediment quality from spills would depend on the volume and characteristics of the material spilled, such as the volatility, solubility in water, and sedimentation rate of the material, as well as the effectiveness of the spill cleanup.

Alternative 2 would provide the same increases in vessel traffic in the West Basin as for the proposed Project. Discharges of polluted water (e.g., oily wastes or black water) or refuse to the harbor from vessels are prohibited. 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. Project-related increases in vessel traffic also could result in higher mass loadings of contaminants such as copper that are released from vessel hull anti-fouling paints. Portions of the Los Angeles Harbor are impaired with respect to copper; thus increased loadings associated with increases in vessel traffic relative to baseline conditions could exacerbate water and sediment quality conditions for copper. It is reasonable to assume that increases in the frequency of spills and illegal discharges would be proportional to the change in numbers of ship visits. In this case, loadings from spills and discharges for Alternative 2 would increase over baseline conditions but they would be comparable to those associated with the proposed Project. 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.

CEQA Impact Determination

Runoff from new and existing impervious surfaces would result in less than significant impacts to harbor sediments and marine water quality under normal operating conditions due to implementation of pollution control measures, in compliance with WDRs and an NPDES-mandated SWPPP. Port operations associated with Alternative 2 are not expected to adversely affect water quality because, as described for the proposed Project, existing safety measures would minimize the likelihood of a large spill or the potential for small spills on land from reaching the harbor waters. Therefore, upland impacts would be less than significant under CEQA. However, there is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching

of contaminants such as copper, from anti-fouling paint could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore, impacts to water quality from vessel spills, discharges and leaching are significant under CEQA.

Mitigation Measures

Although the impact from upland spills and stormwater is less than significant, the following measures are included in the proposed Project as conditions of approval and are subject to monitoring provisions for enforcement and compliance purposes. Beyond legal requirements, there are no available mitigation to eliminate vessel spills and leaching of contaminants.

MM WQ-2: The tenant shall conform to applicable requirements of the Non-Point Source (NPS) Pollution Control Program. The tenant shall design all terminal facilities whose operations could result in the accidental release of toxic or hazardous substances (including sewage and liquid waste facilities, solid and hazardous waste disposal facilities) in accordance with the state Non-Point Source Pollution Control Program administered by the State Water Resources Control Board (SWRCB). As a performance standard, the measures shall be selected and implemented using the Best Available Technology that is economically achievable, such that, at a minimum, relevant water quality criteria as outlined by the California Toxics Rule and the Basin Plan are maintained, or in cases where ambient water quality exceeds these criteria, maintained at or below ambient levels. The applicable measures include:

- Solid Waste Control - Properly dispose of solid wastes to limit entry of these wastes to surface waters.
- Liquid Material Control - Provide and maintain the appropriate storage, transfer, containment, and disposal facilities for liquid materials.
- Petroleum Control - Reduce the amount of fuel and oil that leaks from container and support vessels.

MM WQ-3: The tenant shall develop an approved Source Control Program with the intent of preventing and remediating accidental fuel releases. Prior to their construction, the tenant shall develop an approved Source Control Program (SCP) in accordance with Port guidelines established in the General Marine Oil Terminal Lease Renewal Program. The SCP shall address immediate leak detection, tank inspection, and tank repair.
As a condition of their lease, the tenant will be required to submit to the Port an annual compliance/performance audit in conformance with the Port's standard compliance plan audit procedures. This audit will identify compliance with Regulations and BMPs recommended and implemented to ensure minimizing of spills that might affect water quality, or soil and groundwater.

Residual Impacts

Impacts to water quality from vessel spills, discharges and leaching remain significant under CEQA

NEPA Impact Determination

There is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore, impacts to water quality from vessel spills, discharges and leaching are significant under NEPA.

Mitigation Measures

No mitigation is available.

Residual Impacts

Impacts to water quality from vessel spills, discharges and leaching remain significant under NEPA.

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

Although the majority of the Alternative 2 site is located within a 100-year flood zone, construction and operations would not increase the potential for flooding onsite because drainage would be maintained as described in **Impact WQ-2a** for the proposed Project. Site elevations would remain generally the same as a result of Alternative 2 construction, and runoff would be directed to storm drains. Redevelopment of the existing backlands would increase the amount of impermeable surfaces due to paving, but this would not increase the potential for flooding because existing storm drains would carry the runoff to the adjacent harbor waters. No new landfill would occur under Alternative 2 to increase the amount of land surface from which runoff could occur.

CEQA Impact Determination

Construction and operations for Alternative 2 would not increase potentials for flooding or harming people, property, or sensitive biological resources because they would not substantially increase impermeable surfaces, alter site topography, or reduce the capacity of the stormwater conveyance system. Therefore, impacts would be less than significant under CEQA and comparable to those for the proposed Project.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Because flooding would not be increased by Alternative 2 construction or operations, impacts would be less than significant under NEPA and comparable to those for the proposed Project.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

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

Circulation patterns in the Inner Harbor would not change as a result of the dredging activities for Alternative 2. Wave action in the Inner Harbor would not change substantially as a result of Alternative 2 because waves entering the West Basin would not be reflected or enhanced by Alternative 2 structures. Therefore, Alternative 2 would not change the patterns or intensity of water movements in the harbor.

CEQA Impact Determination

Construction and operation of Alternative 2 would not result in a permanent adverse change because these activities would not impose barriers to water movement in the West Basin and the harbor. Therefore, impacts would be less than significant under CEQA and comparable to the proposed Project.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Alternative 2 would not result in permanent adverse changes because these activities would not impose barriers to water movement in the West Basin and the harbor. Therefore, impacts would be less than significant under NEPA and comparable to those for the proposed Project.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

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

Construction activities related to the new on-dock rail yard, Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I would disturb soils and temporarily increase potentials for wind and water erosion. Erosion of soils could result in temporary impacts on the water quality of surface runoff and receiving waters, the same as for the proposed Project. However, the potentials for erosion of soils from construction areas would be controlled by use of standard BMPs, such as basic site materials and methods (02050); earthworks (02300); excavating, stockpiling, and disposing of chemically impacted soils (02111); temporary sediment basin (ESC 56); material delivery and storage (CA010); material use (CA011); spill prevention and control (CA012); solid waste management (CA020); contaminated soil management (CA022), and others as required by the construction and industrial SWPPPs for Alternative 2,. All applicable permits would be obtained and the conditions in those permits would be implemented and monitored by the Port. This would minimize the potential for soil runoff and deposition in the harbor.

Runoff from onshore construction sites, including the Harry Bridges Buffer Area and Pier A railyard, would enter the harbor primarily through storm drains. The small amount of soils that would not be removed by BMPs and could reach the harbor via storm drains would be rapidly dispersed by mixing with harbor waters in the immediate vicinity of the drain discharge. Runoff of soils from onshore construction activities is not expected to affect the sedimentation rate or quality of harbor sediment.

Expansion of the terminal facilities on the upgraded existing backlands associated with Berths 136-147 would add approximately 6 acres (2.4 ha) of paved area that would increase the amount of impervious surface and reduce potentials for soil erosion. Storm runoff from any remaining unpaved areas is not likely to result in erosion and soil deposition in the harbor due to implementation of required sediment control measures.

Operation of facilities for Alternative 2 would not disturb or expose soils to processes that would not promote erosion; therefore, operations would not accelerate erosion or increase potentials for offsite transport and accumulation of soils.

