

# 3.13

## WATER QUALITY, SEDIMENTS, AND OCEANOGRAPHY

### 3.13.1 Introduction

### 3.13.2 Environmental Setting

#### 3.13.2.2 Water Quality

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](http://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, [Cerritos Channel](#), 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, CTR, 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.

#### 3.13.2.2.4 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) that 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~~ [enter the Harbor](#) 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) that 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, including emissions of NO<sub>x</sub>, SO<sub>x</sub>, and DPM.

#### 3.13.2.2.5 Nutrients

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 ([Allan Hancock Foundation](#) ~~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.

### 3.13.2.3 Marine Sediments

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). [Sampling in the West Basin from Berth 127 to Berth 145 found sediments to be 56 to 77 percent sand and 23 to 44 percent silt and clay \(Kinnetic Laboratories/ToxScan 2002\). In 2002 \(AMEC 2003a\), sediments near Berth 147 were 65 percent sand and 35 percent silt and clay, and near Berth 145 the sediments were 18 percent sand and 82 percent silt and clay. These data indicate that sediments in the proposed Project area are predominantly sandy with localized areas of finer material.](#) 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 ~~and~~ 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 2003a, 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 [effects range low \(ERL\)](#) levels except copper that 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 ~~and~~ 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, total DDT pesticides, pyrene, and total PAHs 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~~ the area that includes Berths 144-145 contained copper, mercury, nickel, DDE, total DDTs, 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 (2003a) 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 2003a), 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)

Results from testing sediments collected near Berths 146-147 (Site 2) by AMEC (2003a) 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 2003a), the material was considered by USACE unsuitable for in-water disposal. Results from testing are listed in Appendix L.

### **3.13.2.4 Oceanography**

#### **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, drainages discharging into the Harbor in the vicinity of West Basin, including~~ 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**

#### **3.13.3.2 Porter-Cologne Act of 1972**

The Porter-Cologne [Water Quality Control](#) 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)~~ that 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 that may impact water quality and to certify, condition, or deny the activity if it does not comply with State water quality standards. If the SWRCB imposes a condition on its certification, those conditions must be included in the federal permit or license.

### **3.13.4 Impacts and Mitigation Measures**

#### **3.13.4.1 Methodology**

##### **3.13.4.1.1 CEQA Baseline**

##### **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 that 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, or 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.

#### **3.13.4.2 Thresholds of Significance**

#### **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 would 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 on-shore 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 USEPA-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/[disposal](#) 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 and fill](#) performance is measured *in situ*. The objective of the monitoring program shall be adaptive management of the [dredging and fill/disposal](#) operation, whereby potential exceedances of water quality objectives can be measured or predicted and [the dredging and fill operations](#) subsequently modified. If exceedances are observed, the Port’s Environmental Management Division shall immediately meet with the construction manager to discuss modifications [to the of dredging and fill operations](#) to reduce turbidity to acceptable levels. This could include alteration of [dredging and fill](#) methods, and/or implementation of additional BMPs such as a silt curtain.
- Plans and specifications for fill placement in the Northwest Slip ([or other available in-water disposal sites](#)) would 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

#### 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 that 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 [in-harbor or ocean \(LA-2 or LA-3\)](#) 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, [an in-water storage or disposal site, the LA-2 or LA-3 ocean disposal site](#), or used as fill for the ~~9.510~~-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 proposed Project. Therefore, ~~the~~ [Pier 400](#) 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 [to key in the containment dike for the fill](#). 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 [and at in-water disposal sites outside 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 [the](#) dredge permit issued by the USACE. Dredging would also remove some sediment-associated contaminants from the West Basin that would provide some long-term benefits to the health of the harbor environment. [Placement of quarry run rock on the dredged slope at Berths 146-147 would be clean material that would not affect turbidity levels.](#)

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. [Most of the piles would be installed through existing or newly placed riprap on the slope from the land to the bottom of the channel and thus would cause minimal turbidity.](#)

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. [Dredging of the localized areas with finer sediments could result in a slightly larger turbidity plume for the short duration that such materials are dredged.](#) 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. [Water quality regulatory standards would not be violated.](#)

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 that affect the binding capacity of sediments for contaminants. Because the sediment characteristics vary across the proposed 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 2003a). Similarly, elutriate tests of sediments from Berths 145 through 147 (AMEC 2003a) 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 proposed 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 that are suspended by the dredging and pile removal/[installation](#) 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.

