Section 3.7
Groundwater and Soils

3.7.1 Introduction

This section describes the existing conditions of groundwater and soil resources in the proposed Project area, including soil and groundwater contamination, and evaluates the impact of these conditions on proposed Project development. The environmental setting is based on a review of published reports, as well as review of previous consulting reports completed in the Port area.

3.7.2 Environmental Setting

The proposed Project area is underlain predominantly by a shallow unconfined aquifer, which is present at a depth ranging from 7 to 20 feet bgs (Ebasco, 1991). Large portions of the Project site have been used historically for storing petroleum hydrocarbon products and for shipbuilding activities. These uses have affected groundwater and soils at the Project site. More specifically, the Project site comprises four areas with distinct past and current uses, the Chevron Marine Terminal, Todd Shipyard, Catalina Express Terminal, and new landfill created in the Southwest Slip as part of the Channel Deepening Project.

As discussed in Chapter 2, the Todd Shipyard and Chevron USA used the area for marine vessel construction and repairs, and for a marine oil terminal, respectively. More recent uses of the site have been for construction staging for the Pier 400 and Badger Avenue Bridge projects and for temporary storage of automobiles, containers, and truck chassis. Prior to the Phase I development, the project site was used for container storage to supplement backland operations at the Berth 121-131 terminal.

3.7.2.1 Groundwater

Tertiary and Quaternary age marine sediments have filled the Los Angeles Basin, which includes Los Angeles Harbor, to depths of several thousand feet. Four major aquifers, the Silverado, Lynwood, Gage, and Gaspur, are present in the West Coast Basin of the Los Angeles Coastal Groundwater Basins and are used for industrial and municipal water supply outside the harbor area (LARWQCB, 1994). The West Coast Basin is bound on the north by the Santa Monica Mountains, on the east by the Newport-Inglewood fault, on the west by the Palos Verdes Hills, and on the south by the Pacific Ocean. The two major water-bearing zones that occur beneath the Project area are the Gaspur and Gage aquifers (URS Consultants, 1991). Both of the aquifers are composed of fine- to medium-grained sand and silty sand. Shallow groundwater beneath the site currently is not considered potable water and likely would not be considered a potable or beneficial

water source in the future, based on LARWQCB Resolution No. 98-018, dated November 2, 1998, which designated West Basin groundwater underlying portions of POLA/POLB as nonpotable. Drinking water is provided to the area by the City of Los Angeles Department of Water and Power (LADWP) (POLA, 2000).

Sediments underlying the West Coast Basin are composed primarily of nearshore marine or estuarine sediments, which were either deposited in place along the margin of the early San Pedro embayment or subsequently dredged and placed at their current locations as fill material (Ebasco, 1991). The West Coast basin area is underlain predominantly by a shallow unconfined aquifer, which is present at depths ranging from 3 to 14 feet bgs (Ebasco, 1991; Montgomery Watson, 1994; Hart Crowser, 1995; and TRC, 2002).

Groundwater is generally present at a depth of 7 to 14 feet beneath the former Berths 97-109. However, in the vicinity of former Berth 109, unconfined groundwater is present at a depth of approximately 15 to 20 feet. This area previously was dredged and used as a wharf but subsequently has been backfilled, extending the berth to the existing configuration. Fill in this area has created an effective barrier for groundwater flow through the western end of the former Todd Pacific Shipyard site. With the exception of this groundwater barrier and localized tidal influences, groundwater flow in this shallow unconfined aquifer is generally toward the center of the West Coast Basin (Ebasco, 1991).

Groundwater depth, gradient, and flow direction are subject to tidal variation in portions of the West Coast Basin. Extensive saltwater intrusion has been documented in the Gaspur aquifer, suggesting open communication with the Pacific Ocean (Jones & Stokes, 2002).

The Los Angeles area obtains water from the following three sources: 60 percent from Owens Valley in the Sierras; 30 percent from groundwater wells in the Los Angeles Basin; and 10 percent from the Metropolitan Water District, which imports water from the Colorado and Feather Rivers. No groundwater wells are located with a 2-mile radius of the Project site (Jones & Stokes, 2002).

3.7.2.2 Soil Conditions

Prior to development of the Los Angeles Harbor, extensive estuarine deposits were present at the mouth of Bixby Slough, Dominguez Channel, and the Los Angeles River. The organic tidal muds were dredged extensively and mostly covered with artificial fill (California Department of Conservation, 1998). Underlying the surface soils of the West Basin are subsurface soils consisting of dredged fill material, underlain by naturally deposited alluvial sediments that overlay the Malaga mudstone formation. Dredge fill and natural alluvial sediments represent a mix of soil types, predominantly unconsolidated layer of soft-to-hard clays and silts, with sandy soils present in some areas to depths of 30 feet.

The Malaga mudstone is the uppermost layer of the Monterrey shale formation in the San Pedro area (California Department of Conservation, 1998). Malaga mudstone is classified as hard to very hard elastic silt by the Unified Soil Classification System and is a relatively soft material by geologic bedrock descriptions (Diaz-Yourman, Inc., 1998). Project site soils also could contain expansive soils from clay minerals and imported fill materials. Expansive soils expand in volume when saturated and shrink when dry. Expansive soils are common in the geologic units in the Palos Verdes Peninsula.

Given the historic industrial development in the area, corrosive soils also could be present in the area. Corrosive soils result from the presence of high moisture content, high

electrical conductivity (the ability to pass electrical current), high acidity, and high dissolved salts. These conditions result in the flow of electrical current between the soil and metallic materials, such as tanks, pipelines, and other objects in contact with the soil. This flow of electrical current results in corrosion of the metallic objects unless they are made of or protected by corrosion-resistant materials.

3.7.2.3 Soil and Groundwater Investigations

3.7.2.3.1 Berth 97-109 Container Terminal Area

The following section summarizes the environmental setting for individual properties located within the boundary of the proposed Berth 97-109 Container Terminal. Site conditions including any onsite contamination, impacts to soil and groundwater, and remediation activities are summarized from various hazardous materials evaluation reports conducted for the closure of the prior site uses. These reports are available in the offices of the Port's Environmental Management Division. Site conditions described herein and in the referenced reports are representative of 2001 CEQA baseline conditions.

3.7.2.3.1.1 Berths 97-102 (former Chevron Marine Terminal)

Berths 97-102 formerly were occupied by the Chevron USA San Pedro Marine Terminal, which consisted of an oil tank farm and tanker terminal (Ebasco, 1991). This terminal was composed of two wharves for receiving and off-loading liquid bulk supplies; however, these two wharves were removed in the early 1990s when the terminal and tank farm were dismantled.

Contaminated Soil. Some soil and groundwater characterization and remediation activities were performed at the former site occupied by the Chevron USA Marine Terminal (Berths 97-102) following decommissioning of the terminal in 1991. The remediation included the disposal of lead-contaminated soils, remediation of petroleum-hydrocarbon-contaminated soils, and collection of free petroleum product on the groundwater surface. Neither soil remediation below the water table nor groundwater remediation (other than free product removal) occurred. As a result contaminated soil in the saturated zone may still be present.

Pipelines that were used to transfer petroleum hydrocarbon materials to and from the site have been removed or temporarily abandoned in place, which is documented in the *Final Closure Report for Remediation Activities* prepared for Chevron U.S.A. Products Company in 1995 by McLaren/Hart Environmental, Engineering Corporation. This study documented the decommissioning of the Chevron terminal, including the 20 aboveground storage tanks.

The Port has also prepared a study to document the contamination left behind following the initial Chevron remediation, especially below the saturation zone or water table. The study documents that a light, nonaqueous, product layer was encountered in previously remediated areas as part of the West Basin Widening Project. The study also documents the results of numerous soil and groundwater samples taken of the Project site. Some samples indicate that soil and groundwater remain contaminated with total petroleum hydrocarbons (TPHs) below the water table. Evidence of free product was in the saturated silty sand sediments below the groundwater table. The report identifies the presence of free product and high TPH concentrations in the saturated zone below the water table as a source of groundwater quality degradation over time.

Contaminated Shallow Groundwater. As discussed above, there are indications that free petroleum product exists in saturated silty sand sediments below the groundwater table, and this free product (including TPH concentrations) in the saturated zone below the water table is a source of degraded groundwater quality.

3.7.2.3.1.2 Berth 96 (Catalina Express Terminal)

The Catalina Express Terminal site and parking area is located along the south side of the Project site adjacent to the Vincent Thomas Bridge and adjacent to the former Chevron Marine Terminal site at Berth 96. Catalina Express will be relocated to Berth 95 as a part of the proposed Project. Berths 95 and 96 are located to the south of the Vincent Thomas Bridge and the Project site.

Contaminated Soil and Groundwater. The Port's study documenting contamination left behind following the initial Chevron remediation found that petroleum-hydrocarbon-containing soil appears to extend from the former Chevron USA Marine Terminal site beyond the eastern site boundary (along Swinford Street). The study also found that affected soil and groundwater also appears to extend beyond the southeastern boundary (beneath the employee parking lot of the Catalina Express Terminal) (McLaren/Hart Environmental, 1995). This contamination has not yet been remediated. It is unclear if this groundwater contamination extends to immediate vicinity of Berth 95.

3.7.2.3.1.3 Berths 103-109 (Former Todd Shipyard)

Berths 103-109 were used as a shipyard (Todd Shipyard) from 1917 to 1989. The shipyard was used for construction, maintenance, and repair operations of large commercial and naval vessels. Primary shipbuilding activities conducted at the site included arc welding, painting, sandblasting, acid etching, and metal fabrication (Ebasco, 1991).

In addition, a pipeline corridor follows the shipyard property lines from the northwestern most part of the site southward, turning easterly along Pacific Avenue and Front Street (see Figure 2-2), before turning northeasterly to the old Chevron USA San Pedro Marine Terminal. Approximately nine pressurized oil pipelines, ranging from 4 to 12 inches in diameter, are buried in the pipeline corridor (Ebasco, 1991). Subsequent to relocation of the oil terminal and the shipyard, the area underwent a series of demolition, remediation, and reclamation activities.

Contaminated Soil and Groundwater. In August 1995, the County of Los Angeles Environmental Management Division reviewed the *Subsurface Investigation for Berth 105,* dated January 1995, prepared by Tetra Tech, Inc.; the summary of previous site characterization reports, dated January 1993, prepared by Schaefer Dixon; and the *Underground Storage Tank Status Investigation*, dated 1992, prepared by Schaefer Dixon. The results are summarized in Table 3.7-1.

Table 3.7-1. Summary of Site Investigations for Berths 105 and 109

Underground Tanks/Sumps/Clarifiers – Berth 105:	
Former Underground Storage Tank (UST) Area	TPH and benzene, toluene, ethylbenzene, and xylene (BTEX) hot spot located at northeast corner of excavated area. 18,000 milligrams per kilogram (mg/kg) were found in the soil; and 20 micrograms per liter (µg/L) benzene were detected in the groundwater.
Abandoned Underground Diesel Tank	95,000 mg/kg TPH detected in soil, 2.4 to 4.9 feet of free product found in groundwater; near surface soils contaminated with copper (2,200 mg/kg) and lead (520 mg/kg).
Former Fuel Pumping Station	One of three underground tanks reported in the area remains unlocated and uncharacterized because of the encroachment of a soil pile from the Chevron remediation project at the time of the Tetra Tech investigation.
Building Areas – Berth 105:	
Machine Shop, Building 19 West	TPH up to 18,000 mg/kg found in soil; 0.15 mg/L chromium detected in groundwater.
Sheet Metal Shop, Building 116	TPH up to 11,000 mg/kg found in soil.
Blacksmith Shop, Building 5; Pipe and Copper Shop, Building 6; Nitric Acid Prep Area, Building 6	TPH up 22,900 mg/kg; total lead up to 3,400 mg/kg; soluble lead up to 59 mg/L; total silver up to 209 mg/kg; total copper up to 1,190 mg/kg; and soluble copper up to 68 mg/L found in soils.
Soil Contamination Areas – Berth 105:	
Metal Cleaning Facility	Near-surface lead up to 2,600 mg/kg found in soil.
Garage and Clarifier	Near-surface lead up to 600 mg/kg found in soil.
Chevron Pipeline Corridor	TPH up to 6,100 mg/kg found in soil.
Plate and RotoBlast Shop	Near-surface lead up to 5,700 mg/kg found in soil.
Soil Contamination Areas – Berth 105:	
East Warehouse Shop	Near-surface TPH up to 4,400 mg/kg found in soil.
Open Spray Paint Area	Lead up to 650 mg/kg and zinc up to 14,000 mg/kg found in soil.
Garage and Clarifier	Near-surface lead up to 600 mg/kg found in soil.
Craneway 14 and 15	Near-surface TPH up to 6,500 mg/kg and polynuclear aromatic hydrocarbons (PNAs) up to 2.18 mg/kg found in soils.

Table 3.7-1. Summary of Site Investigations for Berths 105 and 109

Soil Contamination Areas – Berth 109:	
Former Wharf F/Spent Abrasive Storage	TPH up to 12,000 mg/kg with BTEX; copper up to 4,100 mg/kg; and lead up to 3,000 mg/kg found in soil; 210 µg/L benzene detected in groundwater.
Sandblast Grit Waste	Copper up to 4,300 mg/kg and lead up to 460 mg/kg detected.
Equipment Scrap Area	Lead up to 1,800 mg/kg detected in soil.
Railroad Corridor	TPH up to 100,000 mg/kg found in soil.
West Parking Lot	Near-surface TPH up to 3,300 mg/kg and PNAs up to 3.15 mg/kg found in soils.
Ship Work Bays	PNAs up to 14.2 mg/kg; near surface copper up to 6,100 mg/kg; and near surface lead up to 410 mg/kg detected in soils.

The contamination listed in Table 3.7-1 is related to the former Todd Shipyard uses on the Project site. As part of the construction of the wharf and backlands for Phase I, various amounts of contaminated soils were removed and disposed of; including 1,366 tons of soil contaminated with metals; 19,500 tons of non-RCRA California hazardous waste; and 540 cubic yards of creosote-treated timber.