CEQA Impact Determination

Construction of backland and road improvements for Alternative 2 would not accelerate natural processes of wind and water erosion because project BMPs would control runoff of soils. Operation of the facilities would not increase exposures of soils to natural erosion processes. Stormwater runoff from the project site would be regulated by a NPDES permit, BMPs would be implemented to prevent offsite transport of soils, and stormwater quality would be monitored to ensure compliance with permit limits. Consequently, discharges would have short-term, localized effects on receiving water

quality, but these changes would not create pollution, contamination, a nuisance, or violate any water quality standards. Therefore, impacts would be less than significant under CEQA, and they would be comparable to those for the proposed Project.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts from construction and operation of facilities for Alternative 2 are part of the No Federal Action/NEPA Baseline and are not considered in the impact analysis under NEPA. Consequently, there would be no impacts for development or operation on existing backlands under NEPA.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

3.13.4.3.2.3 Alternative 3: Reduced Wharf

Impacts from the Reduced Wharf Alternative (Alternative 3) on water quality would be less than those described for the proposed Project because the 9.5-acre (4-ha) fill and 400-foot (122-m) Berth 136 wharf extension would not occur. The 705-foot (215-m) new wharf would not be built, part of the existing concrete wharf would not be removed, the timber wharf and piles would not be removed, and no new riprap would be installed. Thus, no dredging would occur in that area. Dredging of 1.6 acres (0.7 ha) between the existing dike and the Federal channel and installation of 1,000 feet (305 m) of sheet pile creating 0.3 ac (0.1 ha) of hard surface also would not occur. Project components with potentials for affecting water and sediment quality, hydrology, and oceanography would include driving 105 new concrete piles in the water, dredging at Berths 136-139, and backland improvements.

Impact WQ-1a: Wharf upgrade activities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Dredging of bottom sediments at Berths 136-139 for Alternative 3 would be the same as for the proposed Project (Impact WQ-1a; Section 3.13.4.3.1.1). Dredging would take about 7 days, and dredged materials would be used within the Port for fill at approved

sites, temporarily stored in the Pier 400 submerged storage site, or taken to the Anchorage Road upland disposal site. The latter site would only be used for contaminated sediments.

Dredging would resuspend bottom sediments, which would generate a relatively small turbidity plume because the material would settle rapidly. Elevated turbidity levels and suspended solids concentrations in the turbidity plume would not affect water quality outside the mixing zone. DO levels would be reduced in the immediate vicinity of dredging activities by the oxygen demand of suspended sediments. The reduction in DO levels, however, would be brief and localized near the dredge. The pH also may decrease in the immediate vicinity of dredging operations. Changes in pH would be highly localized and short in duration. Nutrients released into the water column during the dredging operations are unlikely to promote nuisance growths of phytoplankton, even if operations occur during warm water conditions for the reasons described above for the proposed Project (**Impact WQ-1a**; Section 3.13.4.3.1.1). Based on results of elutriate tests of bottom sediments (Kinnetic Laboratories/Toxscan 2002), contaminants, including metals and organics, would not be released into the water column during dredging at levels that would exceed water quality standards or objectives.

Installation of new pier pilings would also disturb bottom sediments, resulting in the formation of small, transient turbidity plumes in the immediate vicinity of the construction activities. Similar to the dredging operations, these disturbances would not alter water quality outside of the mixing zone.

Sediment testing would be required to determine the suitability of the dredged materials for in-water disposal. Depending on the sediment testing results, and pending issuance of a dredging permit by USACE, one or more in-water or upland disposal options would be available. Placement of clean dredged materials at the Pier 400 underwater storage site would result in temporary and localized increases in suspended sediment concentrations and turbidity levels within the immediate vicinity of the site. Settling would result in rapid (within hours) decreases in suspended solids and turbidity levels within the water column. Increases in contaminant concentrations, decreases in DO concentrations, or other changes to water quality conditions relative to water quality objectives would not occur because only sediments suitable for in-water disposal, as demonstrated by results from standardized sediment testing protocols, would be placed at this site. Alternatively, dredged materials could be placed at the Anchorage Roads upland site.

Dredging for Alternative 3 would require a permit from the USACE and a Section 401 (of the Clean Water Act) Water Quality Certification from the 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 (metals, DDT, PCBs, and PAHs) in waters near the dredging operations may also be required if the contaminant levels in the dredged sediments are known to be elevated and represent a potential risk to beneficial uses. The monitoring data are used by the Port's dredger to demonstrate that water quality limits specified in the permit are not exceeded. The dredging permit could identify corrective actions, such as use of silt curtains, which would be implemented if the monitoring data indicate that water quality conditions outside of the mixing zone exceed the permit-specified limits.

CEQA Impact Determination

Dredging during the construction phases of Alternative 3 would not create pollution, contamination, a nuisance, or violate any water quality standards. The project description includes an adaptive management program. Consistent with this portion of the project description, these impacts would be confined to the mixing zone specified by the dredging permit. During dredge and fill operations, an integrated multi-parameter monitoring program shall be implemented by the Port's Environmental Management Division in conjunction with both USACE and RWQCB permit requirements, wherein dredging performance is measured *in situ*. The objective of the monitoring program is adaptive management of the dredging operation, so that potential exceedances of water quality objectives are measured or predicted and dredging operations subsequently modified. If exceedances are observed, the Port's Environmental Management Division will immediately meet with the construction manager to discuss modifications of dredging operations to reduce turbidity to acceptable levels. This will include alteration of dredging methods, and/or implementation of additional BMPs such as a silt curtain. Therefore, impacts would be less than significant under CEQA and similar to or less than impacts associated with the proposed Project.

Mitigation Measures

Although the impact is less than significant, the above adaptive management program will be included in the proposed Project as a condition of approval, and is subject to monitoring provisions for enforcement and compliance purposes.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts from dredging during the construction phases of Alternative 3 would be the same as described for the CEQA determination. Therefore, impacts would be less than significant under NEPA

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

Residual impacts would be less than significant.

Impact WQ-1b: Runoff from backland development/redevelopment could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Construction activities related to the new Pier A railyard, Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I would disturb soils. Subsequent erosion of disturbed soils by runoff (see **Impact WQ-4a and 4b**) or other construction materials such as asphalt

leachate or concrete washwater could affect the quality of the surface water runoff or harbor receiving waters, similar to those for the proposed Project (**Impact WQ-1b**; Section 3.13.4.3.1.1).

The WDRs for storm water runoff in the County of Los Angeles and incorporated cities in NPDES Permit No. CAS004001 (13 December 2001) require implementation of runoff control at all construction sites. Control measures, such as soil barriers, sedimentation basins, and site contouring, would be installed at the construction sites prior to ground disturbance to minimize runoff of soils and associated contaminants. The tenant, or its contractors, would prepare a pollution control plan that includes BMPs and monitoring and maintenance of the control measures. Implementation of control measures and BMPs would minimize potentials for erosion of soils and offsite transport of construction debris from onshore areas within the project site.

Discharges of stormwater runoff to West Basin would cause temporary changes to receiving water quality within the immediate vicinity of the drains because inputs would mix rapidly with receiving waters. Similarly, discharges of runoff from the railyard would cause temporary changes to receiving waters within the Consolidated Slip. Water quality within the Consolidated Slip is strongly influenced, particularly following storm events, by discharges from the Dominguez Channel (POLA 2007). The Consolidated Slip is listed as an impaired water body for a variety of chemical and biological effects stressors, including legacy contaminants such as DDT, PCB, and chlorinated pesticides (see Table 3.13-1). Runoff from the railyard would not contribute to pesticide or PCB loadings, but it could contribute to loadings of some metals, such as copper, chromium, lead, and zinc. However, BMPs would be expected to reduce loadings associated with runoff from the railyard runoff to levels that comply with the stormwater permit limits, thereby reducing potentials for impacts to water quality within would be negligible compared to loadings from the Dominguez Channel and other the Consolidated Slip.

