

# 3.6

## GROUNDWATER AND SOILS



# 3.6

## GROUNDWATER AND SOILS

### 3.6.1 Introduction

This section addresses groundwater and soils, including existing groundwater and soils conditions, applicable regulations, and the potential impacts associated with existing groundwater and soils on sensitive receptors associated with the proposed Project. Additionally, this section discusses the potential impacts on groundwater and soils that would be introduced by the proposed Project that could have an adverse effect on public health and safety. These potential impacts include the exposure of soils containing toxic substances and changes in the rate or direction of movement of existing contaminants associated with construction and operation of the proposed project facilities.

The impact analysis determined that construction and operation of the proposed Project would result in less-than-significant impacts related to the exposure of people to toxic substances and contaminants, including an increase in groundwater contamination. The analysis also concluded that there would be no impacts related to a reduction in potable groundwater recharge capacity or a violation of regulatory water quality standards at an existing production well. No mitigation is required.

### 3.6.2 Environmental Setting

The hazardous materials and site contamination information described in this section is based on the Preliminary Hazardous Materials Assessment, San Pedro Waterfront Project (HMA) prepared by Ninyo & Moore in 2008 for the San Pedro Waterfront Project EIS/EIR, which is herein incorporated by reference. Additionally, a records search was performed for Berth 260 to identify if there is any contamination on site that may be affected by the proposed demolition and grading activities.

#### 3.6.2.1 Groundwater

Four major aquifers—the Silverado, Lynwood, Gage, and Gaspar—are present within the Los Angeles Basin and are used for industrial and municipal water supply outside the harbor area. The two major water-bearing zones that occur within the vicinity of the proposed project site are the Gaspar and Gage aquifers (LAHD and

1 USACE 2007). Both of these aquifers are composed of fine- to medium-grained  
2 sand and silty sand. According to the conceptual phasing plan for remediation of the  
3 Westway site prepared in 2010 (Tetra Tech 2010), the proposed project area is  
4 predominantly underlain by a shallow unconfined aquifer, which is present at a depth  
5 ranging from 3 to 12 feet bgs. Shallow groundwater beneath the site is saline, is not  
6 currently considered potable water, and would not likely be considered a potable or  
7 beneficial water source in the future. Drinking water is provided to the area by the  
8 LADWP.

### 9 **3.6.2.2 Soils**

10 Prior to development of the Los Angeles Harbor, extensive estuarine deposits were  
11 present at the mouth of Bixby Slough, Dominguez Channel, and the Los Angeles  
12 River. The organic tidal muds were dredged extensively and mostly covered with  
13 artificial fill. Underlying the surface soils are subsurface soils consisting of dredged  
14 fill material, underlain by naturally deposited alluvial soils that overlay the Malaga  
15 mudstone of the Miocene Monterey Formation.

16 Dredging and filling operations have modified these native sediments to create  
17 extensive land masses of dredged fill material that support numerous harbor facilities.  
18 The proposed project site is one such land mass that has been created with fill  
19 material. Both the fill and the native sediments overlie older late-Pleistocene age  
20 deposits. These older deposits are exposed in the bluffs that border the westerly side  
21 of the proposed project area and include the San Pedro Sand, comprised primarily of  
22 sand and pebbly gravel, and the San Timms Point Silt, consisting largely of siltstone.

### 23 **3.6.2.3 Overview of Contamination Sources**

24 Historical uses at the proposed project site date back to 1914 when Municipal Pier  
25 No. 1 was constructed. Transit sheds were constructed in 1915 and the Pan  
26 American Petroleum Company Marine Loading Station Facility at Berth 70 and the  
27 Westway Terminal Building were constructed in 1923 in response to the increase in  
28 worldwide commerce and the 1920s oil boom. As such, uses at the proposed project  
29 site and in the vicinity were predominantly heavy industrial uses, such as gas and oil  
30 facilities, garage and repair shops, engine repair, truck and diesel warehouses, ship  
31 yards, foundries, steel shops using marine solvents, machine shop/welding facilities,  
32 above-ground storage tanks (ASTs), and railroad rights-of-way. Chemicals that are  
33 used or would have been used include, but are not limited to, chemical bulk storage,  
34 warehousing, repair shops, engine service, and railroad right-of-way.