Polychlorinated biphenyl (PCB)-contaminated soils also were discovered during the removal of petroleum pipelines owned by Chevron in August 1999. The affected soils were in the vicinity of a subsurface culvert in the rear of Berths 103 and 109, close to and north of Front Street at Pacific Avenue. PCB concentrations were generally low, with the exception of two hot spot locations: CU-81-1 (4,800 milligrams per kilogram [mg/kg] in a 3-inch soil layer overlying the culvert) and station -419B (4,700 mg/kg in a 3-foot soil sample collected from the eastern end of the culvert). From November 1998 to May 1999, the PCB-tainted soils were delineated, followed by the removal of 2,200 pounds of the tainted soil, which was disposed of in a Class I landfill. Confirmation wipe and soil samples collected after the removal action indicated that the residual PCB concentrations were below the regulatory cleanup requirements and that a "no further action" status was established (Tetra Tech, Inc., 1999a).

3.7.2.3.1.4 Southwest Slip Fill

As part of the Channel Deepening Project, 45 acres of new landfill were created in the Southwest Slip adjacent to the former Todd Shipyard and former Chevron Marine Terminal sites. Clean sediment dredged as part of the Channel Deepening Project was used to fill the 45-acre Southwest Slip fill site. There are no contamination problems associated with this new landfill.

3.7.2.4 Potential Site Contamination

Based on the soil and groundwater investigations discussed above, the Project site could contain contamination, as follows:

+ The former Chevron Site (Berths 97 to 102) could contain soil and groundwater contamination (TPH) below the saturation zone.

+ Soil and groundwater beneath the employee parking area of the Catalina Express Terminal could be contaminated with petroleum hydrocarbons (McLaren/Hart Environmental, 1995). It is unclear if this groundwater contamination extends to immediate vicinity of Berth 95, but it is assumed to have for purposes of this environmental document.

+ Soil and groundwater beneath the portion of the Project site formerly occupied by Todd Shipyard could contain petroleum hydrocarbons and/or metals.

3.7.3 Applicable Regulations

Applicable federal, state, and local laws each contain lists of hazardous materials or hazardous substances that may require special handling if encountered in soil or groundwater during construction of the proposed Project. These include "hazardous substances" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the state Hazardous Substances Account Act (Health and Safety Code Section 25300, et seq.); "hazardous materials" under Health and Safety Code Section 25501, California Labor Code Section 6380 and California Code of Regulations (CCR) Title 8, Section 339; "hazardous substances" under 40 CFR Part 116; and, priority toxic pollutants under CFR Part 122. In addition, "hazardous materials" are frequently defined under local hazardous materials ordinances, such as the Uniform Fire Code.

Generally speaking, "hazardous materials" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials that are commonly found in soil and groundwater include petroleum products, fuel additives, heavy metals, and volatile organic compounds. Hazardous substances are defined by State and Federal regulations as substances that must be regulated in order to protect the public health and the environment. Hazardous materials are characterized by certain chemical, physical, or infectious properties. CCR Title 22, Chapter 11, Article 2, Section 66261 defines a hazardous material as a substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either: (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of or otherwise managed.

According to Title 22 (Chapter 11, Article 3, CCR), substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated, or which is being stored prior to disposal.

Depending on the type and degree of contamination that is present in soil and groundwater, any of several governmental agencies may have jurisdiction over the proposed Project's site. Generally, the agency with the most direct statutory authority over the affected media is designated as the lead agency for purposes of overseeing any necessary investigation or remediation. Typically, sites that are nominally contaminated with hazardous materials remain in the jurisdiction of local hazardous materials agencies,

such as the Los Angeles Fire Department. Sites that have more heavily contaminated soils are more likely to fall under the jurisdiction of the State Department of Toxic Substances Control (DTSC), which is authorized to administer the federal hazardous waste program under the Resource Conservation and Recovery Act and is also responsible for administering the State Superfund Program, under the Hazardous Substance Account Act. The DTSC provides guidelines for cleanup oversight through an environmental oversight agreement for government agencies or a voluntary cleanup agreement for private parties.

Sites that have contaminated groundwater fall within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB) and are subject to the requirements of the Porter-Cologne Water Quality Control Act. Contaminated groundwater that is proposed to be discharged to surface waters or to a publicly owned treatment works would be subject to the applicable provisions of the CWA, including permitting and possibly pretreatment requirements. An NPDES permit is required to discharge pumped groundwater to surface waters, including local storm drains, in accordance with California Water Code Section 13260. Additional restrictions may be imposed upon discharges to water bodies that are listed as "impaired" under Section 303(d) of the CWA, including San Pedro Bay.

In July 2002, USEPA amended the Oil Pollution Prevention regulation at Title 40 of the Code of Federal Regulations, Part 112 (40 CFR 112). The regulation incorporated revisions proposed in 1991, 1993, and 1997. Subparts A through C of the Oil Pollution Prevention regulation are often referred to as the "SPCC Rule" because they describe the requirements for certain facilities to prepare, amend, and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. These plans ensure that facilities include containment and other countermeasures that would prevent oil spills that could reach navigable waters. In addition, oil spill contingency plans are required as part of this legislation to address spill cleanup measures after a spill has occurred.

3.7.4 Impacts and Mitigation Measures

3.7.4.1 Methodology

Groundwater and onshore soils impacts have been evaluated with respect to several general parameters, including groundwater quality, groundwater quantity, and soil contaminants. The impact of the proposed Project on each of these parameters has been evaluated with respect to the significance criteria listed below.

The assessment of impacts is also based on regulatory controls and on the assumptions that the proposed Project would include the following:

+ An individual NPDES permit for stormwater discharges or coverage under the General Construction Activity Storm Water Permit would be obtained for the proposed Project.

+ The contractor would prepare a Spill Prevention, Control, and Countermeasure (SPCC) Plan and an Oil Spill Contingency Plan (OSCP), which would be reviewed and approved by the California Department of Fish and Game Office of Spill Prevention and Response, in consultation with other responsible agencies. The SPCC Plan would detail and implement spill prevention and control measures to prevent oil spills from reaching navigable waters. The OSCP would identify and plan as

necessary for contingency measures that would minimize damage to water quality and provide for restoration to pre-spill conditions.

+ All contaminated soil and groundwater encountered during construction of the proposed Project would be handled, transported, remediated, and/or disposed of in accordance with LAHD lease conditions and all applicable federal, state, and local laws and regulations.

+ In accordance with standard LAHD lease conditions, the Terminal operator would implement a source control program, which provides for the inspection, control, and cleanup of leaks from aboveground tank and pipeline sources, as well as requirements related to groundwater and soil remediation.

Potential impacts to surface water and marine water quality are addressed in Section 3.14, Water Quality, Sediments, and Oceanography.

3.7.4.1.1 CEQA Baseline

Section 15125 of the CEQA Guidelines requires EIRs to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the NOP. These environmental conditions normally would constitute the baseline physical conditions by which the CEQA lead agency determines if an impact is significant. For purposes of this Recirculated Draft EIS/EIR, the CEQA baseline for determining the significance of potential Project impacts is the environmental setting prior to March 2001, pursuant to the ASJ described in Chapter 1, Section 1.4.3. The CEQA baseline for this proposed Project includes 45,135 TEUs per year that occurred on the Project site in the year prior to March 2001.

The CEQA baseline represents the setting at a fixed point in time and differs from the No Project Alternative (discussed in Section 2.5) in that the No Project Alternative addresses what is likely to happen at the site over time, starting from the existing conditions. The No Project Alternative allows for growth at the Project site that could be expected to occur without additional approvals.

3.7.4.1.2 NEPA Baseline

For purposes of this Recirculated Draft EIS/EIR, the evaluation of significance under NEPA is defined by comparing the proposed Project or other alternative to the NEPA baseline. To ensure a full analysis of the impacts associated with Phases I through III, the NEPA baseline does not include the dredging required for the Berth 100 wharf, the existing bridge across the Southwest Slip, or the 1.3 acres of fill constructed as part of Phase I (i.e., the Project site conditions are considered without the in-water Phase I activities and structures). The NEPA baseline condition for determining significance of impacts includes the full range of construction and operational activities the applicant could implement and is likely to implement absent permits from the USACE. The NEPA baseline begins in the year prior to 2001 but is not fixed in time. The NEPA baseline includes construction and operation of backlands container operations on up to 117 acres but does not include wharves, dredging, and improvements that would require federal permits. The NEPA baseline assumes 117 acres of upland development (i.e., the 72 acres of Phase I backlands currently in use plus another 45 acres resulting from the Channel Deepening Project), which is greater than the 2001 baseline conditions. In addition, the NEPA baseline would store or manage up to 632,500 TEUs onsite, but no annual ships calls are included in the NEPA baseline (see Section 2.6.2 for further information).

Unlike the CEQA baseline, which is defined by conditions at a point in time, the NEPA baseline is not bound by statute to a "flat" or "no-growth" scenario. Therefore, the USACE could predict increases in operations over the life of a project to properly describe the NEPA baseline condition. Normally, any ultimate permit decision would focus on direct impacts of the proposed project to the aquatic environment, as well as indirect and cumulative impacts in the uplands determined to be within the scope of federal control and responsibility. Significance of the proposed project or alternative is defined by comparing the proposed project or alternative to the NEPA baseline (i.e., the increment). The NEPA baseline conditions are described in Section 2.1.

The NEPA baseline also differs from the "No Project" Alternative, where the Port would take no further action to construct and develop additional backlands (other than the 72 acres that are currently developed). Under the No Project Alternative, no construction would occur, other than the Phase I construction. However, the abandonment of the existing bridge and 1.3 acres of fill, as well as removal of the four A-frame cranes built as part of Phase 1 would occur. Forecasted increases in cargo throughput would still occur as greater operational efficiencies are realized.

3.7.4.2 Threshold of Significance

Significance criteria used in this assessment are based on the *City of Los Angeles CEQA Thresholds Guide* (City of Los Angeles, 2006), Port criteria, and the scientific judgment of the report preparers. The effects of a Project on groundwater and soils resources are considered to be significant if the Project would result in any of the following:

GW-1 Exposure of soils containing toxic substances and petroleum hydrocarbons, associated with prior operations, which would be deleterious to humans, based on regulatory standards established by the lead agency for the site.

GW-2 Changes in the rate or direction of movement of existing contaminants; expansion of the area affected by contaminants; or increased level of groundwater contamination, which would increase risk of harm to humans.

GW-3 Change in potable water levels sufficient to:

+ Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;
+ Reduce yields of adjacent wells or well fields (public or private); or
+ Adversely change the rate or direction of groundwater flow.

GW-4 Demonstrable and sustained reduction in groundwater recharge capacity.

GW-5 Violation of regulatory water quality standards at an existing production well, as defined in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act.

Under GW-4, groundwater recharge is related to the recharge of groundwater as part of potable water supply management.

3.7.4.3 Impacts and Mitigation

3.7.4.3.1 Proposed Project

3.7.4.3.1.1 Construction Impacts

Soil and Groundwater Quality

Impact GW-1a: Construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.

The majority of the proposed Project site was previously used by Chevron USA for a marine oil tank farm, and by Todd Shipyard as a shipbuilding and maintenance facility. These uses were decommissioned and demolished in the early 1990s. The proposed Project would utilize a portion of the Catalina Express Terminal site for backlands. Chevron performed remediation activities on the soil above the water table, as well as free product removal from the groundwater surface. Neither soil remediation below the water table nor groundwater remediation (other than free product removal) occurred on the former marine oil tank site. More recently, the Port has prepared a study to document the contamination left behind following the initial Chevron remediation, especially below the saturation zone or water table. The study documents that a light, nonaqueous, product layer was encountered in previously remediated areas as part of the West Basin Widening Project. Based on this, the study identified the potential for groundwater contamination below the Catalina Express Terminal site due to migration. The study also documents the results of numerous soil and groundwater samples taken of the Project site. Some samples indicate that soil and groundwater remains contaminated with total petroleum hydrocarbons (TPHs) below the water table (also discussed in Section 3.7.2.2.). Evidence of free product was in the saturated silty sand sediments below the groundwater table. The report identifies the presence of a free product and high TPH cone in the saturated zone below the water table as a source of groundwater quality degradation over time (POLA, 2004). Remediation was performed at the Todd Shipyard site. The proposed Project would create additional backlands (pavement) on the Project site, which would essentially cap contamination remaining from the Chevron Marine Terminal and prevent runoff from leaching through the remaining contaminants. This would minimize the potential for exposure to underlying contaminants.

Other proposed Project features, such as accessory structure foundations or infrastructure (i.e., stormwater runoff BMP facilities), and placement/relocation of the floating docks for the Catalina Express Terminal relocation could require construction beneath the water table and encounter contaminated soil or groundwater. This would be considered a significant impact to construction workers from increased potential exposure to contaminants and related health hazard risks.

The proposed Project also would relocate the Catalina Express Terminal to the Princess Pavilion building and would relocate the docks to the vicinity of Berth 95 south of the Vincent Thomas Bridge. The former terminal site would be used for container backlands and to accommodate construction of the Berth 100 south extension. Petroleum hydrocarbon contamination appears to extend from the former Chevron USA Marine Terminal site beyond the eastern site boundary (along Swinford Street). The affected soil

and groundwater also appear to extend beyond the southeastern boundary to beneath the employee parking lot of the Catalina Express Terminal. Relocation of the Catalina Express Terminal would occur in Phase II, and subsequent demolition and backlands construction has the potential to encounter contamination. This would be considered a potentially significant impact due to the increased possibility of construction workers to be exposed to contaminants and related health hazards.

The extension of the wharf at Berth 100 onto the Catalina Express Terminal could encounter and expose unknown hazardous or contaminated materials. This is considered a potential impact because workers might be exposed to increased health hazard risks.

CEQA Impact Determination

Construction of the proposed Project could result in significant impacts related to the potential to expose construction workers, existing operations personnel, and future occupants of the site to contaminants and related health hazard risks. Construction of proposed Project components could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in exposure to contaminants and related risks. Such exposure also could occur from the extension of the wharf at Berth 100, relocation of the Catalina Express terminal docks, demolition of the Catalina Express Terminal building, and backland construction onto the Catalina Express Terminal. Because of this, the potential to encounter contaminated material during construction and expose personnel onsite would be considered a significant impact under CEQA.

Human health and safety impacts would be significant pursuant to exposure levels established by the California Environmental Protection Agency (CalEPA) Office of Environmental Health Hazard Assessment (OEHHA).