As discussed for the proposed Project (Section 3.13.4.3.1.1), historical soil contamination would not be expected to contribute to contaminant loading from runoff into the harbor because all required soil remediation would be completed prior to the start of any project-related construction. Dewatering activities are not expected and generally not allowed by the Port. If dewatering activities were required for Alternative 3 construction, dewatering effluent would be discharged into the sanitary sewer, under permit with the City of Los Angeles Sanitation Bureau, or to storm drains and/or directly into harbor waters under NPDES permit regulations and an associated SWPPP. Such permit requirements typically include on-site treatment to remove pollutants prior to discharge. Alternatively, the water could be temporarily stored on-site in holding tanks, pending off-site disposal at a disposal facility approved by the RWQCB.

CEQA Impact Determination

Construction activities associated with Alternative 3 would not create pollution, contamination, a nuisance, or violate any water quality standards because activities would be conducted in accordance with the construction SWPPP and BMPs would be implemented to control runoff of sediments and pollutants. Thus, surface water quality impacts from Alternative 3 are considered less than significant with implementation of an NPDES-mandated SWPPP and BMPs. These impacts would be similar to those for the proposed Project.

Mitigation Measures

No mitigation measures would be required for impacts of onshore construction to water quality.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts of backland development and road improvements are part of the No Federal Action/NEPA Baseline and are not considered in the impact analysis under NEPA. Consequently, there would be no impacts under NEPA.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1c: Fill, development, and wharf extension in the Northwest Slip could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Alternative 3 would not fill the Northwest Slip. Consequently, no impacts to water quality would occur.

CEQA Impact Determination

No impacts to water quality would occur under CEQA.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No impacts to water quality would occur under NEPA.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1d: Accidents during construction could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Accidental spills of fuel, lubricants, or hydraulic fluid from equipment used during dredging are unlikely to occur during the Alternative 3 based on past history for this type of work in the harbor. Large spills during onshore construction activities would also have a very low probability of occurring because the volumes of potentially hazardous materials, such as fuels and lubricants, or waste materials used or stored on-site are small enough to be easily contained by standard BMPs and spill cleanup equipment, such as barriers and absorbent booms. Small spills and leaks are expected to be more common, but the potential for impacts is minimized by BMPs (e.g., temporary sediment basin [ESC 56]; material delivery and storage [CA010]; material use [CA011]; spill prevention and control [CA012]; solid waste management [CA020]; contaminated soil management [CA022]; concrete waste management [CA023]; sanitary-septic waste management [CA024]; and employee-subcontractor training [CA040]) and the ability to contain small volume spills or leaks within the work area (e.g., with the use of drip pans), clean up spilled materials, and dispose of contaminated materials without risks of offsite transport.

CEQA Impact Determination

Accidental spills of pollutants during construction would not cause pollution, contamination, or nuisance, or cause standards to be violated. Therefore, impacts would be less than significant impacts under CEQA, and similar to those for the proposed Project.

Mitigation Measures

No mitigation measures would be necessary.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts to water quality due to accidental spills of pollutants would be less than significant under NEPA.

Mitigation Measures

No mitigation measures would be necessary.

Residual Impacts

Residual impacts would be less than significant.

Impact WQ-1e: Operation of Alternative 3 facilities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Operation of terminal facilities under Alternative 3 would not result in any direct, point source discharges of wastes. However, operations could affect water quality by increasing contaminant loadings to harbor waters from stormwater runoff, accidental spills, or illegal/accidental releases from vessels.

Truck traffic and rail traffic would increase the amount of particulate 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 accumulate on backland surfaces. The amount of truck traffic and rail traffic would be less than for the proposed Project and for Alternative 2. Aerial deposition of pollutants from project-related non-electric equipment, vehicles, and vessel operation would occur on land. Pollutants deposited on land could be washed into harbor by storm runoff as described for the proposed Project. Runoff into the harbor has the potential to adversely affect water quality. However, BMPs implemented per the SWPPP and stormwater permits will limit contaminant loadings from runoff. Continued use of existing runoff and storm drain pollution controls would reduce pollutant loadings to the harbor. All tenants would be responsible for obtaining and implementing the conditions of stormwater discharge permits for their facilities. The specific reductions in pollutant loadings achieved by BMPs, and contaminant concentrations in the discharge, are expected to vary for individual contaminants as influenced by the storm conditions, efficiencies of BMPs, and types of contaminants associated with the various facility activities. Nevertheless, standard BMPs such as sediment basins and traps and fabric fences and barriers achieve average suspended sediment removal efficiencies of 60 to 70 percent (USEPA 1993). It is reasonable to expect that BMPs implemented for the construction and operation phases of Alternative 3 would achieve comparable removal efficiencies for soil and soil-associated contaminants in runoff. Monitoring and reporting for compliance with the stormwater permit conditions would also be required of the tenant.

Other sources of pollutants that could affect water quality and accumulate in sediments of the West Basin include accidental spills on land that enter storm drains and accidental spills from vessels in the West Basin directly to harbor waters. Impacts would depend on the characteristics of the spilled material, such as solubility, volatility, and sedimentation rate, and the speed and efficiency of the spill response and cleanup. Spills of petroleum products from vessels into the harbor would likely create a sheen. Depending on the size of the spill, this event could exceed the water quality objective in the Basin Plan 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 Alternative 3 would be addressed in a SPCC plan that would be prepared and implemented by the construction contractor. 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.

The expected vessel traffic in the West Basin associated with Alternative 3 would be greater than baseline conditions but less than the proposed Project. Discharges of polluted water or refuse are prohibited. However, if the numbers of spills or illegal

discharge events are proportional to the numbers of annual ship calls, facility operations could result in increased contaminant loadings to the harbor compared to baseline conditions. However, there is no evidence that illegal discharges from ships presently are causing widespread problems in the harbor. Over the 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.

CEQA Impact Determination

Alternative 3 Project operations would not result in any direct waste discharges to the harbor that could affect water quality. Facility operations would contribute to particulates and contaminants that accumulate on-site and would be susceptible to offsite transport by stormwater runoff. Existing regulatory controls for runoff and storm drain discharges are designed to reduce impacts to water quality and would be fully implemented and monitored. Accidental spills are unlikely to occur during the life of the Alternative 3 Project, and existing safety measures would minimize the likelihood of a large spill reaching the harbor waters and sediments. Therefore, operations would not create pollution, contamination, or nuisance, and impacts would be less than significant under CEQA. The magnitude of operational impacts for Alternative 3 would be comparable to those for the proposed Project. However, there is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore, impacts to water quality from vessel spills, discharges and leaching are significant under CEQA.

Mitigation Measures

Although the impact from upland spills and stormwater is less than significant, the following measures are included in the proposed Project as conditions of approval and are subject to monitoring provisions for enforcement and compliance purposes. Beyond legal requirements, there are no available mitigation to eliminate vessel spills and leaching of contaminants.

MM WQ-2: The tenant shall conform to applicable requirements of the Non-Point Source (NPS) Pollution Control Program. The tenant shall design all terminal facilities whose operations could result in the accidental release of toxic or hazardous substances (including sewage and liquid waste facilities, solid and hazardous waste disposal facilities) in accordance with the state Non-Point Source Pollution Control Program administered by the State Water Resources Control Board (SWRCB). As a performance standard, the measures shall be selected and implemented using the Best Available Technology that is economically achievable such that, at a minimum, relevant water quality criteria as outlined by the California Toxics Rule and the Basin Plan are maintained, or in cases where ambient water quality exceeds these criteria, maintained at or below ambient levels. The applicable measures include:

- Solid Waste Control - Properly dispose of solid wastes to limit entry of these wastes to surface waters.