Dredged material that may be transported to and disposed at the LA-2 or LA-3 ocean disposal sites would be tested to determine suitability for ocean disposal. The low concentrations of contaminants that could be present in sediments meeting the disposal criteria would not cause any water quality standards to be exceeded or cause toxic effects in marine organisms.

Nutrients could be released into the water column during the dredging operations as well as in-harbor or offshore disposal of dredged materials. Release of nutrients may promote nuisance growths of phytoplankton if operations occur during warm water conditions. Phytoplankton blooms have occurred during previous dredging projects, including the Deep Draft Navigation Improvement Project (USACE and LAHD 1992). However, there is no evidence that the plankton blooms observed were not a natural occurrence or that they were exacerbated by dredging activities. The Basin Plan (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 proposed Project activities with the potential for releasing nutrients from bottom sediments, effects on beneficial uses of the West Basin and in-harbor or offshore disposal areas 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 an in-water storage or disposal~~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. Disposal of dredged material at the LA-2 or LA-3 ocean disposal sites would result in a temporary turbidity plume during the disposal process. The material would be transported by barge for ocean disposal, and the turbidity plume would dissipate partially to completely between barge trips, depending on the frequency of the trips. The effects of sediment disposal at these sites on water quality were addressed in the EISs prepared for designation of the sites (USEPA 1987, 2005).

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 [increase turbidity and](#) 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. [Disposal of clean dredged material at the LA-2 or LA-3 ocean disposal sites or an in-water storage site would result in the same types of temporary and localized changes in water quality indicators at those sites.](#) Previous testing demonstrated that sediments disturbed by proposed Project activities would not cause significant toxicity, contaminant bioaccumulation, or releases of contaminants to surface waters.

The proposed 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 [and in-water disposal within the Harbor](#), 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 would immediately meet with the construction manager to discuss modifications of dredging operations to reduce turbidity to acceptable levels. This would 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 [and disposal](#) would be less than significant under CEQA.

### ***Mitigation Measures***

Although the impact is less than significant, the above adaptive management program would 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 and sediment disposal, 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~~-in-water 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 proposed Project site would be ~~regulated-treated under~~ according to a construction SWPPP ~~issued by the RWQCB~~ prepared by the Project proponent 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.

### **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 that 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 approaches 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). [The dike would contain the fill material and limit its movement.](#)

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 that would result in proportional but small increases in volumes of stormwater runoff from the Project facilities. The fill in Northwest Slip would convert open water to an impervious surface, and direct precipitation on that fill would be channeled to the Harbor through storm drains. In the absence of fill, rainfall would have fallen evenly on the water surface. Discharging the stormwater runoff from the fill surface at specific points would reduce salinity in the adjacent harbor water until mixing occurs. These effects would be of short duration, occur in a limited area, and have minor effects on the water column. 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 proposed Project description, the plans and specifications for fill placement in the Northwest Slip would 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 would 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-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. Dredging would slightly increase the tidal prism and filling would slightly reduce the volume of the tidal prism for a small net decrease because the amount of fill exceeds the amount of dredging 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, resulting in elimination of water movement in that area when the dike reaches the water surface. 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.

#### **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.**

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 No Federal Action/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 prop wash from vessel traffic within the West Basin creates turbulence sufficient to resuspend bottom](#)

sediments. However, sediment resuspension from prop wash can occur from any shipping activities within the Port, not just those associated with the proposed Project. Resuspended sediments are expected to settle quickly to the bottom, and associated contaminants are not expected to increase toxicity or bioavailability because contaminants typically have a strong attachment to sediment particles.

### **CEQA Impact Determination**

Upland operations associated with the proposed Project would not result in direct discharges of wastes. However, stormwater runoff from the proposed 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*

No mitigation is required. 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.

**Condition of Approval**~~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.

**Condition of Approval**~~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 would 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 No Federal Action/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~~would be a significant unavoidable impact from in-water vessel spills, illegal discharges, and leaching of contaminants.