Mitigation Measures

GW-1: Site Remediation. Unless otherwise authorized by the lead regulatory agency for any given site, the LAHD shall remediate all encountered contaminated soils or contamination within the excavation zones on the Project site boundaries prior to or during subsurface construction activities. Remediation shall occur in compliance with local, state, and federal regulations, as described in Section 3.7.3, and as directed by the Los Angeles Fire Department, DTSC, and/or RWQCB.

Soil remediation shall be completed such that contamination levels in subsurface excavations are below health screening levels established by OEHHA and/or applicable action levels established by the lead regulatory agency with jurisdiction over the site. Only clean soil would be used as backfill. Soil contamination waivers may be acceptable as a result of encapsulation (i.e., paving) in backland areas and/or risk-based soil assessments but would be subject to the discretion of the lead regulatory agency. Excavated contaminated soil shall not be placed in another location onsite; it must be properly disposed offsite. All imported soil to be used as backfill in excavated areas should be sampled to ensure that the soil is free of contamination.

Existing groundwater contamination throughout the proposed Project boundary shall continue to be monitored and remediated as encountered, simultaneous and/or subsequent to site development, and/or in accordance with direction provided by the RWQCB.

Unless otherwise authorized by the lead regulatory agency for any given site, areas of excavation with soil contamination that shall be remediated prior to, or in conjunction with, Project construction.

GW-2: Contamination Contingency Plan. The following contingency plan shall be implemented to address previously unknown contamination during demolition, grading, and construction:

a) All trench excavation and filling operations shall be observed for the presence of free petroleum products, chemicals, or contaminated soil. Deeply discolored soil or suspected contaminated soil shall be segregated from light colored soil. In the event unexpected suspected chemically impacted material (soil or water) is encountered during construction, the contractor shall notify the Los Angeles Harbor Department's Chief Harbor Engineer, Director of Environmental Management, and Risk Management's Industrial Hygienist. The Port shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material(s) identified within the boundaries of the construction area. Continued work at a contaminated site shall require the approval of the Chief Harbor Engineer.

b) A photoionization detector (or other similar devices) shall be present during grading and excavation of suspected chemically impacted soil.

c) Excavation of VOC-contaminated soil will require obtaining and complying with a South Coast Air Quality Management District Rule 1166 permit.

d) The remedial option(s) selected shall be dependent upon a number of criteria (including but not limited to types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis. Both offsite and onsite remedial options shall be evaluated.

e) The extent of removal actions shall be determined on a site-specific basis. At a minimum, the chemically impacted area(s) within the boundaries of the excavation area shall be remediated to the satisfaction of the lead regulatory agency for the site. The Port Project Manager overseeing removal actions shall inform the contractor when the removal action is complete.

f) Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the Chief Harbor Engineer within 30 days of Project completion.

g) In the event that contaminated soil is encountered, all onsite personnel handling or working in the vicinity of the contaminated material shall be trained in accordance with Occupational Safety and Health and Administration (OSHA) regulations for hazardous waste operations. These regulations are based on CFR 1910.120 (e) and 8 CCR 5192, which states that "general site workers" shall receive a minimum of 40 hours of classroom training and a minimum of three days of field training. This training provides precautions and protective measures to reduce or eliminate hazardous materials/waste hazards at the work place.

h) In cases where potential chemically impacted soil is encountered, a real-time aerosol monitor shall be placed on the prevailing downwind side of the impacted soil area to monitor for airborne particulate emissions during soil excavation and handling activities.

i) All excavations shall be filled with structurally suitable fill material which is free from contamination.

Residual Impacts

Soil and groundwater remediation of known contaminated areas, as outlined in **MM GW-1**, as well as implementation of a contingency plan for potentially encountering unknown soil contamination, as outlined in **MM GW-2,** would reduce health and safety impacts to onsite personnel in backland areas, as well as construction personnel, such that residual impacts would be less than significant.

NEPA Impact Determination

The proposed Project would include new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. In addition, the proposed Project would include in-water construction and backlands construction associated with the southern extension of Berth 100 on to the Catalina Express Terminal site, which is suspected of having subsurface contamination, as described above. Because of this, construction of the proposed Project could potentially expose construction workers to contaminants and related health hazard risks. As a result, the potential to encounter contaminated material during construction would be considered a significant impact under NEPA.

Mitigation Measures

MM GW-1 and MM GW-2 would be implemented to address previously unknown contamination encountered during new wharf construction.

Residual Impacts

Implementation of **MM GW-1 and MM GW-2** would reduce health and safety impacts to construction workers and onsite personnel, such that residual impacts would be less than significant.

Impact GW-2a: Proposed Project construction would not result in expansion of the area affected by contaminants.

As discussed for **Impact GW-1**, soil and groundwater in the Berth 97-109 Project site have been affected hazardous substances and petroleum products, as a result of past historic petroleum terminal and industrial uses.

Construction of the proposed Project would repave a large portion of the Project site for backlands (including the Catalina Express Terminal site), which effectively would serve as an impermeable surface barrier above the contamination zone. As a result, following construction, runoff would be conveyed offsite and would not permeate the soil or enter the groundwater. Consequently, the proposed Project is not expected to change the rate, direction, or extent of existing soil and/or groundwater contamination.

During construction, if contaminated materials are encountered, they would be remediated as required by **MM GW-1 and MM GW-1**. Potential remediation activities associated with backlands development would result in a reduction, rather than an increase or expansion, of onsite contaminants. Remediation of onsite soil and groundwater contamination encountered during construction would be a beneficial impact.

CEQA Impact Determination

Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils (encountered during construction), as a source of groundwater contamination. In addition, the impermeable layer that would be placed over the Project site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. As a consequence, construction of the proposed Project would not result in expansion of the existing area affected by contaminants and would not cause significant impacts under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

The proposed Project would include new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. In addition, the proposed Project would include in-water construction and backlands construction associated with the southern extension of Berth 100 on to the Catalina Express Terminal site, which is suspected of having subsurface contamination, as described above. Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils, as a source of groundwater contamination. In addition, the impermeable layer that would be placed over the Project site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. As a consequence, construction of the proposed Project would not result in expansion of the existing area affected by contaminants and would not cause significant impacts under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3a: Proposed Project construction would not result in a change to potable water levels.

Drinking water is provided to the proposed Project area by the City of Los Angeles Department of Water and Power. Although shallow groundwater may be locally extracted during construction dewatering operations (e.g., for utility lines, storm drains, and SUSMP devices), groundwater beneath the Project site is nonpotable. Localized groundwater withdrawal would have no impact on potential underlying potable water supplies in the vicinity.

CEQA Impact Determination

Because drinking water is provided to the proposed Project area by the City of Los Angeles Department of Water and Power, and because no potable groundwater exists beneath the Project site, construction of the proposed Project would result in no impacts to potable water levels under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No potable groundwater supplies exist in the Inner Harbor. As such, in-water construction activities for the proposed Project would have no impact on potable water supplies under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4a: Proposed Project construction would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

The proposed Project area is underlain by saline, nonpotable groundwater. As such, any changes in site permeability will not affect potable groundwater recharge capacity.

CEQA Impact Determination

The proposed Project site is underlain by saline, nonpotable groundwater. Because the water is nonpotable, the amount of infiltration to the groundwater beneath the Project site is irrelevant with respect to potential recharge of the groundwater for drinking water storage. Therefore, any temporary increase or decrease in site permeability at the Project site during construction would be irrelevant and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No rechargeable potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities for the proposed Project would have no impact on recharge capacity of potable groundwater supplies. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5a: Proposed Project construction would not result in violation of regulatory water quality standards at an existing production well.

Drinking water is provided to the proposed Project area by the City of Los Angeles Department of Water and Power. No potable water production wells are located within a 2-mile radius of the proposed Project. Groundwater in the vicinity of the proposed Project is subject to extensive saltwater intrusion and is not a source of potable water.

CEQA Impact Determination

As no existing production wells are located in the vicinity of the proposed Project site, Project construction would not result in impacts to water quality at production wells under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As no existing production wells are located in the vicinity of the proposed Project site, Project construction would not result in impacts to water quality at production wells. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.1.2 Operational Impacts

Soil and Groundwater Quality

Impact GW-1b: Proposed Project operations would not result in uncovering of toxic substances or other contaminants associated with historical uses of the Port that might result in exposure to operations personnel.

Soil and groundwater in the Berth 97-109 backland areas have been affected by hazardous substances and petroleum products from past industrial uses at the site. In addition, the area in the vicinity of the Catalina Express Terminal relocation (Berth 95) could have contaminated groundwater beneath the site. Implementation of **MM GW-1** and **MM GW-2** prior to or during proposed Project construction, would remediate contamination encountered during Project construction, and following Project construction, backlands pavement would serve as an impermeable surface barrier. Subsequent terminal operations would entail surface activities at the Project site and excavations that could encounter contaminated soil would not be completed as part of proposed Project operations.

CEQA Impact Determination

Contamination encountered during construction would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction would also develop the site as backlands with an impermeable layer at the ground surface. In addition, no excavations that could encounter contaminated soil and/or groundwater would be completed as part of proposed Project operations. Therefore, operational health and safety impacts associated with contaminated soil and groundwater would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Contamination encountered during construction would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction would also develop the site as backlands with an impermeable layer at the ground surface. In addition, no excavations that could encounter contaminated soil and/or groundwater would be completed as part of proposed Project operations. Therefore, operational health and safety impacts associated with contaminated soil and groundwater would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Impact GW-2b: Proposed Project operations would not result in expansion of the area affected by contaminants.

Soil and groundwater in the Berth 97-109 backland areas have been affected by hazardous substances and petroleum products from past industrial uses at the site. In addition, the area in the vicinity of the Catalina Express Terminal relocation (Berth 95) could have contaminated groundwater beneath the site. Implementation of **MM GW-1** and **MM GW-2** prior to or during proposed Project construction, would remediate contamination encountered during Project construction, and following Project construction, backlands pavement would serve as an impermeable surface layer to prevent percolation that could affect subsurface contamination. Subsequent terminal operations would entail surface activities at the Project site and excavations that could encounter contaminated soil or surface activities that could penetrate the surface pavement would not be completed as part of proposed Project operations. As a consequence, Project operations would not cause the expansion of subsurface contamination.

CEQA Impact Determination

Contamination encountered during construction would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. In addition, only clean soil would be used for backfill. Construction would also develop the site as backlands with an impermeable layer at the ground surface. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of proposed Project operations. Therefore, operation of the proposed Project would not result in significant impacts under CEQA related to the expansion of contaminated soil or groundwater at the Project site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Contamination encountered during construction would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. In addition, only clean soil would be used for backfill. Construction would also develop the site as backlands with an impermeable layer at the ground surface. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of proposed Project operations. Therefore, operation of the proposed Project would not result in significant impacts under NEPA related to the expansion of contaminated soil or groundwater at the Project site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3b: The proposed Project operations would not result in a change to potable water levels.

Drinking water is provided to the proposed Project area by the City of Los Angeles Department of Water and Power. The proposed Project area is underlain by highly saline nonpotable groundwater.

CEQA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles' Department of Water and Power. Because potable water supplies are not located beneath the Project site, and because Project operations would be confined to surface activities, operation of the proposed Project would result in no impacts to potable water supplies under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable groundwater supplies are not located beneath the Project site, operation of the proposed Project would not affect potable water supplies. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4b: The proposed Project operations would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

The proposed Project site would be paved subsequent to construction, resulting in minimal or no groundwater infiltration at the site. Furthermore, the proposed Project area is underlain by highly saline, nonpotable groundwater, and is not used to recharge a potable groundwater supply.

CEQA Impact Determination

Although paving across most of the site would prevent groundwater infiltration on the proposed Project site, there is no potable groundwater beneath the site. Therefore, Project operations and the permanent impermeable surface pavement on the backlands would result in no effect to potable groundwater recharge capacity, and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

In-water construction activities would have no impact with respect to potential loss of groundwater recharge because the proposed Project area is underlain by highly saline, nonpotable groundwater. No impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5b: The proposed Project operations would not result in violation of regulatory water quality standards at an existing production well.

Drinking water is provided to the proposed Project area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the proposed Project site.

CEQA Impact Determination

No existing production wells are located in the vicinity of the proposed Project site; therefore, no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No existing production wells are located in the vicinity of the proposed Project site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2 Alternatives

3.7.4.3.2.1 Alternative 1 – No Project Alternative

Alternative 1 would use the terminal site constructed as part of Phase I for container storage. Because of this, the Phase I construction activities are included under Alternative 1 although the in-water Phase I elements would be abandoned.

As described in Chapter 2, under Alternative 1, no additional Port action or federal action would occur. The Port would not take further action to construct or develop additional backlands (other than the 72 acres that were constructed under Phase I of the proposed Project). Under Alternative 1, no additional site development beyond Phase I would occur. Under Alternative 1, the 72-acre backlands constructed under Phase I would be used by the Berth 121-131 Container Terminal for supplemental container storage. Because of this, Alternative 1 would include construction of the 72 acres of backlands. Because the Berth 121-131 Terminal is berth limited, use of Berth 97-109 by Yang Ming will not result in additional ship, truck, or rail trips at the Berth 121-131 terminal.

As part of Alternative 1, the existing four A-frame cranes would be removed, the bridge over the Southwest Slip and the 1.3 acres of fill constructed during Phase I would be abandoned, and all existing wharf operations would cease. No further CEQA or NEPA actions would occur under Alternative 1.

3.7.4.3.2.1.1 Construction Impacts

Soil and Groundwater Quality

Impact GW-1a: The No Project Alternative would not cause toxic substances or other contaminants associated with historical uses of the Port to be encountered, potentially resulting in exposure to construction/operations personnel and/or long-term exposure to future site occupants.

Soil and groundwater in the backland areas of Berths 97-109 have been affected by hazardous substances and petroleum products as a result of past industrial uses of the site.

Remediation of much of the soil contamination has occurred, but some contamination could remain onsite.

CEQA Impact Determination

Alternative 1 includes the Phase I construction (72 acres of backlands and in-water development). Construction of Phase I encountered contaminated soils during general site construction and the installation of terminal infrastructure. Contaminants encountered included treated timber, contaminated groundwater (with hydrocarbons), and contaminated soil (hydrocarbons). Because of this, there was a potential for contamination exposure of personnel onsite, which is considered a significant impact.