- Liquid Material Control - Provide and maintain the appropriate storage, transfer, containment, and disposal facilities for liquid materials.
- Petroleum Control - Reduce the amount of fuel and oil that leaks from container and support vessels.

MM WQ-3: The tenant shall develop an approved Source Control Program with the intent of preventing and remediating accidental fuel releases. Prior to their construction, the tenant shall develop an approved Source Control Program (SCP) in accordance with Port guidelines established in the General Marine Oil Terminal Lease Renewal Program. The SCP shall address immediate leak detection, tank inspection, and tank repair.

Residual Impacts

Impacts to water quality from vessel spills, discharges and leaching **remain** significant under CEQA

NEPA Impact Determination

There is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore, impacts to water quality from vessel spills, discharges and leaching are significant under NEPA.

Mitigation Measures

No mitigation is available.

Residual Impacts

Impacts to water quality from vessel spills, discharges and leaching remain significant under NEPA.

Impact WQ-2a and 2b: Alternative 3 construction and operation would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.

Although most of the Alternative 3 site is located within a 100-year flood zone, construction and operations would not increase the potential for flooding onsite because drainage would be maintained as described in **Impact WQ-2a** for the proposed Project (Section 3.13.4.3.1). Site elevations would remain generally the same as a result of Alternative 3 construction, and runoff would be directed to storm drains. Redevelopment of the existing backlands would increase the area covered by paved (impermeable) surfaces, but this would not increase the potential for flooding because existing storm drains would carry the runoff to the harbor. No fill would occur in Northwest Slip to add land surface from which runoff could occur.

CEQA Impact Determination

Construction and operations for Alternative 3 would not increase potentials for flooding or harming people, property, or sensitive biological resources because they would not substantially increase impermeable surfaces, alter site topography, or reduce the capacity of the stormwater conveyance system. Therefore, flooding impacts would be less than significant under CEQA and similar to those for the proposed Project.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Because flooding would not be increased by Alternative 3 construction, flooding impacts are less than significant under NEPA.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

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

Circulation patterns in the Inner Harbor would not change as a result of the dredging activities for Alternative 3. Wave action in the Inner Harbor would not change as a result of Alternative 3 because waves entering the West Basin would not be reflected or enhanced by the additional sheetpiles along the existing wharves.

CEQA Impact Determination

Permanent adverse changes in movement of water in the West Basin and the harbor would not occur because Alternative 3 construction and operation would not impose barriers to water movement and impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Permanent adverse changes in movement of water in the West Basin and the harbor would not occur because Alternative 3 construction and operation would not impose barriers to water movement and impacts would be less than significant under NEPA.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

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

Construction activities related to the new on-dock rail yard, Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I would disturb soils and expose them to wind and erosion processes. Soil erosion could result in temporary impacts on the quality of surface runoff, or harbor receiving waters, similar to the proposed Project. Paving the backlands area associated with Berths 136-147 would add approximately 6 acres (2.4 ha) of impervious surface, which would reduce the amount of soil subject to erosion and run off to harbor.

Runoff of soils from the facility would be controlled by use of BMPs (e.g., soil barriers and site contouring) as required by either the General Construction Activity Stormwater Permit, issued by the RWQCB, or a site-specific SWPPP for Alternative 3, prepared by the construction contractor. Permits would be obtained and the conditions in those permits would be implemented by the tenant and monitored by the Port. This would minimize the amount of soil runoff and deposition in the harbor. Storm runoff from any remaining unpaved areas is not likely to result in erosion and sediment deposition in the harbor due to implementation of required soil control measures.

CEQA Impact Determination

Construction and operational activities for Alternative 3 would not accelerate natural processes of wind and water erosion resulting in soil runoff or deposition which could not be contained or controlled on-site through implementation of BMPs to control runoff of soils. Therefore, impacts to water quality would be less than significant under CEQA.

Mitigation Measures

No mitigation measures would be required for impacts of onshore construction to water quality.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Impacts of backland development and road improvements, and operation of these facilities, are part of the No Federal Action/NEPA Baseline and are not considered in the impact analysis under NEPA. Consequently, there would be no impacts for development on existing backlands under NEPA.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

3.13.4.3.2.4 Alternative 4: Omni Terminal

No new developments in the harbor (e.g., dredging, filling, and wharf reconstruction/ upgrades) would occur under the Omni Terminal Alternative (Alternative 4). Backland improvements, however, would occur.

Impact WQ-1a: Wharf upgrade activities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

For Alternative 4, no wharf reconstruction or other in-water construction or dredging operations would be performed. Therefore, this alternative would not directly impact harbor waters.

CEQA Impact Determination

No impacts to harbor water quality would occur under CEQA.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1b: Runoff from backland development/redevelopment could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Construction activities related to the Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I would disturb soils on-site as well as expose construction materials to processes capable of transporting materials off-site. Transport via runoff of soils, asphalt leachate, concrete washwater, and other construction materials would affect the quality of surface runoff and harbor receiving waters, similar to those described for the proposed Project (Section 3.13.4.3.1).

The WDRs for storm water runoff in the County of Los Angeles and incorporated cities in NPDES Permit No. CAS004001 (13 December 2001) require implementation of runoff control from all construction sites. The tenant, or its contractors, would prepare a pollutant control plan that includes installation and maintenance of the control measures and monitoring. These control measures would be installed at the construction sites prior to ground disturbance. All conditions of Alternative 4 permits would be implemented and monitored. Standard BMPs, such as soil barriers, sedimentation basins, and site contouring, would be used during construction activities to minimize runoff of soils and associated contaminants in compliance with the State General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and project-specific SWPPP. These types of BMPs remove an average of 60 to 70 percent of the total suspended solids from runoff (USEPA 1993). Similar removal efficiencies would be expected for any construction-derived contaminants present in eroded soils. Removal by BMPs of soils and contaminants from runoff would minimize the pollutant loading from the project site to the harbor.

Runoff from onshore construction sites would enter the harbor primarily through storm drains. Runoff would be rapidly diluted by mixing with harbor receiving waters in the immediate vicinity of the discharge. Effects of this runoff on DO, pH, and nutrient levels would be minor and limited to the vicinity of the drain discharge locations because of rapid mixing with receiving waters. Similarly, discharges of runoff from the railyard would cause temporary changes to receiving waters within the Consolidated Slip. Water quality within the Consolidated Slip is strongly influenced, particularly following storm events, by discharges from the Dominguez Channel (POLA 2007). The

Consolidated Slip is listed as an impaired water body for a variety of chemical and biological effects stressors, including legacy contaminants such as DDT, PCB, and chlorinated pesticides (see Table 3.13-1). Runoff from the railyard would not contribute to pesticide or PCB loadings, but it could contribute to loadings of some metals, such as copper, chromium, lead, and zinc. However, BMPs would be expected to reduce loadings associated with runoff from the railyard runoff to levels that comply with the stormwater permit limits, thereby reducing potentials for impacts to water quality within would be negligible compared to loadings from the Dominguez Channel and other the Consolidated Slip.

As discussed for the proposed Project (Section 3.13.4.3.1.1), historical soil contamination would not be expected to contribute to contaminant loading from runoff into the harbor because all required soil remediation would be completed prior to the start of any project-related construction. Dewatering activities are not expected and generally not allowed by the Port. If dewatering activities were required for Alternative 4 construction, shallow groundwater collected from the dewatering activities may contain unacceptable levels of contaminants, affecting the ability to discharge this water into nearby drainages and harbor waters. Any project-related dewatering activities would be required to either discharge into the sanitary sewer, under permit with the City of Los Angeles Sanitation Bureau, or discharge into storm drains and/or directly into harbor waters under NPDES permit regulations and an associated SWPPP. Such permit requirements typically include on-site treatment to remove pollutants prior to discharge. Alternatively, the water could be temporarily stored on-site in holding tanks, pending off-site disposal at a disposal facility approved by the RWQCB.