### **3.13.4.3.2 Alternatives**

#### **3.13.4.3.2.1 Alternative 1: No Project Alternative**

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

**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 400a~~ submerged storage site, [taken to the LA-2 or LA-3 ocean disposal 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. [Dredging of the localized areas with finer sediments could result in a slightly larger turbidity plume for the short duration that such materials are dredged.](#) 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 2003a; 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~~[an](#) underwater storage site, disposal at a CDF, [transport to the LA-2 or LA-3 ocean disposal site](#), 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~~[an](#) 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. [Disposal of dredged material at the LA-2 or LA-3 ocean disposal sites would result in a temporary turbidity plume during the disposal process. The material would be transported by barge for offshore disposal, and the turbidity plume would dissipate partially to completely between barge trips, depending on the frequency of the trips. The effects of sediment disposal at these sites on water quality were addressed in the EISs prepared for designation of the sites \(USEPA 1987, 2005\).](#) 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 [and sediment disposal \(in-harbor or at the USEPA-approved ocean disposal sites\)](#), 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 Alternative 2 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 would 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 would 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-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 from Alternative 2 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 would 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. [The prop wash from existing vessel traffic within the West Basin creates turbulence sufficient to resuspend bottom sediments. However, sediment resuspension from prop wash can occur from any shipping activities within the Port, not just those associated with vessel traffic in the West Basin. Resuspended sediments are expected to settle quickly to the bottom, and associated contaminants are not expected to increase toxicity or bioavailability because contaminants typically have a strong attachment to sediment particles.](#)

### **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 that 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*

No mitigation is required. 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.

Condition of Approval ~~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.

Condition of Approval ~~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 that 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-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 that 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 BMPs for Alternative 2 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**

**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 400a~~ submerged storage site, [taken to the ocean disposal sites LA-2 or LA-3](#), 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~~[an underwater storage site or disposal at the LA-2 or LA-3 ocean disposal sites](#) 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 [and sediment disposal](#) during the construction phases of Alternative 3 would not create pollution, contamination, a nuisance, or violate any water quality standards. The project description for Alternative 3 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 would 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*

No mitigation is required. Although the impact is less than significant, the above adaptive management program would 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-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.**

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. [The prop wash from vessel traffic within the West Basin creates turbulence sufficient to resuspend bottom sediments. However, sediment resuspension from prop wash can occur from any shipping activities within the Port, not just those associated with Alternative 3. Resuspended sediments are expected to settle quickly to the bottom, and associated contaminants are not expected to increase toxicity or bioavailability because contaminants typically have a strong attachment to sediment particles.](#)

### **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 that 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*

[No mitigation is required.](#) 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.

[Condition of Approval](#)~~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.

**Condition of Approval 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 that 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.

#### **3.13.4.3.2.4 Alternative 4: Omni Terminal**

**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 that 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~~ The potential for an increase in incidental spills and illegal discharges would be reduced relative to baseline conditions due to ~~increased~~ the smaller number of vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint could also ~~cause increased loading in the harbor~~ be reduced compared to baseline conditions. ~~which is listed as impaired with respect to copper.~~ Therefore, impacts to water quality from vessel spills, discharges and leaching ~~are~~ would be less than significant under CEQA.

### *Mitigation Measures*

No mitigation is required. 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.~~

Condition of Approval ~~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.

**Condition of Approval** ~~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~~ would be less than 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.

### 3.13.4.3.2.5 Alternative 5: Landside Terminal Improvements

#### **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~~ would be reduced relative to baseline conditions due to ~~increased fewer~~ vessel calls at the facility. Leaching of contaminants such as copper, from anti-fouling paint, would also be reduced relative to baseline conditions. ~~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~~ would be less than significant under CEQA.

### *Mitigation Measures*

No mitigation is required. 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.

Condition of Approval~~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.

Condition of Approval~~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~~ be less than 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.

### **3.13.4.3.3 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 would apply, 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.~~

These measures are intended as conditions for approval as part of Port-wide efforts to maintain high water quality conditions, and not as mitigation measures to reduce the level of significance associated with project-specific impacts to water quality. 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**