Mitigation Measures

Mitigation measures **MM GW-1** and **MM GW-2** apply to Alternative 1 construction. Equivalent measures to **MM GW-1, Site Remediation,** and **MM GW-2, Contamination Contingency Plan,** were implemented during Phase I construction to reduce health and safety impacts. During Phase I construction, extensive soil sampling and groundwater sampling were conducted to profile potential hazardous wastes encountered, to categorize the waste materials, and properly dispose of the wastes. Contaminated groundwater that was a result of dewatering was characterized and either treated and disposed of in the storm drain system under permit from the RWQCB or was discharged to the City sewer system under permit from the City Bureau of Sanitation. Documentation of testing, management, and disposal of all hazardous wastes encountered during Phase I construction is contained in the report titled *Environmental Oversight Services Summary Report for Berth 100 Backland and Wharf Development Project* prepared by the Port in 2004 (POLA, 2004). Proper testing, management, and disposal of hazards wastes encountered during Phase I construction kept potential health and safety impacts to below a level of significance.

Residual Impacts

Soil and groundwater remediation contamination encountered during Phase I construction, consistent with **MM GW-1 and MM GW-2**, mitigated potential health and safety impacts such that residual impacts were less than significant.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

Impact GW-2a: The No Project Alternative would not potentially result in expansion of the area affected by contaminants.

As discussed for **Impact GW-1a**, soil and groundwater in the Berth 97-109 backland areas have been affected by hazardous substances and petroleum products as a result of

past industrial uses of the site. Remediation of much of the soil contamination has occurred, but some contamination could remain onsite.

CEQA Impact Determination

The soil and groundwater remediation that occurred during Phase I construction resulted in beneficial impacts relative to contaminated groundwater conditions by removing or treating contaminated soils (which served as a source of groundwater contamination) and contaminated groundwater. In addition, the backlands would serve as an impermeable surface pavement layer that prevents runoff from percolating through potentially contaminated soil and further contaminating groundwater. Impacts under CEQA are not significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

Potable Water Supplies

Impact GW-3a: The No Project Alternative would not result in a change to potable water levels.

Drinking water is provided to the No Project Alternative area by the City of Los Angeles Department of Water and Power. Although construction of the backlands would occur, the Alternative 1 terminal site is underlain by saline, nonpotable groundwater.

CEQA Impact Determination

Drinking water is provided to the area by the City of Los Angeles Department of Water and Power. Backlands construction under this alternative would not result in any changes to potable water levels in the vicinity of the site. Therefore, no impacts to potable water levels would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

Impact GW-4a: The No Project Alternative would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

The terminal site under Alternative 1 is not used to recharge potable groundwater supplies. Groundwater in the Project area is saline and nonpotable.

CEQA Impact Determination

Although Alternative 1 includes 72 acres of backlands, groundwater in the vicinity is not used as a potable water supply; hence, no reductions in potable groundwater capacity would occur. Therefore, no impacts to potable groundwater recharge would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

Impact GW-5a: The No Project Alternative would not result in violation of regulatory water quality standards at an existing production well.

Drinking water is provided to the area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the site.

CEQA Impact Determination

Because no existing production wells are located in the vicinity of the No Project Alternative site, construction of Phase I, as applied to Alternative 1, did not result in impacts under CEQA. Consequently, no impacts to existing water production wells would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, no residual impacts would occur under CEQA.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

3.7.4.3.2.1.2 Operational Impacts

Soil and Groundwater Quality

Impact GW-1b: Operation of the No Project Alternative would not result in uncovering of toxic substances or other contaminants associated with historical uses of the Port that might result in exposure to operations personnel.

Soil and groundwater in the backland areas of Berths 97-109 have been affected by hazardous substances and petroleum products as a result of past industrial uses of the site.

CEQA Impact Determination

Equivalent measures to **MM GW-1** and **MM GW-2** were implemented to remediate contamination encountered during Phase I construction to acceptable levels. Construction of backlands included an impermeable pavement layer at the ground surface that prevents percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, health and safety impacts associated with terminal operations under Alternative 1 (related to contaminated soil and groundwater) would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

Impact GW-2b: Operation of the No Project Alternative would not result in expansion of the area affected by contaminants.

As discussed for Impact **GW-1b**, soil and groundwater in the backland areas of Berths 97-109 have been affected by hazardous substances and petroleum products as a result of past industrial uses of the site. Remediation of much of the soil contamination has occurred, but some contamination could remain onsite.

CEQA Impact Determination

Equivalent measures to **MM GW-1** and **MM GW-2** were implemented during Phase I construction, which remediated contamination encountered during construction to acceptable levels. Construction of backlands included an impermeable pavement layer at the ground surface that prevents percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, operation of Alternative 1 would not result in significant impacts under CEQA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

Potable Water Supplies

Impact GW-3b: Operation of the No Project Alternative would not result in a change to potable water levels.

The proposed terminal site and surrounding area is underlain by saline, nonpotable groundwater; therefore, potable water levels would not be affected. Drinking water would continue to be provided to the No Project Alternative area by the City of Los Angeles Department of Water and Power.

CEQA Impact Determination

Drinking water would continue to be provided to the No Project Alternative area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located beneath the terminal site, operation of Alternative 1 would not impact potable water supplies, under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

Impact GW-4b: Operation of the No Project Alternative would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

Because the terminal site is not used for groundwater recharge and because the Project area is underlain by highly saline nonpotable groundwater, no impact to groundwater recharge capacity would occur.

CEQA Impact Determination

Although paving across the site would prevent groundwater infiltration to the groundwater from the Alternative 1 site, the terminal site is not used to recharge a potable groundwater supply, and no potable groundwater exists beneath the site. Therefore, terminal operation could not affect potable groundwater recharge capacity and no impact would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

Impact GW-5b: Operation of the No Project Alternative would not result in violation of regulatory water quality standards at an existing production well.

Drinking water would continue to be provided to the No Project Alternative area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the No Project Alternative site.

CEQA Impact Determination

Because no existing production wells are located in the vicinity of the No Project Alternative site, no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

A residual impacts determination is not applicable.

3.7.4.3.2.2 Alternative 2 – No Federal Action

Alternative 2 would use the terminal site constructed as part of Phase I for container storage and would increase the backland area to 117 acres. Because of this, the Phase I construction activities are included under Alternative 2 although the in-water Phase I elements would not be used. The Phase I dike, fill, and wharf would be abandoned.

Under Alternative 2, a Port action would further develop backlands at the Project site (does not require a federal action) on up to 117 acres. No further federal action would occur. The 117-acre backlands would be used by the Berth 121-131 Container Terminal for supplemental container storage. Because the Berth 121-131 Terminal is berth limited, use of Berth 97-109 would not result in additional ship, truck or rail trips at the Berth 121-131 terminal. The existing wharves (Berths 100-102) would cease to be used for ship berthing and ship loading and unloading operations, the four existing A-frame cranes installed during Phase I would be removed, and the previously constructed bridge over the Southwest Slip and 1.3 acres of fill would be abandoned. No NEPA action would occur under Alternative 2. Alternative 2 would not require the relocation of the Catalina Express Terminal.

3.7.4.3.2.2.1 Construction Impacts

Soil and Groundwater Quality

Impact GW-1a: The No Federal Action Alternative could cause toxic substances or other contaminants associated with historical uses of the Port to be encountered, potentially resulting in exposure to construction/operations personnel and/or long-term exposure to future site occupants.

Soil and groundwater in the backland areas of Berths 97-109 have been affected by hazardous substances and petroleum products as a result of past industrial uses of the site. Remediation of much of the soil contamination has occurred, but some contamination could remain onsite.

CEQA Impact Determination

Alternative 2 includes the Phase I construction (72 acres of backlands and in-water development), as well as development further upland to increase the backlands to 117 acres, including related infrastructure such as storm drains and utilities. Phase I construction, as well as further construction of the backlands and infrastructure could result in significant impacts related to the potential to expose construction workers, existing operations personnel, and future occupants of the site to contaminants and related health hazard risks. Construction of storm drains and utilities onsite could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in exposure to contaminants and related risks. Because of this, the potential to encounter contaminated material during construction and expose personnel onsite would be considered a significant impact.

Human health and safety impacts would be significant pursuant to exposure levels established by the CalEPA Office of Environmental Health Hazard Assessment (OEHHA).

Mitigation Measures

Equivalent measures to **MM GW-1, Site Remediation,** and **MM GW-2, Contamination Contingency Plan,** were implemented during Phase I construction to reduce health and safety impacts. During Phase I construction, extensive soil sampling and groundwater sampling were conducted to profile potential hazardous wastes encountered, to categorize the waste materials, and properly dispose of the wastes. Contaminated groundwater that was a result of dewatering was characterized and either treated and disposed of in the storm drain system under permit from the RWQCB or was discharged to the City sewer system under permit from the City Bureau of Sanitation. Documentation of testing, management, and disposal of all hazardous wastes encountered during Phase I construction is contained in the report titled *Environmental Oversight Services Summary Report for Berth 100 Backland and Wharf Development Project* prepared by the Port in 2004 (POLA, 2004). Proper testing, management, and disposal of hazards wastes encountered during Phase I construction kept potential health and safety impacts to below a level of significance.

MM GW-1 and MM GW-2 would be implemented to mitigate impacts related to encountering contamination during subsequent upland construction.

Residual Impacts

Implementation of **MM GW-1 and MM GW-2** would reduce health and safety impacts to construction workers and onsite personnel, such that residual impacts would be less than significant.

NEPA Impact Determination

Alternative 2 includes Phase I construction (new wharf construction and other in-water construction activities) that were not part of the NEPA baseline. Construction of Phase I, encountered existing contaminated materials and groundwater, as described above, which resulted in the potential for contamination exposure by onsite personnel, and this potential exposure during Phase I construction is considered a significant impact under NEPA. In addition, under Alternative 1, backlands would be increased to 117 acres, but no additional development would occur in the in-water terminal area (i.e., no additional dredging, dike or fill placement, pile installation, or wharf construction). Because backland development under Alternative 2 would be the same as under the NEPA baseline, the additional backlands development would not result in significant impacts related to contaminated soil or groundwater under Alternative 2 because there would be no net change in backland development conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

Equivalent measures to **MM GW-1, Site Remediation,** and **MM GW-2, Contamination Contingency Plan,** were implemented during Phase I construction to reduce health and safety impacts, as described above.

No further mitigation measures are necessary under NEPA for subsequent backlands construction.

Residual Impacts

Implementation of soil and groundwater remediation contamination encountered during Phase I construction, consistent with **MM GW-1** and **MM GW-2**, mitigated

potential health and safety impacts such that residual impacts were less than significant.

Impact GW-2a: The No Federal Action Alternative potentially would not result in expansion of the area affected by contaminants.

Alternative 2 would result in backlands development on 117 acres of the terminal site, which effectively would serve as an impermeable surface above the contamination zone. As a result, following construction, runoff would be conveyed offsite and would not permeate the soil or enter the groundwater. Consequently, Alternative 2 would not change the rate, direction, or extent of existing soil and/or groundwater contamination.

During construction, if contaminated materials are encountered, they would be remediated as required by **MM GW-1 and MM GW-1**. Potential remediation activities associated with backlands development would result in a reduction, rather than an increase or expansion, of onsite contaminants. Remediation of onsite soil and groundwater contamination encountered during construction would be a beneficial impact.

CEQA Impact Determination

Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils, as a source of groundwater contamination. In addition, the impermeable surface pavement layer that would be placed over the backlands would prevent runoff from percolating through potentially contaminated soil and further contaminating or affecting groundwater. As a consequence, construction of Alternative 2 would not result in expansion of the existing area affected by contaminants and would not cause significant impacts under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Construction of Phase I included new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. Under this alternative, no further development would occur in the in-water terminal area (i.e., no additional dredging, dike or fill placement, pile installation, or wharf construction). In addition, backland development under Alternative 2 would be the same as under the NEPA baseline (both 117 acres). Therefore, potential impacts under NEPA would not be significant because there would be no substantive change in environmental conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation measures are necessary under NEPA.

Residual Impacts

No residual impacts would occur.

Potable Water Supplies

Impact GW-3a: The No Federal Action Alternative would not result in a change to potable water levels.

Drinking water is provided to the No Project Alternative area by the City of Los Angeles Department of Water and Power. Although construction of the backlands would occur, the proposed Project Area is underlain by saline nonpotable groundwater.

CEQA Impact Determination

Drinking water is provided to the area by the City of Los Angeles Department of Water and Power. Because no potable groundwater exists beneath the terminal site, construction of Alternative 2 would not affect or change potable water levels. No impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities under Phase I, as applied to Alternative 2, did not have an impact on potable water supplies. Under this alternative, no additional development would occur in the in-water terminal area (i.e., no further dredging, dike or fill placement, pile installation, or wharf construction). In addition, backland development under Alternative 2 would be the same as under the NEPA baseline. Therefore, potential impacts under NEPA would not occur because there would be no net change in potable water supply conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4a: The No Federal Action Alternative would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

The terminal site under Alterative 2 not used for groundwater recharge and is underlain by saline nonpotable groundwater. As such, any changes in site permeability would not affect potable groundwater recharge capacity.

CEQA Impact Determination

The terminal under Alternative 1 is not used to recharge potable groundwater supplies, and the site is underlain by saline nonpotable groundwater. Because the

water is nonpotable, changes in the permeability of the terminal site would not reduce groundwater recharge capacity. Therefore, any temporary increase or decrease in site permeability caused by Alternative 2 during construction would be irrelevant and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No rechargeable potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities under Phase I, as applied to Alternative 2, did not have an impact on recharge capacity of potable groundwater supplies. Under this alternative, no additional development would occur in the in-water terminal area (i.e., no further dredging, dike or fill placement, pile installation, or wharf construction). In addition, backland development under Alternative 2 would be the same as under the NEPA baseline. Therefore, potential impacts under NEPA would not occur because there would be no net change in recharge capacity conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5a: The No Federal Action Alternative would not result in violation of regulatory water quality standards at an existing production well.

Drinking water is provided to the area by the City of Los Angeles Department of Water and Power. No potable water production wells are located within a 2-mile radius of the site. Groundwater in the vicinity of the site is subject to extensive saltwater intrusion and is not a source of potable water.