CEQA Impact Determination

Construction activities for Alternative 4 would not create pollution, contamination, a nuisance, or violate any water quality standards due to implementation of BMPs to control runoff of soils and pollutants. Impacts to water quality would be less than significant under CEQA and comparable to those associated with the proposed Project.

Mitigation Measures

No mitigation measures would be required for impacts to water quality from onshore construction activities.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1c: Fill, development, and wharf extension in the Northwest Slip could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Alternative 4 would not fill the Northwest Slip. Consequently, no impacts to water quality would occur.

CEQA Impact Determination

No impacts to water quality would occur under CEQA.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1d: Accidents during construction could 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 onshore construction activities would involve relatively small releases because these activities do not require handling or storage of large volumes of material. Most construction-related spills on land are expected to be small and effectively contained within the work area. Additionally, BMPs such as soil barriers or sedimentation basins in the project-specific SWPPP would prevent or minimize spilled materials from entering storm drains and, thereby, minimizing impacts to harbor waters. Existing regulations, such as the General Construction Activity Stormwater Permit and Port Master Specifications (Section

01410), include requirements to avoid or minimize effects on water quality during construction activities, and these would be implemented for Alternative 4.

CEQA Impact Determination

Accidental spills of pollutants would not create pollution, contamination, or a nuisance or violate standards. Therefore, impacts would be less than significant impacts under CEQA.

Mitigation Measures

No mitigation measures would be necessary.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1e: Operation of Alternative 4 facilities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Operation of the marine terminals and the facilities on portions of the 57 acres (23 ha) of redeveloped backlands not previously used for terminal purposes would contribute to contaminant loadings to harbor waters through storm runoff from the new facilities. The annual truck and rail traffic for Alternative 4 in year 2038 (0.6 million and 463, respectively) would be considerably less than for the proposed Project (1.88 million and 1,434, respectively) or for the CEQA (1.2 million and 731, respectively) and NEPA (1.2 million and 1,351, respectively) baselines (see Tables 2-1 and 2-4 in Chapter 2). Consequently, 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 accumulate on backland surfaces and subject to wash off in stormwater, would be reduced. Similarly, aerial deposition of pollutants from non-electric equipment, vehicles, and vessel operations, which would also contribute to project-related sources of contaminants to surface waters, would also be reduced. While runoff from the facilities to the harbor has the potential to affect water quality within the West Basin, use of existing runoff and storm drain pollution controls would reduce the potential contaminant loading

to the harbor. All tenants would be responsible for obtaining and implementing the conditions of stormwater discharge permits for their facilities.

Other operational sources of pollutants that could affect water quality or accumulate in sediments of the West Basin include accidental spills on land that enter storm drains and accidental spills from vessels while in the West Basin. Impacts would depend on the volumes and composition of the material spilled and the speed and effectiveness of the containment and cleanup response. The Omni Terminal Project would handle shipping containers which, based on past safety records for this type of terminal, represent a lower risk for spills than bulk cargo operations.

The amount of vessel traffic in the West Basin for Alternative 4 (83 in year 2038) would be less than for the proposed Project (334) and below the CEQA and NEPA (246 and 250, respectively) baseline levels. Because discharges of polluted water and refuse are prohibited, Alternative 4 would not affect the volumes or characteristics of vessel discharges to the harbor. If the numbers of spills or illegal discharge events are proportional to the numbers of annual ship calls, facility operations could result in decreased contaminant loadings to the harbor compared to baseline conditions.

CEQA Impact Determination

Runoff from existing impervious surfaces would not cause pollution, contamination, or nuisance, or cause water quality standards to be violated under normal operating conditions due to implementation of pollution control measures, in compliance with WDRs and an NPDES-mandated SWPPP. As described for the proposed Project, existing safety measures would minimize the likelihood of a spill reaching and adversely affecting harbor waters and sediments. Therefore, impacts would be less than significant under CEQA and comparable to or less than those for the proposed Project. However, there is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also cause increased loading in the harbor which is listed as impaired with respect to copper. Therefore, impacts to water quality from vessel spills, discharges and leaching are significant under CEQA.

Mitigation Measures

Although the impact from upland spills and stormwater is less than significant, the following measures are included in the proposed Project as conditions of approval and are subject to monitoring provisions for enforcement and compliance purposes. Beyond legal requirements, there are no available mitigation to eliminate vessel spills and leaching of contaminants.

MM WQ-2: The tenant shall conform to applicable requirements of the Non-Point Source (NPS) Pollution Control Program. The tenant shall design all terminal facilities whose operations could result in the accidental release of toxic or hazardous substances (including sewage and liquid waste facilities, solid and hazardous waste disposal facilities) in accordance with the state Non-Point Source Pollution Control Program administered by the State Water Resources Control Board (SWRCB). As a performance standard, the measures shall be selected and implemented using the Best Available Technology that is economically achievable such that, at a minimum, relevant water

quality criteria as outlined by the California Toxics Rule and the Basin Plan are maintained, or in cases where ambient water quality exceeds these criteria, maintained at or below ambient levels. The applicable measures include:

- Solid Waste Control - Properly dispose of solid wastes to limit entry of these wastes to surface waters.
- Liquid Material Control - Provide and maintain the appropriate storage, transfer, containment, and disposal facilities for liquid materials.
- Petroleum Control - Reduce the amount of fuel and oil that leaks from container and support vessels.

MM WQ-3: The tenant shall develop an approved Source Control Program with the intent of preventing and remediating accidental fuel releases. Prior to their construction, the tenant shall develop an approved Source Control Program (SCP) in accordance with Port guidelines established in the General Marine Oil Terminal Lease Renewal Program. The SCP shall address immediate leak detection, tank inspection, and tank repair.

As a condition of their lease, the tenant will be required to submit to the Port an annual compliance/performance audit in conformance with the Port's standard compliance plan audit procedures. This audit will identify compliance with Regulations and BMPs recommended and implemented to ensure minimizing of spills that might affect water quality, or soil and groundwater.

Residual Impacts

Impacts to water quality from vessel spills, discharges and leaching remain significant under CEQA

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-2a and 2b: Alternative 4 construction and operation would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.

Although the majority of the Omni Terminal site is located within a 100-year flood zone, construction and operations would not increase the potential for flooding onsite because drainage would be maintained as described in **Impact WQ-2a** for the proposed Project.

Site elevations would remain generally the same as a result of Alternative 4 construction, and runoff would be directed to storm drains. Redevelopment of the existing backlands would increase the amount of impermeable surfaces, but this would not increase the potential for flooding because existing storm drains would carry the runoff to the harbor. No fill would occur in Northwest Slip to increase the land surface from which runoff could occur or affect the potential for flooding.

CEQA Impact Determination

Construction and operations for Alternative 4 would not increase potentials for flooding or harming people, property, or sensitive biological resources because they would not substantially increase impermeable surfaces, alter site topography, or reduce the capacity of the stormwater conveyance system. Therefore, impacts would be less than significant under CEQA and similar to those for the proposed Project.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

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

Circulation patterns, waves, and tides in the Inner Harbor would not be affected by Alternative 4 because no structures would be placed in the water.