**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)**

<i>Alternative</i>	<i>Environmental Impacts*</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
<b>3.13 Water Quality, Sediments, and Oceanography (continued)</b>				
<a href="#">Proposed Project</a>	<b>WQ-1e:</b> 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: <b>Significant</b> impact  NEPA: Upland Stormwater Discharges: Less than significant impact In-water vessel spills and leaching: <b>Significant</b> impact	<a href="#">Upland: Mitigation not required.</a> <del><b>WQ-2:</b></del> Non-Point Source (NPS) Pollution Control <a href="#">and Source Control</a> Programs <a href="#">are included as conditions of approval.</a> <a href="#">In-water: Mitigation not available</a>  <del><b>WQ-3: Source Control Program.</b></del> <a href="#">Upland:</a> Mitigation not required for upland activities  <a href="#">In-water:</a> Mitigation not available	CEQA: Upland: Less than significant impact In-water: <b>Significant</b> and unavoidable impact after mitigation  NEPA: Upland: Less than significant impact In-water: <b>Significant</b> and unavoidable impact after mitigation
<a href="#">Alternative 1</a>	Operations under the No Project alternative would continue as under baseline conditions. Therefore there would be no impact under CEQA or NEPA for <b>WQ-2b, WQ-3b and WQ-54b</b> . However the amount of vessel traffic would increase by 4 vessels per year (Year 2038). Only significance criterion <b>WQ-1e</b> would apply to Alternative 1.	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	<b>WQ-1e:</b> 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: <a href="#">Upland Stormwater Discharges: Less than significant impact</a> <a href="#">In-water vessel spills and leaching: Significant</a> impact  NEPA: Not applicable	<a href="#">Upland: Mitigation not required</a> <a href="#">In-water:</a> Mitigation not available  Mitigation not required	CEQA: <a href="#">Upland: Less than significant impact</a> <a href="#">In-water: Significant</a> and unavoidable 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
<b>3.13 Water Quality, Sediments, and Oceanography (continued)</b>				
<a href="#">Alternative 2</a>	<b>WQ-1e:</b> 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: <b>Significant</b> impact  NEPA: <u>Upland Stormwater Discharges: Less than significant impact</u> <u>In-water vessel spills and leaching: Significant</u> impact	<u>Upland: Mitigation not required, but conditions of approval apply</u> <u>In-water: No mitigation available</u> <del>WQ-2: Non-Point Source (NPS) Pollution Control Program</del>  <del>WQ-3: Source Control Program.</del>  <u>Upland: Mitigation not required for upland activities</u> <u>In-water: Mitigation not available</u>	CEQA: Upland: Less than significant impact In-water: <b>Significant</b> and unavoidable impact after mitigation  NEPA: <u>Upland: Less than significant impact</u> <u>In-water: Significant</u> and unavoidable impact after mitigation
<a href="#">Alternative 3</a>	<b>WQ-1e:</b> 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: <u>Upland Stormwater Discharges: Less than significant impact</u> <u>In-water vessel spills and leaching: Significant</u> impact  NEPA: <u>Upland Stormwater Discharges: Less than significant impact</u> <u>In-water vessel spills and leaching: Significant</u> impact	<u>Upland: Mitigation not required, but conditions of approval apply</u> <u>In-water: No mitigation available</u> <del>WQ-2 and WQ-3</del>  <u>Upland: Mitigation not required for upland activities</u> <u>In-water: No mitigation available</u>	CEQA: <u>Upland: Less than significant impact</u> <u>In-water: Significant</u> and unavoidable impact <del>after mitigation</del> NEPA: <u>Upland: Less than significant impact</u> <u>In-water: Significant</u> and unavoidable impact <del>after mitigation</del>
<a href="#">Alternative 4</a>	<b>WQ-1e:</b> 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: <u>Upland Stormwater Discharges: Less than significant impact</u> <u>In-water: <del>vessel spills and leaching:</del> ss than significant <del>Significant</del> impact</u>  NEPA: Not applicable	<u>Upland: Mitigation not required, but conditions of approval apply</u> <del>WQ-2 and WQ-3</del>  <u>In-water: Mitigation not required</u>  Mitigation not required	CEQA: <u>Upland: Less than significant impact</u> <u>In-water: Less than significant impact</u> <del>Significant and unavoidable impact after mitigation</del> 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)**

<i>Alternative</i>	<i>Environmental Impacts*</i>	<i>Impact Determination</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
<b>3.13 Water Quality, Sediments, and Oceanography (continued)</b>				
Alternative 5	<b>WQ-1e:</b> 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: <u>Upland Stormwater Discharges: Less than significant impact</u> <u>In-water: less than significant impact</u> <del>In-water vessel spills and leaching: Significant impact</del>  NEPA: Not applicable	<u>Upland: Mitigation not required, but conditions of approval apply</u> <del>WQ-2 and WQ-3</del> <u>In-water: Mitigation not required</u>  Mitigation not required	CEQA: <u>Upland: Less than significant impact</u> <u>In-water: Less than significant impact</u> <del>In-water: Significant and unavoidable impact after mitigation</del>  NEPA: Not applicable
* Unless otherwise noted, all impact descriptions for each of the Alternatives are the same as those described for the Proposed Project.				

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