CEQA Impact Determination

Because no existing production wells are located in the vicinity of the terminal site under Alternative 2, construction of Phase I, as applied to Alternative 2, did not result in impacts to production wells, and neither would subsequent backlands development. Consequently, no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No existing production wells are located in the vicinity of the Alternative 2 site; therefore, no impacts occurred under NEPA from Phase I construction, as applied to Alternative 2. Under this alternative, no additional development would occur in the in-water terminal area (i.e., no further dredging, dike or fill placement, pile installation, or wharf construction). In addition, backland development under Alternative 2 would be the same as under the NEPA baseline. Therefore, potential impacts under NEPA would not occur because there would be no net change in environmental conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.2.2 Operational Impacts

Soil and Groundwater Quality

Impact GW-1b: Operation of the No Federal Action Alternative would not result in uncovering of toxic substances or other contaminants associated with historical uses of the Port that might result in exposure to operations personnel.

Soil and groundwater in the Berth 97-109 backland areas have been affected by hazardous substances and petroleum products as a result of past industrial uses of the site. Remediation of much of the soil contamination has occurred, but some contamination could remain onsite. Equivalent measures to **MM GW-1** and **MM GW-2** were implemented to remediate contamination encountered during Phase I construction to acceptable levels. In addition, implementation of **MM GW-1** and **MM GW-2** prior to or during construction of additional backlands under Alternative 2 would remediate contamination encountered during Project construction. Following terminal construction, backlands pavement would serve as an impermeable surface layer. Subsequent terminal operations would entail surface activities at the terminal would not include activities that could encounter subsurface contamination.

CEQA Impact Determination

Because no excavations that might encounter contaminated soil/or groundwater would occur as part of backland operations under the No Federal Action Alternative, there would be no health and safety impacts under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Backland development under Alternative 2 would be the same as under the NEPA baseline (117 acres), and terminal operations would not require subsurface excavations that could encounter contamination. Therefore, potential impacts under NEPA would not occur because there would be no net change in environmental conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-2b: Operation of the No Federal Action Alternative would not result in expansion of the area affected by contaminants.

As discussed for Impact **GW-1b**, soil and groundwater in the backland areas of Berths 97-109 have been affected by hazardous substances and petroleum products as a result of past industrial uses of the site. Remediation of much of the soil contamination has occurred, but some contamination could remain onsite.

CEQA Impact Determination

Equivalent measures to **MM GW-1** and **MM GW-2** were implemented during Phase I construction, which remediated contamination encountered during construction to acceptable levels. Construction of Phase I and subsequent backlands under would result in an impermeable pavement layer over the terminal site that would prevent percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, operation of Alternative 2 would not result in impacts under CEQA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Equivalent measures to **MM GW-1** and **MM GW-2** were implemented during Phase I construction, which remediated contamination encountered during construction to acceptable levels. Under this alternative, no additional development would occur in the in-water terminal area (i.e., no further dredging, dike or fill placement, pile installation, or wharf construction). Although additional backlands development would occur to in crease backland acreage to 117 acres under Alternative 2, total backland development under Alternative 2 would be the same as under the NEPA baseline. The backlands under both Alternative 2 and the NEPA baseline would form an impermeable pavement layer at the ground surface that prevents percolation of runoff during operations. Therefore, potential impacts under

NEPA would not occur because there would be no net change in environmental conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Potable Water Supplies

Impact GW-3b: Operation of the No Federal Action Alternative would not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power, and the terminal site under Alternative 2 is underlain by saline nonpotable groundwater. Because potable groundwater supplies are not located beneath the terminal site and because backland operations would be confined to surface activities, operation of Alternative 2 would not affect potable water levels. No impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located in the in-water area of the terminal site, operation of Alternative 5 would not impact potable water supplies. In addition, potential impacts under NEPA would not occur because there would be no net change in potable water supply conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4b: Operation of the No Federal Action Alternative would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

Under this alternative, no new site development would occur from terminal operations. Because the Project area is underlain by highly saline, nonpotable groundwater, any changes in groundwater recharge capacity would be inconsequential.

CEQA Impact Determination

Although paving on the terminal site under Alternative 2 would reduce site permeability, the terminal site is not used for groundwater recharge and there is no potable groundwater beneath the site. Therefore, terminal operation and the permanent impermeable surface pavement on the backlands would not affect potable groundwater recharge capacity, and no impacts would occur under CEQA

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Drinking water is provided to the terminal site and surrounding area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located in the vicinity, operation of Alternative 2 would not impact potable water supplies. Although additional backlands development would occur to in crease backland acreage to 117 acres under Alternative 2, total backland development under Alternative 2 would be the same as under the NEPA baseline. The backlands under both Alternative 2 and the NEPA baseline would form an impermeable pavement layer at the ground surface that prevents percolation of runoff during operations. Therefore, potential impacts under NEPA to groundwater recharge would not occur because there would be no net change in groundwater recharge capacity conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5b: Operation of the No Federal Action Alternative would not result in violation of regulatory water quality standards at an existing production well.

Drinking water would continue to be provided to the Project area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the terminal site.

CEQA Impact Determination

Because no existing production wells are located in the vicinity of the terminal site, no impacts under CEQA would occur to production wells from terminal operations under Alternative 2.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No existing production wells are located in the vicinity of the Alternative 5 site; therefore, no impacts would occur under NEPA. In addition, backland development under Alternative 2 would be the same as under the NEPA baseline. Therefore, potential impacts under NEPA would not occur because there would be no net change in water production well conditions between Alternative 2 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.3 Alternative 3 – Reduced Fill: No New Wharf Construction at Berth 102

Alternative 3 would develop a 142-acre container terminal on the Project but with reduced wharf length. Under Alternative 3, only the Berth 100 wharves would be constructed for a total length of 1,575 feet (1,200 feet in Phase I and 375 feet in Phase III). Alternative 3 would construct the two bridges across the Southwest Slip and require the relocation of the Catalina Express Terminal. The container terminal under Alternative 3 would handle approximately 936,000 TEUs annually and accommodate up to 130 annual ship calls.

3.7.4.3.2.3.1 Construction Impacts

Soil and Groundwater Quality

Impact GW-1a: Alternative 3 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.

CEQA Impact Determination

Construction of Alternative 3 could result in significant impacts related to the potential to expose construction workers, existing operations personnel, and future occupants of the site to contaminants and related health hazard risks. Construction of Alternative 3 terminal infrastructure could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in exposure to contaminants and related risks. Such exposure also could occur from the relocation of the Catalina Express Terminal, the southern extension of the wharf at Berth 100, and backland construction on a portion of the existing the Catalina Express Terminal site. Because of this, the potential to encounter contaminated material during construction and expose personnel onsite would be considered a significant impact under CEQA. Potential human health and safety

impacts would be significant pursuant to exposure levels established by the CalEPA OEHHA.

Mitigation Measures

MM GW-1*:* Site Remediation and MM GW-2: Contamination Contingency Plan (as described under the proposed Project) shall be implemented to reduce potential health and safety impacts.

Residual Impacts

Soil and groundwater remediation of known contaminated areas, as outlined in **MM GW-1**, as well as implementation of a contingency plan for potentially encountering unknown soil contamination, as outlined in **MM GW-2,** would reduce health and safety impacts to onsite personnel in backland areas, as well as construction personnel, such that residual impacts would be less than significant under CEQA.

NEPA Impact Determination

Alternative 3 would include new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. In addition, the Alternative 3 would include in-water construction and backlands construction associated with the southern extension of Berth 100 on to the Catalina Express Terminal site, which is suspected of having subsurface contamination, as described above. Because of this, construction of Alternative 3 could potentially expose construction workers to contaminants and related health hazard risks. As a result, the potential to encounter contaminated material during construction would be considered a significant impact under NEPA.

Mitigation Measures

MM GW-1*:* Site Remediation and MM GW-2: Contamination Contingency Plan (as described under the proposed Project) shall be implemented to reduce potential health and safety impacts.

Residual Impacts

Implementation of **MM GW-1 and MM GW-2** would reduce health and safety impacts to construction workers and onsite personnel, such that residual impacts would be less than significant under NEPA.

Impact GW-2a: Alternative 3 construction would not result in expansion of the area affected by contaminants.

As discussed for **Impact GW-1**, soil and groundwater in the Berth 97-109 Project site and the Catalina Express Terminal site have been affected by hazardous substances and petroleum products, as a result of past petroleum terminal and industrial uses. Remediation of much of the soil contamination has occurred, but some contamination could remain onsite.

Construction of Alternative 3 would repave a large portion of the terminal site for backlands (including the Catalina Express Terminal site), which effectively would serve as an impermeable surface barrier above the contamination zone. As a result, following construction, runoff would be conveyed offsite and would not permeate the soil or enter

the groundwater. Consequently, Alternative 3 is not expected to change the rate, direction, or extent of existing soil and/or groundwater contamination.

During construction, if contaminated materials are encountered, they would be remediated as required by **MM GW-1 and MM GW-2**. Potential remediation activities associated with backlands development would result in a reduction, rather than an increase or expansion, of onsite contaminants. Remediation of onsite soil and groundwater contamination encountered during construction would be a beneficial impact.

CEQA Impact Determination

Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils (encountered during construction), as a source of groundwater contamination. In addition, the impermeable surface layer that would be placed over the terminal site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. No significant impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Alternative 3 would include new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. In addition, Alternative 3 would include in-water construction and backlands construction associated with the southern extension of Berth 100 on to the Catalina Express Terminal site, which is suspected of having subsurface contamination, as described above. Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils, as a source of groundwater contamination. Furthermore, the impermeable layer that would be placed over the terminal site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. As a consequence, construction of Alternative 3 would not result in expansion of the existing area affected by contaminants and would not cause significant impacts under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur under NEPA.

Potable Water Supplies

Impact GW-3a: Alternative 3 construction would not result in a change to potable water levels.

CEQA Impact Determination

Because drinking water is provided to the area where Alternative 3 would be located by the City of Los Angeles Department of Water and Power, and because no potable water supplies exist beneath the Project site, construction of Alternative 3 would not result in impacts to potable water levels. No impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 3 would have no impact on potable water supplies. No impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4a: Alternative 3 construction would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

The terminal site under Alternative 3 is not used for groundwater recharge and is underlain by saline nonpotable groundwater. Because the water is nonpotable, the amount of infiltration to the groundwater beneath the site is irrelevant with respect to groundwater recharge capacity. Therefore, any temporary increase or decrease in site permeability at the Project site during construction would be irrelevant and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No rechargeable potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 3 would have no impact on recharge capacity of potable groundwater supplies. No impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5a: Alternative 3 construction would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.1, drinking water is provided to the Alternative 3 area by the City of Los Angeles Department of Water and Power. **Impact GW-5a** would be the same as described for the proposed Project, as no existing production wells are located in the vicinity of the Alternative 3 site. No impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.1, no existing production wells are located in the vicinity of the Alternative 3 site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.3.2 Operational Impacts

Soil and Groundwater Quality

Impact GW-1b: Alternative 3 operations would not result in uncovering toxic substances or other contaminants associated with historical uses of the Port that might result in exposure to operations personnel.

CEQA Impact Determination

Contamination encountered during construction of Alternative 3 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction would also develop the site as backlands with an impermeable pavement layer at the ground surface. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, potential health and safety impacts associated with contaminated soil and groundwater would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Contamination encountered during construction of Alternative 3 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction would also develop the site as backlands with an impermeable pavement layer at the ground surface. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of Alternative 3 operations. Therefore, potential health and safety impacts associated with contaminated soil and groundwater would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-2b: Alternative 3 operations would not result in expansion of the area affected by contaminants.

CEQA Impact Determination

Contamination encountered during construction would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. In addition, only clean soil would be used for backfill. Construction

would also develop the site as backlands with an impermeable layer at the ground surface. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of Alternative 3 operations. Therefore, operation of Alternative 3 would not result in significant impacts under CEQA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Contamination encountered during construction would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. In addition, only clean soil would be used for backfill. Construction would also develop the site as backlands with an impermeable layer at the ground surface. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of Alternative 3 operations. Therefore, operation of Alternative 3 would not result in significant impacts under NEPA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3b: The Alternative 3 operations would not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located beneath the terminal site and because Alternative 3 operations would be confined to surface activities, operation of Alternative 3 would not affect potable water supplies. No impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located in the in-water area of the Project, operation of Alternative 3 would not affect potable water supplies. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4b: Alternative 3 operations would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

Although paving across most of the site would prevent infiltration to groundwater from the Alternative 3 site, the site is not used to recharge a potable groundwater supply and no potable groundwater exists beneath the site. Therefore, terminal operation and the permanent impermeable surface pavement on the backlands could not affect potable groundwater recharge capacity, and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

In-water construction activities would have no impact to groundwater recharge capacity because Alternative 3 area is not used for groundwater recharge and is underlain by highly saline, nonpotable groundwater. No impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5b: Alternative 3 operations would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.2, drinking water is provided to the Alternative 3 area by the City of Los Angeles Department of Water and Power. No existing

production wells are located in the vicinity of Alternative 3 site. Therefore, Alternative 3 would result in no impacts to existing production wells under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.2, no existing production wells are located in the vicinity of the Alternative 3 site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.4 Alternative 4 – Reduced Fill: No South Wharf Extension at Berth

Alternative 4 would develop a 130-acre container terminal on the Project site but with reduced wharf length. Under Alternative 4, wharves at Berth 100 and Berth 102 (no Berth 100 south extension) would be constructed for a total length of 2,125 feet. Alternative 4 would not include the relocation of the Catalina Express Terminal, but would include the two bridges across the Southwest Slip. The container terminal under Alternative 4 would handle approximately 1,392,000 TEUs annually and accommodate up to 208 annual ship calls.

3.7.4.3.2.4.1 Construction Impacts

Soil and Groundwater Quality

Impact GW-1a: Alternative 4 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.

CEQA Impact Determination

Construction of Alternative 4 could result in significant impacts related to the potential to expose construction workers, existing operations personnel, and future occupants of the site to contaminants and related health hazard risks. Construction of Alternative 4 terminal infrastructure could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in exposure to contaminants and related risks. Because of this, the potential to encounter contaminated material during construction and expose personnel onsite would be considered a significant impact. Potential human health and safety impacts would be significant pursuant to exposure levels established by the CalEPA OEHHA and could be a significant impact under CEQA.