CEQA Impact Determination

Permanent adverse changes in the movement of surface water and exchange of harbor water within the West Basin and the harbor would not occur because construction and operations for the Omni Terminal Alternative would not impose barriers to water movement. Therefore, impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

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

Construction activities related to the Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I would disturb soils within the project site. Exposed soils would be subject to erosion by wind and runoff, which could result in temporary impacts on surface water quality, similar to those for the proposed Project. Runoff of soils from the facility sites would be controlled by use of BMPs (e.g., soil barriers and site contouring) as required by either the General Construction Activity Stormwater Permit, issued by the RWQCB, or a site-specific SWPPP for Alternative 4, prepared by the construction contractor. These measures have been described in **Impact WQ-1b** for the proposed Project. All applicable permits would be obtained and the conditions in those permits would be implemented. This would minimize the amount of soil runoff from the project site and subsequent deposition in the harbor.

Operation of terminal facilities on the upgraded existing backlands associated with Berths 136-147 would add approximately 6 acres (2.4 ha) of paved area that would increase the amount of impervious surface. Paving would reduce the amount of soil that would be subject to erosion from the site. Storm runoff from any remaining unpaved areas is not likely to result in erosion and soil deposition in the harbor due to implementation of required control measures.

The small amount of soil that could reach the harbor via storm drains would be rapidly dispersed by mixing with harbor receiving waters in the immediate vicinity of the drain discharge. Erosion of soils would not increase loadings of residual contaminants to the

harbor, because in accordance with **Mitigation Measures GW-1 and GW-2**, all contamination would be remediated prior to or during demolition, grading, and construction. In addition, no excavations that might encounter contaminated soil would be completed as part of Alternative 4 operations. Runoff of landfill soils would not affect sediment quality in the harbor because the materials consist of clean soils that do not contain contaminant levels in excess of the corresponding action levels.

CEQA Impact Determination

Backland construction and road improvements would disturb some soils within the project area, but BMPs would be implemented to control erosion and runoff of soils. Alternative 4 would not accelerate the natural erosion rates or promote soil runoff and deposition within the harbor. Therefore, impacts to water quality would be less than significant under CEQA.

Mitigation Measures

No mitigation measures would be required for impacts to water quality.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.13.4.3.2.5 Alternative 5: Landside Terminal Improvements

Under the Landside Terminal Improvements Alternative (Alternative 5), no new developments in Harbor waters would occur (e.g., dredging, filling, and wharf reconstruction/upgrades). Backland infrastructure improvements, however would take place, including the Harry Bridges Boulevard widening and buffer area as well as the railyard relocation. Terminal acreage would increase from 176 acres in 2003 to 190 acres in 2015 and remain at that level through 2038. The increased acreage for backlands infrastructure would be located entirely within Port boundaries and would be well within industrial areas at the Port. The extent of on-land ground disturbances would be somewhat less than the proposed Project. All mitigation measures of the proposed Project, except for mitigations

relating to dredging and new cranes, would apply. Because no federal action would occur, NEPA would not apply and no impacts would occur.

Impact WQ-1a: Wharf upgrade activities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

For Alternative 5, no wharf reconstruction or other in-water construction or dredging operations would be performed. Therefore, this alternative would not directly affect harbor waters.

CEQA Impact Determination

No impacts to harbor water quality would occur under CEQA for Alternative 5.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1b: Runoff from backland development/redevelopment could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Construction activities related to the Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I would disturb soils within the project site. Stormwater runoff could transport exposed soils, resulting in temporary impacts on surface water quality through runoff of soils as well as asphalt leachate, concrete washwater, and other construction materials as described for the proposed Project.

The WDRs for storm water runoff in the County of Los Angeles and incorporated cities in NPDES Permit No. CAS004001 (13 December 2001) require implementation of

runoff control from all construction sites. All conditions of Alternative 5 permits would be implemented. Standard BMPs, such as soil barriers, sedimentation basins, and site contouring, would be used during construction activities to minimize runoff of soils and associated contaminants in compliance with the State General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and project-specific SWPPP. The tenant, or its contractors, would prepare a pollutant control plan that includes implementation and maintenance of BMPs and monitoring of the control measures. These types of BMPs remove an average of 60 to 70 percent of the total suspended solids from runoff (USEPA 1993). Similar removal efficiencies would be expected for any construction-derived contaminants present in eroded soils. Removal by BMPs of soils and contaminants from runoff would minimize the pollutant loading from the project site to the harbor. Leaks and/or spills of petroleum hydrocarbons (fuels and lubricants) from construction equipment on land would have a very low potential to occur and enter storm drains because they would be cleaned up immediately (see **Impact WQ-1d**).

Effects of this runoff on DO, pH, and nutrient levels in receiving waters of the West Basin would be minor and limited to the vicinity of the drain discharge locations because runoff would mix rapidly with receiving waters. Similarly, discharges of runoff from the railyard would cause temporary changes to receiving waters within the Consolidated Slip. Water quality within the Consolidated Slip is strongly influenced, particularly following storm events, by discharges from the Dominguez Channel (POLA 2007). The Consolidated Slip is listed as an impaired water body for a variety of chemical and biological effects stressors, including legacy contaminants such as DDT, PCB, and chlorinated pesticides (see Table 3.13-1). Runoff from the railyard would not contribute to pesticide or PCB loadings, but it could contribute to loadings of some metals, such as copper, chromium, lead, and zinc. However, BMPs would be expected to reduce loadings associated with runoff from the railyard runoff to levels that comply with the stormwater permit limits, thereby reducing potentials for impacts to water quality within would be negligible compared to loadings from the Dominguez Channel and other the Consolidated Slip.

As discussed for the proposed Project (Section 3.13.4.3.1.1), historical soil contamination would not be expected to contribute to contaminant loading from runoff into the harbor because all required soil remediation would be completed prior to the start of any project-related construction. Dewatering activities are not expected and generally not allowed by the Port. Dewatering activities are not expected and generally not allowed by the Port. If dewatering activities were required for Alternative 4 construction, shallow groundwater collected from the dewatering activities may contain unacceptable levels of contaminants, affecting the ability to discharge this water into nearby drainages and harbor waters. Any project-related dewatering activities would be required to either discharge into the sanitary sewer, under permit with the City of Los Angeles Sanitation Bureau, or comply with the NPDES permit regulations and an associated SWPPP regarding discharge into storm drains and/or directly into harbor waters. Such permit requirements typically include on-site treatment to remove pollutants prior to discharge. Alternatively, the water could be temporarily stored on-site in holding tanks, pending off-site disposal at a disposal facility approved by the RWQCB.

CEQA Impact Determination

Construction activities generally would not create pollution, contamination, a nuisance, or violate any water quality standards due to implementation of BMPs to control runoff of sediments and pollutants. Runoff from general construction activities would have short-term, localized impacts on water quality that would be less than significant under CEQA and comparable to impacts associated with the proposed Project.

Mitigation Measures

No mitigation measures would be required for impacts to water quality under Alternative 5.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1c: Fill, development, and wharf extension in the Northwest Slip could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Alternative 5 would not fill the Northwest Slip. Consequently, no impacts to water quality would occur.

CEQA Impact Determination

No impacts to water quality would occur under CEQA.

Mitigation Measures

No mitigation measures would be required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1d: Accidents during construction could 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 the equipment used for onshore construction activities have a low probability of occurring, and any spills on land are expected to be small and capable of being contained within the work area. Additionally, implementation of BMPs (e.g., soil barriers or sedimentation basins) identified in the project-specific SWPPP would prevent spilled materials from entering storm drains. Existing regulations, such as the General Construction Activity Stormwater Permit and Port Master Specifications (Section 01410), include requirements to avoid or minimize effects on water quality during construction activities, and these would be implemented for Alternative 5.

CEQA Impact Determination

Accidental spills during construction capable of creating pollution, contamination, or a nuisance or cause regulatory standards to be violated are considered unlikely given the small volumes of materials used and stored at construction sites and spill prevention and control measures that would be implemented. Consequently, impacts would be less than significant under CEQA, and they would be comparable to those for the proposed Project.

Mitigation Measures

No mitigation measures would be necessary.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-1e: Operation of Alternative 5 facilities could create pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or cause regulatory standards to be violated in harbor waters.

Operation of Alternative 5 facilities would not result in any direct, point source discharges of wastes to the harbor. Use of the marine terminals and backland facilities on portions of the 57 acres (23 ha) of redeveloped backlands not previously used for terminal purposes would contribute to loadings and accumulation of particulates and chemical pollutants from normal wear of truck tires, train wheels, and other moving parts, as well as from leaks of lubricants and hydraulic fluids, that can fall on backland surfaces. Aerial deposition of pollutants from project-related non-electric equipment, vehicles, and vessel operation would also occur within onshore portions of the project site. The amount of truck traffic and rail traffic would be comparable to that for the proposed Project. Pollutants deposited on land could be washed into the harbor by storm runoff as described for the proposed Project, and this runoff would contribute incrementally to water quality changes within the harbor.

Use of existing runoff and storm drain pollution controls would limit pollutant loadings to the harbor from runoff. All tenants would be responsible for obtaining and implementing the conditions of stormwater discharge permits for their facilities.

Other sources of pollutants that could affect water quality or accumulate in sediments of the West Basin include accidental spills on land that enter storm drains and accidental spills from vessels while in the West Basin. Impacts would depend on the composition and characteristics of the material spilled the speed and effectiveness of the containment and cleanup response.

The amount of vessel traffic in the West Basin would be less than for the proposed Project and below baseline levels. Discharges of polluted water and refuse are prohibited. Thus, waste discharges from vessels would not increase relative to baseline conditions. If the numbers of spills or illegal discharge events are proportional to the numbers of annual ship calls, facility operations could result in decreased contaminant loadings to the harbor compared to baseline conditions.

CEQA Impact Determination

Operation of the Alternative 5 facilities would not be expected to create pollution, contamination, or a nuisance, or cause violations of regulatory standards due to the types of materials that would be handled and past safety records for this type of terminal. Therefore, impacts to water quality would be less than significant under CEQA and comparable to those for the proposed Project. However, there is potential for an increase in incidental spills and illegal discharges due to increased vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also cause increased

loading in the harbor which is listed as impaired with respect to copper. Therefore, impacts to water quality from vessel spills, discharges and leaching are significant under CEQA.

Mitigation Measures

Although the impact is less than significant, the following measures are included in Alternative 5 as conditions of approval, and are subject to monitoring provisions for enforcement and compliance purposes.

MM WQ-2: The tenant shall conform to applicable requirements of the Non-Point Source (NPS) Pollution Control Program. The tenant shall design all terminal facilities whose operations could result in the accidental release of toxic or hazardous substances (including sewage and liquid waste facilities, solid and hazardous waste disposal facilities) in accordance with the state Non-Point Source Pollution Control Program administered by the State Water Resources Control Board (SWRCB). As a performance standard, the measures shall be selected and implemented using the Best Available Technology that is economically achievable such that, at a minimum, relevant water quality criteria as outlined by the California Toxics Rule and the Basin Plan are maintained, or in cases where ambient water quality exceeds these criteria, maintained at or below ambient levels. The applicable measures include:

- Solid Waste Control - Properly dispose of solid wastes to limit entry of these wastes to surface waters.
- Liquid Material Control - Provide and maintain the appropriate storage, transfer, containment, and disposal facilities for liquid materials.
- Petroleum Control - Reduce the amount of fuel and oil that leaks from container and support vessels.

MM WQ-3: The tenant shall develop an approved Source Control Program with the intent of preventing and remediating accidental fuel releases. Prior to their construction, the tenant shall develop an approved Source Control Program (SCP) in accordance with Port guidelines established in the General Marine Oil Terminal Lease Renewal Program. The SCP shall address immediate leak detection, tank inspection, and tank repair.

As a condition of their lease, the tenant will be required to submit to the Port an annual compliance/performance audit in conformance with the Port's standard compliance plan audit procedures. This audit will identify compliance with Regulations and BMPs recommended and implemented to ensure minimizing of spills that might affect water quality, or soil and groundwater.

Residual Impacts

Impacts to water quality from vessel spills, discharges and leaching would remain significant under CEQA.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact WQ-2a and 2b: Alternative 5 construction and operation would not result in increased flooding, which would have the potential to harm people or damage property or sensitive biological resources.

CEQA Impact Determination

Construction and operations for Alternative 5 would not increase potentials for flooding or harming people, property, or sensitive biological resources because they would not substantially increase impermeable surfaces, alter site topography, or reduce the capacity of the stormwater conveyance system. Therefore, impacts would be less than significant under CEQA and comparable to those for the proposed Project.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

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

Circulation patterns, waves, and tides in the Inner Harbor would not be affected by Alternative 5 because no structures would be placed in the water.

CEQA Impact Determination

Alternative 5 would not impose barriers that would result in permanent adverse change in the movement of water in the West Basin and the harbor, and impacts would be less than significant under CEQA.

Mitigation Measures

No mitigation would be required.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

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

Construction activities related to the Harry Bridges Buffer Area, widening of Harry Bridges Boulevard, and redevelopment of approximately 57 acres (23 ha) of backlands in Phase I would disturb soils within the project area. Erosion of exposed soils could result in temporary impacts on surface water quality similar to those for the proposed Project. Runoff of soils from the surface of these facility sites would be controlled during construction activities by use of BMPs such as soil barriers and site contouring to minimize runoff in compliance with the State General Permit for Storm Water Discharges Associated with Construction Activity (Water Quality Order 99-08-DWQ) and project-specific SWPPP. These measures have been described in **Impact WQ-1b** for the proposed Project. All

applicable permits would be obtained and the conditions in those permits would be implemented. This would minimize the amount of soil runoff and deposition in the harbor.

Operation of terminal facilities on the upgraded existing backlands associated with Berths 136-147 would add approximately 6 acres (2.4 ha) of paved area that would increase the amount of impervious surface. Paving would reduce the amount of soil that could run off to the harbor. Storm runoff from any remaining unpaved areas would not result in erosion and sediment deposition in the harbor due to implementation of required soil control measures.

The small amount of soil that could reach the harbor via storm drains would be rapidly dispersed by mixing with Harbor waters in the immediate vicinity of the drain discharge. Runoff of soils from the project site would not be expected to affect the rate or location of sediment deposition in the harbor.

CEQA Impact Determination

Construction and operations for Alternative 5 would not accelerate natural processes of wind and water erosion resulting in soil runoff or sedimentation because erosion would be controlled on-site through implementation of BMPs to control runoff of sediments. Therefore, impacts to water quality would less than significant under CEQA and comparable to the proposed Project.

Mitigation Measures

No mitigation measures would be required for impacts to water quality.

Residual Impacts

Residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, there would be no federal action and an impact determination is not applicable.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.13.4.3.3 Summary of Impact Determinations

Table 3.13-2 summarizes the CEQA and NEPA impact determinations for the proposed Project and its alternatives related to Water Quality, Sediments, Hydrology, and

Oceanography, as described in the detailed discussion in Sections 3.13.4.3.1 and 3.13.4.3.2. 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 type of potential impact, 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. Note that impact descriptions for each of the alternatives are the same as for the proposed Project, unless otherwise noted.

3.13.4.4 Mitigation Monitoring

No mitigation measures are required for the proposed Project or the Alternatives because construction and operational impacts to water and sediment quality, hydrology, and oceanography would be less than significant. Although the impact is less than significant, the following measures are included as conditions of approval, and they are subject to monitoring provisions for enforcement and compliance purposes.