Mitigation Measures

MM GW-1: Site Remediation and MM GW-2: Contamination Contingency Plan (as described under the proposed Project) would be implemented to reduce potential health and safety impacts.

Residual Impacts

Soil and groundwater remediation of known contaminated areas, as outlined in **MM GW-1**, as well as implementation of a contingency plan for potentially encountering unknown soil contamination, as outlined in **MM GW-2,** would reduce health and safety impacts to onsite personnel in backland areas, as well as construction personnel, such that residual impacts would be less than significant under CEQA.

NEPA Impact Determination

Alternative 4 would include new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. Construction of Alternative 4 terminal infrastructure could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in exposure to contaminants and related risks. Because of this, construction of Alternative 4 could potentially expose construction workers to contaminants and related health hazard risks. As a result, the potential to encounter contaminated material during construction would be considered a significant impact under NEPA.

Mitigation Measures

MM GW-1 and MM GW-2 would be implemented to address previously unknown contamination encountered during new wharf construction.

Residual Impacts

Implementation of **MM GW-1 and MM GW-2** would reduce health and safety impacts to construction workers and onsite personnel, such that residual impacts would be less than significant.

Impact GW-2a: Alternative 4 construction would not result in expansion of the area affected by contaminants.

CEQA Impact Determination

Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils (encountered during construction), as a source of groundwater contamination. In addition, the impermeable surface pavement layer that would be placed over the terminal site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. No significant impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Alternative 4 would include new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils, as a source of groundwater contamination. Furthermore, the impermeable layer that would be placed over the terminal site under Alternative 4 would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. As a consequence, construction of Alternative 4 would not result in expansion of the existing area affected by contaminants, and no significant impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3a: Alternative 4 construction would not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because no potable water supplies exist beneath the terminal site, construction of the Alternative 4 would result in no impacts to potable water levels. No impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No potable water supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 4 would have no impact on potable water supplies. No impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4a: Alternative 4 construction would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

The terminal site under Alternative 4 is not used for groundwater recharge and is underlain by saline, nonpotable groundwater. Because the water is nonpotable, the amount of infiltration to the groundwater beneath the site is irrelevant with respect to groundwater recharge capacity. Therefore, any temporary increase or decrease in site permeability at the Project site during construction would be irrelevant and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No rechargeable potable groundwater supplies exist in the Inner Harbor. As such, in-water construction activities for Alternative 4 would have no impact on recharge capacity of potable groundwater supplies. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5a: Alternative 4 construction would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.1, drinking water would be provided to Alternative 4 area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the Alternative 4 site, and as for the proposed Project, no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.1, no existing production wells are located in the vicinity of the Alternative 4 site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.4.2 Operational Impacts

Soil and Groundwater Quality

Impact GW-1b: Alternative 4 operations would not result in uncovering of toxic substances or other contaminants associated with historical uses of the Port that might result in exposure to operations personnel.

CEQA Impact Determination

Contamination encountered during construction of Alternative 4 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction would also develop the site as backlands with an impermeable paving layer at the ground surface. In addition, no excavations that could encounter contaminated soil and/or groundwater would be completed as part of terminal operations. Therefore, potential health and safety impacts associated with contaminated soil and groundwater would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

MM GW-1 and **MM GW-2** would remediate contamination encountered during construction to levels acceptable by the applicable lead regulatory agency. Construction would also develop the site as backlands with an impermeable layer at the ground surface. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of Alternative 4 operations. Therefore, potential health and safety impacts associated with contaminated soil and groundwater would be less than significant under NEPA

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Impact GW-2b: Alternative 4 operations would not result in expansion of the area affected by contaminants.

CEQA Impact Determination

Contamination encountered during construction would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. In addition, only clean soil would be used for backfill. Construction would also develop the site as backlands with an impermeable layer at the ground surface. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of Alternative 4 operations. Therefore, operation of Alternative 4 would not result in significant impacts under CEQA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

MM GW-1 and **MM GW-2** would remediate contamination encountered during construction to levels acceptable by the applicable lead regulatory agency. In addition, only clean soil would be used for backfill. Construction would also develop the site as backlands with an impermeable layer at the ground surface. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of Alternative 4 operations. Therefore, operation of Alternative 4 would not result in significant impacts under NEPA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3b: Alternative 4 operations would not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power, and because potable water supplies are not located beneath the terminal site, operation of Alternative 4 would not affect potable water supplies. No impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located in the in-water area of the Project, operation of Alternative 4 would not affect potable water supplies under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4b: Alternative 4 operations would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

Although paving across the Alternative 4 site would prevent infiltration to groundwater below, the site is not used to recharge a potable groundwater supply and no potable groundwater exists beneath the site. Therefore, terminal operation would not affect potable groundwater recharge capacity, and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

In-water construction activities would have no impact to groundwater recharge capacity because Alternative 4 area is not used for groundwater recharge and is underlain by highly saline, nonpotable groundwater. No impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5b: Alternative 4 operations would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.2, drinking water is provided to the Alternative 4 area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of Alternative 4 site. Therefore, Alternative 4 would result in no impacts to existing production wells under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.2, no existing production wells are located in the vicinity of the Alternative 4 site. Therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.5 Alternative 5 – Reduced Construction and Operation: Phase I Construction Only

Under Alternative 5, the Phase I container terminal that was completed in 2003 (as allowed by the ASJ) and that is currently operational would continue to operate. The Phase I construction included 72 acres of backlands, dredging, dike placement, fill, and a new 1,200-foot wharf. Construction impacts under Phase I would apply to this alternative. Alternative 5 would accommodate a total of 630,000 TEUs annually and allow 104 annual ship calls.

3.7.4.3.2.5.1 Construction Impacts

Soil and Groundwater Quality

Impact GW-1a: Alternative 5 construction activities encountered toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.

CEQA Impact Determination

Construction of Phase I encountered contaminated soils during general site construction and the installation of terminal infrastructure. Contaminants encountered included treated timber, contaminated groundwater (with hydrocarbons),

and contaminated soil (hydrocarbons). Because of this, there was a potential for contamination exposure of personnel onsite, which is considered a significant impact.

Mitigation Measures

Equivalent measures to **MM GW-1: Site Remediation and MM GW-2: Contamination Contingency Plan** were implemented during Phase I construction to reduce health and safety impacts. During Phase I construction, extensive soil sampling and groundwater sampling was conducted to profile potential hazardous wastes encountered, to categorize the waste materials, and properly dispose of the wastes. Contaminated groundwater that was dewatered was characterized and either treated and disposed of in the storm drain system under permit from the RWQCB or discharged to the City sewer system under permit from the City Bureau of Sanitation. Documentation of testing, management, and disposal of all hazardous wastes encountered during Phase I construction is contained in the report titled *Environmental Oversight Services Summary Report for Berth 100 Backland and Wharf Development Project* prepared by the Port in 2004 (POLA, 2004). Proper testing, management, and disposal of hazards wastes encountered during Phase I construction kept potential health and safety impacts to below a level of significance.

Residual Impacts

Soil and groundwater remediation contamination encountered during Phase I construction, consistent with **MM GW-1 and MM GW-2**, mitigated potential health and safety impacts such that residual impacts were less than significant.

NEPA Impact Determination

Alternative 5 includes new wharf construction and other in-water construction activities that were not part of the NEPA baseline. Construction of Phase I, encountered existing contaminated wastes and groundwater, as described above, which resulted in the potential for contamination exposure by onsite personnel onsite, and this potential exposure is considered a significant impact under NEPA.

Mitigation Measures

Equivalent measures to **MM GW-1, Site Remediation,** and **MM GW-2, Contamination Contingency Plan,** were implemented during Phase I construction to reduce health and safety impacts, as described above.

Residual Impacts

Implementation of soil and groundwater remediation contamination encountered during Phase I construction, consistent with **MM GW-1** and **MM GW-2**, mitigated potential health and safety impacts such that residual impacts were less than significant.

Impact GW-2a: Alternative 5 construction did not result in expansion of the area affected by contaminants.

CEQA Impact Determination

The soil and groundwater remediation that occurred during Phase I construction resulted in beneficial impacts relative to contaminated groundwater conditions by removing or treating contaminated soils (which served as a source of groundwater

contamination) and contaminated groundwater. In addition, an impermeable surface pavement layer that was placed over the terminal site prevents runoff from percolating through potentially contaminated soil and further contaminating groundwater. Significant impacts did not occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts occurred.

NEPA Impact Determination

Construction of Phase I included new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. Soil remediation activities at the site resulted in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils (which served as a source of groundwater contamination) and contaminated groundwater. Furthermore, the impermeable surface pavement layer that was placed over the terminal site under Phase I prevents runoff from percolating through potentially contaminated soil and further contaminating groundwater. As a consequence, construction of Alternative 5 has not result in expansion of the existing area affected by contaminants, and no significant impacts occurred under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts occurred.

Potable Water Supplies

Impact GW-3a: Alternative 5 construction did not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because no potable water supplies exist beneath the terminal site, construction of the Alternative 5 resulted in no impacts to potable water levels. No impacts occurred under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts occurred.

NEPA Impact Determination

No potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 5 did not have an impact on potable water supplies. No impacts occurred under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts occurred.

Impact GW-4a: Alternative 5 construction did not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

The terminal site under Alternative 5 is not used for groundwater recharge and is underlain by saline, nonpotable groundwater. Because the water is nonpotable, the amount of infiltration to the groundwater beneath the site is irrelevant with respect to groundwater recharge capacity. Therefore, any temporary increase or decrease in site permeability at the Project site that occurred from Alternative 5 construction was irrelevant and no impacts occurred under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts occurred.

NEPA Impact Determination

No rechargeable potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 5 did not have an impact on recharge capacity of potable groundwater supplies. No impacts occurred under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts occurred.

Impact GW-5a: Alternative 5 construction did not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.1, drinking water would be provided to the Alternative 5 area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the Alternative 5 site, and

construction of Phase I, as applied to Alternative 5, did not result in impacts under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts occurred.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.1, no existing production wells are located in the vicinity of the Alternative 5 site; therefore, no impacts occur under NEPA from Phase I construction, as applied to Alternative 5.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts occurred.

3.7.4.3.2.5.2 Operational Impacts

Soil and Groundwater Quality

Impact GW-1b: Alternative 5 operations would not result in uncovering of toxic substances or other contaminants associated with historical uses of the Port that might result in exposure to operations personnel.

CEQA Impact Determination

Equivalent measures to **MM GW-1** and **MM GW-2** were implemented to remediate contamination encountered during Phase I construction to acceptable levels. Construction of backlands included an impermeable pavement layer at the ground surface that prevents percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, health and safety impacts associated with Project operations (related to contaminated soil and groundwater) would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts occurred.

NEPA Impact Determination

Equivalent measures to **MM GW-1** and **MM GW-2** were implemented during Phase I construction, which remediated contamination encountered during

construction to acceptable levels. Construction of backlands included an impermeable pavement layer at the ground surface that prevents percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, health and safety impacts associated with Project operations (related to contaminated soil and groundwater) would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts occurred.

Impact GW-2b: Alternative 5 operations would not result in expansion of the area affected by contaminants.

CEQA Impact Determination

Equivalent measures to **MM GW-1** and **MM GW-2** were implemented during Phase I construction, which remediated contamination encountered during construction to acceptable levels. Construction of backlands included an impermeable pavement layer at the ground surface that prevents percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, operation of Alternative 5 would not result in significant impacts under CEQA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts occurred.

NEPA Impact Determination

Equivalent measures to **MM GW-1** and **MM GW-2** were implemented during Phase I construction, which remediated contamination encountered during construction to acceptable levels. Construction of backlands included an impermeable pavement layer at the ground surface that prevents percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, operation of Alternative 5 would not result in significant impacts under NEPA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts occurred.

Potable Water Supplies

Impact GW-3b: Alternative 5 operations would not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located beneath the terminal site, operation of Alternative 5 would not impact potable water supplies, under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts occurred.

NEPA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located in the in-water area of the Project, operation of Alternative 5 would not impact potable water supplies. No impacts occurred under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts occurred.

Impact GW-4b: Alternative 5 operations would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

Although paving across the site would prevent groundwater infiltration to the groundwater from the Alternative 5 site, the site is not used to recharge a potable groundwater supply, and no potable groundwater exists beneath the site. Therefore, terminal operation could not affect potable groundwater recharge capacity and no significant impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

In-water construction activities would have no impact with respect to potential loss of groundwater recharge because Alternative 5 area is not used for groundwater recharge and is underlain by highly saline, nonpotable groundwater. No impacts under NEPA would occur. Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located in the in-water area of the Project, operation of Alternative 5 would not impact potable water supplies.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5b: Alternative 5 operations would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.2, drinking water is provided to the Alternative 5 area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of Alternative 5 site. Therefore, Alternative 5 would result in no impacts to existing production wells under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.2, no existing production wells are located in the vicinity of the Alternative 5 site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.6 Alternative 6 – Omni Cargo Terminal

This alternative would construct an omni cargo terminal at the Berth 97-109 site, which would entail physical land improvements and wharf construction as required for the proposed Project. Under this alternative, the entire Project site would be developed to meet the needs of an omni terminal. Like the proposed Project, construction of this alternative would involve construction of 142 acres of omni-terminal-specific backlands, 2,500 linear feet of wharf and 2.54 acres of fill into waters of the U.S. The Catalina Express Terminal would be relocated under this alternative. Alternative 6 would

accommodate a total of 506,467 TEUs annually, handle 17,987 autos (annual TEUs), manage 5,159, 570 tons of annual break-bulk commodities, and require 364 annual ship calls.

3.7.4.3.2.6.1 Construction Impacts

Soil and Groundwater Quality

Impact GW-1a: Alternative 6 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.

CEQA Impact Determination

Construction of Alternative 6 could result in significant impacts related to the potential to expose construction workers, existing operations personnel, and future occupants of the site to contaminants and related health hazard risks. Construction of Alternative 6 terminal infrastructure could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in exposure to contaminants and related risks. Such exposure also could occur from the relocation of the Catalina Express Terminal, the southern extension of the wharf at Berth 100, and backland construction on a portion of the existing the Catalina Express Terminal site. Because of this, the potential to encounter contaminated material during construction and expose personnel onsite would be considered a significant impact under CEQA. Potential human health and safety impacts would be significant pursuant to exposure levels established by the CalEPA OEHHA.