- An integrated multi-parameter monitoring program shall be implemented by the Port's Environmental Management Division in conjunction with both USACE and RWQCB permit requirements under **Mitigation Measure WQ-1.**
- Conformance with applicable requirements of the Non-Point Source (NPS) Pollution Control Program under **Mitigation Measure WQ-2.**
- Requirements for the tenant to develop an approved Source Control Program with the intent of preventing and remediating accidental fuel releases under **Mitigation Measure WQ-3.**

As a condition of their lease, the tenant also will be required to submit to the Port an annual compliance/performance audit in conformance with the Port's standard compliance plan audit procedures. This audit will identify compliance with Regulations and BMPs recommended and implemented to ensure minimizing of spills that might affect water quality, or soil and groundwater.

3.13.5 Significant Unavoidable Impacts

There will be a significant unavoidable impact from in-water vessel spills, illegal discharges and leaching of contaminants. This is the one significant unavoidable impact that would occur for the proposed project and all of the alternatives.

Table 3.13-2: 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*
3.13 Water Quality, Sediments, and Oceanography				
Proposed Project	**WQ-1a**: Wharf demolition and construction activities could 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-1b: Runoff from backland development/redevelopment could 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 impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: No impact
	WQ-1c: Fill, development, and wharf extension in the Northwest Slip could 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-1d: Accidents during construction could 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-2a: Proposed Project 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Proposed Project (continued)	**WQ-3a:** Construction activities would not result in a permanent adverse change in movement of surface water in the harbor.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-4a: Construction activities have the potential to accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition which would not be contained or controlled on-site.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-1e: Operation of proposed Project facilities could 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: Upland Stormwater Discharges: Less than significant impact In-water vessel spills and leaching: **Significant** impact NEPA: Upland Stormwater Discharges: Less than significant impact In-water vessel spills and leaching: **Significant** impact	**WQ-2:** Non-Point Source (NPS) Pollution Control Program **WQ-3:** Source Control Program. Mitigation not required for upland activities Mitigation not available	CEQA: Upland: Less than significant impact In-water: **Significant** and unavoidable impact after mitigation NEPA: Upland: Less than significant impact In-water: **Significant** and unavoidable impact after mitigation
	WQ-2b: Operation of proposed Project facilities 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-3b: Operations would not result in a permanent adverse change in movement of surface water in the Harbor.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Proposed Project (continued)	**WQ-4b:** Operations have a low potential to accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition which would not be contained or controlled on-site.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
Alternative 1	No dredging, filling, or wharf construction would occur in Harbor waters, and no new developments would occur on the existing backlands under this alternative. Therefore, no construction impacts would occur in association with the No Project Alternative. There are no impacts under CEQA or NEPA for **WQ-1a, WQ-1b, WQ-1c, WQ-1 d, WQ-2a, WQ-3a,** and **WQ-4a.**	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	Operations under the No Project alternative would continue as under baseline conditions. Therefore there would be no impact under CEQA or NEPA for **WQ-2b, WQ-3b** and **WQ-5b.** However the amount of vessel traffic would increase by 4 vessels per year (Year 2038). Only significance criterion **WQ-1e** would apply to Alternative 1.	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Alternative 1 (continued)	**WQ-1e:** Operation of No Project facilities would 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: **Significant** impact NEPA: Not applicable	Mitigation not available Mitigation not required	CEQA: **Significant** and unavoidable impact NEPA: Not applicable
Alternative 2	**WQ-1a:** Wharf demolition and construction activities could 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-1b: Runoff from backland development/redevelopment could 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 impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: No impact
	WQ-1c: Fill, development, and wharf extension in the Northwest Slip could 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 Mitigation not required	CEQA: No impact NEPA: No impact

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Alternative 2 (continued)	**WQ-1d:** Accidents during construction could 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-1e: Operation of project facilities could 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: Upland Stormwater Discharges: Less than significant impact In-water vessel spills and leaching: **Significant** impact NEPA: **Significant** impact	**WQ-2:** Non-Point Source (NPS) Pollution Control Program **WQ-3:** Source Control Program. Mitigation not available	CEQA: Upland: Less than significant impact In-water: **Significant** and unavoidable impact after mitigation NEPA: **Significant** and unavoidable impact after mitigation
	WQ-2a/2b: Project construction and operations 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-3a/3b: Project construction and operations would not result in a permanent adverse change in movement of surface water in the harbor.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-4a/4b: Project construction and operations have a low potential to accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition which would not be contained or controlled on-site.	CEQA: Less than significant impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: No impact

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Alternative 3	**WQ-1a:** Wharf demolition and construction activities could 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 impact NEPA: Less than significant impact	Mitigation not required\ Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-1b: Runoff from backland development/redevelopment could 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 impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: No impact
	WQ-1c: Fill, development, and wharf extension in the Northwest Slip could 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 Mitigation not required	CEQA: No impact NEPA: No impact
	WQ-1d: Accidents during construction could 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-1e: Operation of project facilities could 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: **Significant** impact NEPA: **Significant** impact	**WQ-2** and **WQ-3** No mitigation available	CEQA: **Significant** and unavoidable impact after mitigation NEPA: **Significant** and unavoidable impact after mitigation

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Alternative 3 (continued)	**WQ-2a/2b:** Project construction and operations 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 impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-3a/3b: Project construction and operations would not result in a permanent adverse change in movement of surface water in the harbor.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	WQ-4a/4b: Project construction and operations have a low potential to accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition which would not be contained or controlled on-site.	CEQA: Less than significant impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: No impact
Alternative 4	**WQ-1a:** Wharf demolition and construction activities could 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: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	WQ-1b: Runoff from backland development/redevelopment could 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 impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Alternative 4 (continued)	**WQ-1c:** Fill, development, and wharf extension in the Northwest Slip could 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: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	WQ-1d: Accidents during construction could 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 impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
	WQ-1e: Operation of project facilities could 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: **Significant** impact NEPA: Not applicable	**WQ-2** and **WQ-3** Mitigation not required	CEQA: **Significant** and unavoidable impact after mitigation NEPA: Not applicable
	WQ-2a/2b: Project construction and operations 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 impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
	WQ-3a/3b: Project construction and operations would not result in a permanent adverse change in movement of surface water in the harbor.	CEQA: Less than significant impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Alternative 4 (continued)	**WQ-4a/4b:** Project construction and operations have a low potential to accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition which would not be contained or controlled on-site.	CEQA: Less than significant impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
Alternative 5	**WQ-1a:** Wharf demolition and construction activities could 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: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	WQ-1b: Runoff from backland development/redevelopment could 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 impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
	WQ-1c: Fill, development, and wharf extension in the Northwest Slip could 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: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	WQ-1d: Accidents during construction could 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 impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable

Table 3.13-2: Summary Matrix of Potential Impacts and Mitigation Measures for Water Quality, Sediments and Oceanography Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.13 Water Quality, Sediments, and Oceanography (continued)				
Alternative 5 (continued)	**WQ-1e:** Operation of project facilities could 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: **Significant** impact NEPA: Not applicable	**WQ-2** and **WQ-3** Mitigation not required	CEQA: **Significant** and unavoidable impact after mitigation NEPA: Not applicable
	WQ-2a/2b: Project construction and operations 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 impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
	WQ-3a/3b: Project construction and operations would not result in a permanent adverse change in movement of surface water in the harbor.	CEQA: Less than significant impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
	WQ-4a/4b: Project construction and operations have the potential to accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition which would not be contained or controlled on-site.	CEQA: Less than significant impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
* Unless otherwise noted, all impact descriptions for each of the Alternatives are the same as those described for the Proposed Project.				