Mitigation Measures

MM GW-1: Site Remediation and MM GW-2: Contamination Contingency Plan (as described under the proposed Project) would be implemented to reduce potential health and safety impacts.

Residual Impacts

Soil and groundwater remediation of known contaminated areas, as outlined in **MM GW-1**, as well as implementation of a contingency plan for potentially encountering unknown soil contamination, as outlined in **MM GW-2,** would reduce health and safety impacts to onsite personnel in backland areas, as well as construction personnel, such that residual impacts would be less than significant.

NEPA Impact Determination

Alternative 6 would include new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. In addition, the Alternative 6 would include in-water construction and backlands construction associated with the southern extension of Berth 100 on to the Catalina Express Terminal site, which is suspected of having subsurface contamination, as described above. Based on these site conditions, construction of Alternative 6 could potentially expose construction workers to contaminants and related health hazard risks. As a result, the potential to

encounter contaminated material during construction would be considered a significant impact under NEPA.

Mitigation Measures

MM GW-1 and **MM GW-2** would be implemented to address previously unknown contamination encountered during new wharf construction.

Residual Impacts

Implementation of **MM GW-1** and **MM GW-2** would reduce health and safety impacts to construction workers and onsite personnel, such that residual impacts would be less than significant.

Impact GW-2a: Alternative 6 construction would not result in expansion of the area affected by contaminants.

CEQA Impact Determination

Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils (encountered during construction), as a source of groundwater contamination. In addition, the impermeable pavement layer that would be placed over the terminal site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. No significant impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Alternative 6 would include new wharf construction and other in-water construction activities that would not be part of the NEPA baseline. In addition, Alternative 6 would include in-water construction and backlands construction associated with the southern extension of Berth 100 on to the Catalina Express Terminal site, which is suspected of having subsurface contamination, as described above. Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils, as a source of groundwater contamination. Furthermore, the impermeable pavement layer that would be placed over the terminal site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. As a consequence, construction of Alternative 6 would not result in expansion of the existing area affected by contaminants, and no significant impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3a: Alternative 6 construction would not result in a change to potable water levels.

CEQA Impact Determination

Because drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power, and, since no potable water supplies exist beneath the site, construction of the Alternative 6 would result in no impacts to potable water levels. No impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

No potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 6 would have no impact on potable water supplies. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Impact GW-4a: Alternative 6 construction would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

The terminal site under Alternative 6 is not used for groundwater recharge and is underlain by saline, nonpotable groundwater. Because the water is nonpotable, the amount of infiltration to the groundwater beneath the site is irrelevant with respect to groundwater recharge capacity. Therefore, any temporary increase or decrease in site permeability at the Project site during construction would be irrelevant and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No rechargeable potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 6 would have no impact on recharge capacity of potable groundwater supplies. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5a: Alternative 6 construction would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.1, drinking water is provided to the Alternative 6 area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the Alternative 6 site. **Impact GW-5a** would be the same as for the proposed Project, and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.1, no existing production wells are located in the vicinity of the Alternative 6 site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.6.2 Operational Impacts

Soil and Groundwater Quality

Impact GW-1b: Alternative 6 operations would not result in uncovering toxic substances or other contaminants associated with historical uses of the Port that might result in exposure to operations personnel.

CEQA Impact Determination

Contamination encountered during construction of Alternative 6 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction of backlands with an impermeable layer of pavement at the ground surface that would prevent percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, health and safety impacts associated with contaminated soil and groundwater would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Contamination encountered during construction of Alternative 6 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction of backlands with an impermeable layer of pavement at the ground surface that would prevent percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of Alternative 6 operations. Therefore, health and safety impacts associated with contaminated soil and groundwater would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Impact GW-2b: The Alternative 6 operations would not result in expansion of the area affected by contaminants.

CEQA Impact Determination

Contamination encountered during construction of Alternative 6 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. In addition, only clean soil would be used for backfill.

Construction of backlands with an impermeable layer of pavement at the ground surface that would prevent percolation of runoff during operations. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of Alternative 6 operations. Therefore, operation of Alternative 6 would not result in significant impacts under CEQA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Contamination encountered during construction of Alternative 6 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. In addition, only clean soil would be used for backfill. Construction of backlands with an impermeable layer of pavement at the ground surface that would prevent percolation of runoff during operations. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of Alternative 6 operations. Therefore, operation of Alternative 6 would not result in significant impacts under NEPA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3b: Alternative 6 operations would not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located beneath the terminal site, operation of Alternative 6 would not impact potable water supplies. No impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Drinking water is provided to the area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located in the in-water area of the Project, operation of Alternative 6 would not impact potable water supplies. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4b: The Alternative 6 operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.

CEQA Impact Determination

Although paving across most of the site would prevent groundwater infiltration on the Alternative 6 site, the site is not used to recharge a potable groundwater supply, and no potable groundwater exists beneath the site. Therefore, terminal operation could not affect potable groundwater recharge capacity, and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

In-water construction activities would have no impact to groundwater recharge capacity because Alternative 6 area is not used for groundwater recharge and is underlain by highly saline, nonpotable groundwater. No impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5b: Alternative 6 operations would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.2, drinking water would continue to be provided to the Alternative 6 area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the Alternative 6 site.

Therefore, Alternative 6 would result in no impacts to existing production wells under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.2, no existing production wells are located in the vicinity of the Alternative 6 site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.7 Alternative 7 – Nonshipping Use

Alternative 7 would use the terminal site constructed as part of Phase I for commercial and industrial uses and would increase the backland area to 117 acres. Because of this, the Phase I construction activities are included under Alternative 7 although the in-water Phase I elements would be abandoned.

Alternative 7 would convert the site from shipping and containerized storage to a Regional Center developed with retail, office park, and light industrial uses on 117 acres. The existing A-frame cranes would be removed. The bridge across the Southwest Slip and the 1.3 acres of fill added during Phase I would be abandoned. A public dock would be constructed but would be developed only to anchor docks to support access by small watercraft. The Catalina Express Terminal would not be relocated under this alternative. Alternative 7 includes a CEQA action to increase the site to 117 acres.

3.7.4.3.2.7.1 Construction Impacts

Soil and Groundwater Quality

Impact GW-1a: Alternative 7 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.

CEQA Impact Determination

Construction of Alternative 7 could result in significant impacts related to the potential to expose construction workers, existing operations personnel, and future occupants of the site to contaminants and related health hazard risks. Construction of Alternative 7 developments could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in

exposure to contaminants and related risks. Because of this, the potential to encounter contaminated material during construction and expose personnel onsite would be considered a significant impact under CEQA. Human health and safety impacts would be significant pursuant to exposure levels established by the CalEPA OEHHA.

Mitigation Measures

Equivalent measures to **MM GW-1, Site Remediation,** and **MM GW-2, Contamination Contingency Plan,** were implemented during Phase I construction to reduce health and safety impacts. During Phase I construction, extensive soil sampling and groundwater sampling were conducted to profile potential hazardous wastes encountered, to categorize the waste materials, and properly dispose of the wastes. Contaminated groundwater that was a result of dewatering was characterized and either treated and disposed of in the storm drain system under permit from the RWQCB or was discharged to the City sewer system under permit from the City Bureau of Sanitation. Documentation of testing, management, and disposal of all hazardous wastes encountered during Phase I construction is contained in the report titled *Environmental Oversight Services Summary Report for Berth 100 Backland and Wharf Development Project* prepared by the Port in 2004 (POLA, 2004). Proper testing, management, and disposal of hazards wastes encountered during Phase I construction kept potential health and safety impacts to below a level of significance.

MM GW-1, Site Remediation, and **MM GW-2, Contamination Contingency Plan** (as described under the proposed Project), would be implemented to mitigate impacts related to encountering contamination during subsequent construction.

Residual Impacts

Implementation of **MM GW-1** and **MM GW-2** would reduce health and safety impacts to construction workers and onsite personnel, such that residual impacts would be less than significant.

NEPA Impact Determination

Alternative 2 includes Phase I construction (new wharf construction and other in-water construction activities) that were not part of the NEPA baseline. Construction of Phase I, encountered existing contaminated materials and groundwater, as described above, which resulted in the potential for contamination exposure by onsite personnel, and this potential exposure during Phase I construction is considered a significant impact under NEPA.

Alternative 7 would include in-water construction activities such as dike and fill placement to support the public dock(s) and related improvements. These in-water construction activities would not be part of the NEPA baseline. In addition, construction of Alternative 7 developments could extend beneath the water table (in the saturated zone) and encounter existing contaminated soil or groundwater, which could result in exposure to contaminants and related risks. Therefore, construction of Alternative 7 could potentially expose construction workers to contaminants and related health hazard risks. As a result, the potential to encounter contaminated material during Regional Center construction would be considered a significant impact under NEPA.

Mitigation Measures

Equivalent measures to **MM GW-1, Site Remediation,** and **MM GW-2, Contamination Contingency Plan,** were implemented during Phase I construction to reduce health and safety impacts, as described above.

MM GW-1, Site Remediation, and **MM GW-2, Contamination Contingency Plan** (as described under the proposed Project), shall be implemented to mitigate impacts related to encountering contamination during subsequent construction.

Residual Impacts

Implementation of soil and groundwater remediation contamination encountered during Phase I construction, consistent with **MM GW-1** and **MM GW-2**, mitigated potential health and safety impacts such that residual impacts were less than significant. Implementation of **MM GW-1** and **MM GW-2** during subsequent construction would mitigate potential impacts such that residual impacts would be less than significant.

Impact GW-2a: Alternative 7 construction would potentially result in expansion of the area affected by contaminants.

CEQA Impact Determination

Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils (encountered during construction), as a source of groundwater contamination. In addition, the impermeable pavement layer that would be placed over the site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. No significant impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Alternative 7 would include in-water construction activities such as dike and fill placement associated with Phase I and to support the public dock(s) and related improvements. Although these in-water construction activities would not be part of the NEPA baseline, they would not result in the expansion of contamination, as they would not affect the soil and groundwater contamination beneath the Project site.

Possible soil remediation activities at the site would result in beneficial impacts to contaminated groundwater conditions by removing or treating contaminated soils, as a source of groundwater contamination. Furthermore, the impermeable pavement layer that would be placed over the site would prevent runoff from percolating through potentially contaminated soil and further contaminating groundwater. As a consequence, construction of Alternative 7 would not result in expansion of the existing area affected by contaminants. In addition, site development acreage under Alternative 7 would be the same as under the NEPA baseline (both 117 acres). Potential impacts under NEPA would not occur because there would be no

substantive change in environmental conditions between Alternative 7 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3a: Alternative 7 construction would not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because no potable water supplies exist beneath the Project site, construction of Alternative 7 would not result in impacts to potable water levels. No impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

No potable water supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 7 would have no impact on potable water supplies. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Impact GW-4a: Alternative 7 construction would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

The site under Alternative 7 is not used for groundwater recharge and is underlain by saline, nonpotable groundwater. Because the water is nonpotable, the amount of infiltration to the groundwater beneath the site is irrelevant with respect to groundwater recharge capacity. Therefore, any temporary increase or decrease in site permeability at the Project site during construction would be irrelevant and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

No rechargeable potable groundwater supplies exist in the Inner Harbor, and as such, in-water construction activities for Alternative 7 would have no impact on recharge capacity of potable groundwater supplies. In addition, site development acreage under Alternative 7 would be the same as under the NEPA baseline. No impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5a: Alternative 7 would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.1, drinking water is provided to the Alternative 7 area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the Alternative 7 site. **Impact GW-5a** would be the same as for the proposed Project and no impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.1, no existing production wells are located in the vicinity of the Alternative 7 site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.2.7.2 Operational Impacts

Soil and Groundwater Quality

Impact GW-1b: Alternative 7 operations would not result in uncovering toxic substances or other contaminants associated with historical uses of the Port that might result in exposure to operations personnel.

CEQA Impact Determination

Contamination encountered during construction of Alternative 7 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction would also develop the site as a Regional Center with an impermeable layer at the ground surface. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of terminal operations. Therefore, health and safety impacts associated with contaminated soil and groundwater would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Contamination encountered during construction of Alternative 7 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction of backlands with an impermeable layer of pavement at the ground surface that would prevent percolation of runoff during operations. In addition, no excavations that could encounter contaminated soil and/or groundwater would occur as part of Alternative 7 operations. Therefore, health and safety impacts associated with contaminated soil and groundwater would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-2b: The Alternative 7 operations would not result in expansion of the area affected by contaminants.

CEQA Impact Determination

Contamination encountered during construction of Alternative 7 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. In addition, only clean soil would be used for backfill. Construction would also develop the site as a Regional Center with an impermeable layer at the ground surface. In addition, excavations that could encounter

contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of Alternative 7 operations. Therefore, operation of Alternative 7 would not result in significant impacts under CEQA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

NEPA Impact Determination

Contamination encountered during construction of Alternative 7 would be remediated to levels acceptable by the applicable lead regulatory agency as described in **MM GW-1** and **MM GW-2**. Construction would also develop the site as a Regional Center with an impermeable layer at the ground surface. In addition, excavations that could encounter contaminated soil and/or groundwater, or activities that would reduce the permeability of the surface pavement would not occur as part of Alternative 7 operations. Therefore, operation of Alternative 7 would not result in significant impacts under NEPA related to the expansion of contaminated soil or groundwater at the terminal site.

Mitigation Measures

No mitigation is required.

Residual Impacts

No significant residual impacts would occur.

Potable Water Supplies

Impact GW-3b: Alternative 7 operations would not result in a change to potable water levels.

CEQA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable water supplies are not located beneath the Regional Center site and because Alternative 7 operations would be confined to surface activities, operation of Alternative 7 would not affect potable water supplies, under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

Drinking water is provided to the Project area by the City of Los Angeles Department of Water and Power. Because potable groundwater supplies are not located in the in-water area of the Project, operation of Alternative 7 would not affect potable groundwater supplies, under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-4b: Alternative 7 operations would not result in a demonstrable and sustained reduction in groundwater recharge capacity (for potable water storage).

CEQA Impact Determination

Although paving across most of the Alternative 7 site would prevent infiltration to groundwater below, the site is not used to recharge a potable groundwater supply and no potable groundwater exists beneath the site. Therefore, Regional Center operations and the permanent impermeable surface pavement on the development site could not affect potable groundwater recharge capacity and no significant impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

In-water construction activities would have no impact to groundwater recharge capacity because Alternative 7 area is not used for groundwater recharge and is underlain by highly saline, nonpotable groundwater. No impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

Impact GW-5b: Alternative 7 operations would not result in violation of regulatory water quality standards at an existing production well.

CEQA Impact Determination

As indicated in Section 3.7.4.3.1.2, drinking water would continue to be provided to the Alternative 7 area by the City of Los Angeles Department of Water and Power. No existing production wells are located in the vicinity of the Alternative 7 site. Therefore, Alternative 7 would result in no impacts to existing production wells under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

NEPA Impact Determination

As indicated in Section 3.7.4.3.1.2, no existing production wells are located in the vicinity of the Alternative 7 site; therefore, no impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No residual impacts would occur.

3.7.4.3.3 Summary of Impact Determinations

Table 3.7-2 summarizes the CEQA and NEPA impact determinations of the proposed Project and its alternatives related to Groundwater and Soils, as described in the detailed discussion in Sections 3.7.4.3.1 and 3.7.4.3.2. This table is meant to allow easy comparison between the potential impacts of the 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 Project, unless otherwise noted.

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils				
Proposed Project	**GW-1a:** Proposed Project construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction /operations personnel and/or long-term exposure to future site occupants.	CEQA: Significant impact NEPA: Significant impact	**MM GW-1,** Site Remediation and **MM GW-2,** Contingency Plan **MM GW-1** and **MM GW-2**	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2a: Proposed Project construction would potentially result in expansion of the area affected by contaminants.	CEQA: Less than significant NEPA: Less than significant	Mitigation not required Mitigation not required	CEQA: Less than significant NEPA: Less than significant
	GW-3a: Proposed Project construction would not result in a change to potable water levels	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4a: Proposed Project construction would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5a: Proposed Project Proposed Project construction would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-1b: Proposed Project operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to personnel.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant NEPA: Less than significant
	GW-2b: Proposed Project operations would not result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant NEPA: Less than significant

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Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Proposed Project (continued)	**GW-3b:** Proposed Project operations would not result in a change to potable water levels.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4b: Proposed Project operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5b: Proposed Project would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
Alternative 1 (No Project Alternative)	**GW-1a:** The No Project Alternative includes backland construction, which could encounter contamination, potentially resulting in exposure to construction/operations personnel and/or long-term exposure to future site occupants	CEQA: Significant impact NEPA: Not applicable	**MM GW-1** and **MM GW-2** Mitigation not applicable	CEQA: Less than significant NEPA: Not applicable
	GW-2a: The No Project Alternative would not cause the expansion of contamination areas.	CEQA: Less than significant NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: Less than significant NEPA: Not applicable
	GW-3a: The No Project Alternative would not result in a change to potable water levels	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: No impact NEPA: Not applicable
	GW-4a: The No Project Alternative would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: No impact NEPA: Not applicable
	GW-5a: The No Project Alternative would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: No impact NEPA: Not applicable
	GW-1b: No Project Alternative operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to operations personnel.	CEQA: Less than significant NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: Less than significant NEPA: Not applicable

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 1 (continued)	**GW-2b:** No Project Alternative operations would not result in expansion of the area affected by contaminants.	CEQA: Less than significant NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: Less than significant NEPA: Not applicable
	GW-3b: No Project Alternative operations would not result in a change to potable water levels.	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: No impact NEPA: Not applicable
	GW-4b: No Project Alternative operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: No impact NEPA: Not applicable
	GW-5b: No Project Alternative operations would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not applicable	CEQA: No impact NEPA: Not applicable
Alternative 2 (No Federal Action)	**GW-1a:** The No Federal Action Alternative would not cause toxic substances or other contaminants associated with historical uses of the Port to be encountered, potentially resulting in exposure to construction/operations personnel and/or long-term exposure to future site occupants	CEQA: Significant impact NEPA: Significant impact	**MM GW-1** and **MM GW-2** **MM GW-1** and **MM GW-2**	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2a: The No Federal Action Alternative would not potentially result in expansion of the area affected by contaminants.	CEQA: Less than significant NEPA: Less than significant	Mitigation not required Mitigation not required	CEQA: Less than significant NEPA: Less than significant
	GW-3a: The No Federal Action Alternative would not result in a change to potable water levels	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4a: The No Federal Action Alternative would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5a: The No Federal Action Alternative would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 2 (continued)	**GW-1b:** The No Federal Action Alternative operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to operations personnel.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-2b: The No Federal Action Alternative operations would not result in expansion of the area affected by contaminants.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-3b: The No Federal Action Alternative operations would not result in a change to potable water levels.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	GW-4b: The No Federal Action Alternative operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5b: The No Federal Action Alternative operations would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
Alternative 3 No Wharf at Berth 102	**GW-1a:** Alternative 3 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction /operations personnel and/or long-term exposure to future site occupants.	CEQA: Significant impact NEPA: Significant impact	**MM GW-1** and **MM GW-2** **MM GW-1** and **MM GW-2**	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2a: Alternative 3 construction would potentially result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-3a: Alternative 3 construction would not result in a change to potable water levels	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 3 (continued)	**GW-4a:** Alternative 3 construction would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5a: Alternative 3 construction would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-1b: Alternative 3 operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to operations personnel.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2b: Alternative 3 operations would not result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-3b: Alternative 3 operations would not result in a change to potable water levels.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4b: Alternative 3 operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5b: Alternative 3 operations would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
Alternative 4 No South Extension of Berth 100	**GW-1a:** Alternative 4 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction /operations personnel and/or long-term exposure to future site occupants.	CEQA: Significant impact NEPA: Significant impact	**MM GW-1** and **MM GW-2** **MM GW-1** and **MM GW-2**	CEQA: Less than significant impact NEPA: Less than significant impact

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 4 (continued)	**GW-2a:** Alternative 4 construction would potentially result in expansion of the area affected by contaminants.	CEQA: Less than significant NEPA: Less than significant	Mitigation not required Mitigation not required	CEQA: Less than significant NEPA: Less than significant
	GW-3a: Alternative 4 construction would not result in a change to potable water levels	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4a: Alternative 4 construction would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5a: Alternative 4 construction would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-1b: Alternative 4 operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to operations personnel.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2b: Alternative 4 operations would not result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-3b: Alternative 4 operations would not result in a change to potable water levels.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4b: Alternative 4 operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5b: Alternative 4 operations would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 5 Phase I Operations Only	**GW-1a:** Construction 5 activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction /operations personnel and/or long-term exposure to future site occupants.	CEQA: Significant impact NEPA: Significant impact	**MM GW-1** and **MM GW-2** **MM GW-1** and **MM GW-2**	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2a: Alternative 5 construction would potentially result in expansion of the area affected by contaminants.	CEQA: Less than significant NEPA: Less than significant	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-3a: Alternative 5 construction would not result in a change to potable water levels	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4a: Alternative 5 construction would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5a: Alternative 5 construction would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-1b: Alternative 5 operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to operations personnel.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2b: Alternative 5 operations would not result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-3b: Alternative 5 operations would not result in a change to potable water levels.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 5 (continued)	**GW-4b:** Alternative 5 operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5b: Alternative 5 operations would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
Alternative 6 Omni Terminal	**GW-1a:** Alternative 6 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction /operations personnel and/or long-term exposure to future site occupants.	CEQA: Significant impact NEPA: Significant impact	**MM GW-1** and **MM GW-2** **MM GW-1** and **MM GW-2**	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2a: Alternative 6 construction would potentially result in expansion of the area affected by contaminants.	CEQA: Less than significant NEPA: Less than significant	Mitigation not required Mitigation not required	CEQA: Less than significant NEPA: Less than significant
	GW-3a: Alternative 6 construction would not result in a change to potable water levels	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4a: Alternative 6 construction would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5a: Alternative 6 construction would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-1b: Alternative 6 operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to operations personnel.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 6 (continued)	**GW-2b:** Alternative 6 operations would not result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-3b: Alternative 6 operations would not result in a change to potable water levels.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4b: Alternative 6 operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5b: Alternative 6 operations would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
Alternative 7 Nonshipping	**GW-1a:** Alternative 7 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction /operations personnel and/or long-term exposure to future site occupants.	CEQA: Significant impact NEPA: Significant impact	**MM GW-1** and **MM GW-2** **MM GW-1** and **MM GW-2**	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2a: Alternative 7 construction would potentially result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-3a: Alternative 7 construction would not result in a change to potable water levels	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4a: Alternative 7 construction would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 7 (continued)	**GW-5a:** Alternative 7 construction would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-1a: Alternative 7 construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction /operations personnel and/or long-term exposure to future site occupants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-2a: Alternative 7 construction would potentially result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
	GW-3a: Alternative 7 construction would not result in a change to potable water levels	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4a: Alternative 7 construction would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5a: Alternative 7 construction would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-1b: Alternative 7 operations would not result in uncovering toxic substances or other contaminants associated with historical uses that might result in exposure to operations personnel.	CEQA: Less than significant impact	Mitigation not required	CEQA: Less than significant impact
		NEPA: Less than significant impact	Mitigation not required	NEPA: Less than significant impact
	GW-2b: Alternative 7 operations would not result in expansion of the area affected by contaminants.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact

Table 3.7-2. Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils Associated with the Proposed Project and Alternatives (continued)

Alternative	Environmental Impacts*	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
3.7 Groundwater and Soils (continued)				
Alternative 7 (continued)	**GW-3b:** Alternative 7 operations would not result in a change to potable water levels.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-4b: Alternative 7 operations would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	GW-5b: Alternative 7 operations would not result in violation of regulatory water quality standards at an existing production well.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
Note: *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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3.7.4.4 Mitigation Monitoring

As outlined under the proposed Project construction impacts for groundwater quality, mitigation measures to reduce effects of potentially exposing construction and operations personnel and future recreation users to contaminated soils that may be uncovered during site grading and excavation include: Soil and groundwater remediation of known contaminated areas shall be carried out under **MM GW-1.**

A contingency plan for potentially encountering unknown soil contamination shall be implemented, as outlined in **MM GW-2.**

These measures would contribute to reducing potential health and safety impacts to onsite personnel in backland areas, as well as construction personnel. See Section 3.7.4.3.1.1 for details of these measures.

The mitigation monitoring program outlined below would be applicable for the proposed Project and all alternatives.

Impact GW-1a: Construction activities may encounter toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.	
Mitigation Measures	**GW-1: Site Remediation.** Unless otherwise authorized by the lead regulatory agency for any given site, LAHD shall remediate all encountered contaminated soils or contamination within the excavation zones on the Project site boundaries prior to or during subsurface construction activities. Remediation shall occur in compliance with local, state, and federal regulations, as described in Section 3.7.3, and as directed by the Los Angeles Fire Department, DTSC, and/or RWQCB. Soil remediation shall be completed such that contamination levels in subsurface excavations are below health screening levels established by OEHHA and/or applicable action levels established by the lead regulatory agency with jurisdiction over the site. Only clean soil would be used as backfill. Soil contamination waivers may be acceptable as a result of encapsulation (i.e., paving) in backland areas and/or risk-based soil assessments but would be subject to the discretion of the lead regulatory agency. Excavated contaminated soil shall not be placed in another location onsite; it must be properly disposed of offsite. All imported soil to be used as backfill in excavated areas should be sampled to ensure that the soil is free of contamination. Existing groundwater contamination throughout the proposed Project boundary shall continue to be monitored and remediated as encountered, simultaneous and/or subsequent to site development, and/or in accordance with direction provided by the RWQCB. Unless otherwise authorized by the lead regulatory agency for any given site, areas of excavation with soil contamination that shall be remediated prior to, or in conjunction with, Project construction. **GW-2: Contamination Contingency Plan.** The following contingency plan shall be implemented to address previously unknown contamination during demolition, grading, and construction: a) All trench excavation and filling operations shall be observed for the presence of free petroleum products, chemicals, or contaminated soil. Deeply discolored soil or suspected contaminated soil shall be segregated from light colored soil. In the event unexpected suspected chemically impacted material (soil or water) is encountered during construction, the contractor shall notify the Los Angeles Harbor Department Chief Harbor Engineer, Director of Environmental Management, and Risk Management Industrial Hygienist.

	The Port shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material(s) identified within the boundaries of the construction area. Continued work at a contaminated site shall require the approval of the Chief Harbor Engineer. b) A photoionization detector (or other similar devices) shall be present during grading and excavation of suspected chemically impacted soil. c) Excavation of VOC-contaminated soil will require obtaining and complying with a South Coast Air Quality Management District Rule 1166 permit. d) The remedial options selected shall be dependent upon a number of criteria (including, but not limited to, types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis. Both offsite and onsite remedial options shall be evaluated. e) The extent of removal actions shall be determined on a site-specific basis. At a minimum, the chemically impacted areas within the boundaries of the excavation area shall be remediated to the satisfaction of the lead regulatory agency for the site. The Port Project Manager overseeing removal actions shall inform the contractor when the removal action is complete. f) Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the Chief Harbor Engineer within 30 days of Project completion. g) In the event that contaminated soil is encountered, all onsite personnel handling or working in the vicinity of the contaminated material shall be trained in accordance with OSHA regulations for hazardous waste operations. These regulations are based on CFR 1910.120 (e) and 8 CCR 5192, which states that "general site workers" shall receive a minimum of 40 hours of classroom training and a minimum of three days of field training. This training provides precautions and protective measures to reduce or eliminate hazardous materials/waste hazards at the workplace. h) In cases where potential chemically impacted soil is encountered, a real-time aerosol monitor shall be placed on the prevailing downwind side of the impacted soil area to monitor for airborne particulate emissions during soil excavation and handling activities. i) All excavations shall be filled with structurally suitable fill material that is free from contamination.
Timing	Prior to and concurrent with proposed Project construction.
Methodology	The LAHD shall include MM GW-1 through MM GW-2 in the contract specifications for construction. LAHD shall monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD
Residual Impacts	Less than significant after mitigation.

3.7.5 Significant Unavoidable Impacts

No significant unavoidable impacts on Groundwater or Soils would occur during construction or operation at the Berth 97-109 Container Terminal under the proposed Project or any alternatives.