35 A 2003 investigation was conducted by LAHD to characterize the subsurface  
36 contamination; this was followed by a 2008 investigation to perform additional  
37 subsurface sampling. Between 1989 and 2007, there have been six reported releases  
38 in Berths 70–71 involving the release of methanol, Neutral 100 Lube Oil, 1,1,1-  
39 trichloroethane (1,1,1-TCA), tetrahydrofuran, tetrachloroethene, and caustic sodium  
40 hydroxide.

1 The subsurface soil, soil vapor, groundwater, and sediment have been impacted by  
2 the historical operations of GATX and Westway. There are several plumes of  
3 petroleum hydrocarbons and VOCs in the subsurface, which have come together over  
4 time. Primary chemicals of concern on site include: tetrachloroethene,  
5 trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, vinyl chloride,  
6 1,4-dioxane, 1,1-dichloroethene, gasoline-range petroleum hydrocarbons, and diesel  
7 range petroleum hydrocarbons. In addition, there are several areas with free phase  
8 product petroleum, light non-aqueous phase product, free-phase chlorinated solvents,  
9 dense-non-aqueous phase product, free-phase chlorinated solvents, and dense-non-  
10 aqueous phase product. The sediment has been impacted by chlorinated solvents.

11 The Westway site and surrounding areas near Berths 70–71 historically included  
12 varied industrial usage, such as chemical bulk storage, warehousing, repair shops,  
13 engine service, and railroad right-of-way. The demolition of the structures and the  
14 remediation of the site was analyzed in the 2009 SPW EIR/EIS. More recently, a  
15 conceptual phasing plan for remediation of the Westway site was prepared in 2010  
16 (Tetra Tech 2010). Future development of the Westway site could begin after  
17 remediation activities are completed. Exact engineering control system(s) would be  
18 determined based on post-remediation sampling and would be dependent on future  
19 building placement on the site. Vapor barrier and/or passive or active vapor control  
20 could be required by the SCAQMD due to the presence of chlorinated solvents.  
21 Also, some areas would require additional monitoring (e.g., sampling); however,  
22 development would be allowed during monitoring periods. Lastly, indoor air  
23 sampling is recommended, including sub slab sampling to determine if any  
24 engineering controls should be implemented prior to long-term usage.

25 The HMA (Ninyo & Moore 2008) evaluated the likelihood that hazardous materials  
26 may be present in soil or groundwater beneath the proposed project site as a result of  
27 existing and former onsite construction and operation activities. The assessment  
28 methodology included review of historical aerial photographs, historical topographic  
29 maps, regulatory database searches, review of previous hazardous material assessments  
30 prepared for the site and nearby surroundings, interviews with onsite operators, and a  
31 site reconnaissance. No active or abandoned oil or gas activities were identified on  
32 or adjacent to the proposed project site. The following sections summarize the  
33 review of historical sources including general photographs, Sanborn Fire Insurance  
34 maps, historical city directories, and topographic maps.

### 35 **3.6.2.3.1 Contaminated Sites Database Review**

36 A total of five known contaminated sites from the FirstSearch™ database reports  
37 within the study area have either a low, moderate, or high potential for soil and  
38 groundwater contamination. No sites were identified within an oil field and no  
39 contaminated sites were identified within Berth 260 or Berths 56–60:

- 40 **1. The Westway Terminal (Berths 70–71).** Berths 70–71 are listed on the  
41 Emergency Response Notification System (ERNS) database with several listings  
42 for unauthorized releases. A release was reported in 2005, when an AST was  
43 overfilled, releasing 638 gallons of tetrahydrofuran into a secondary containment  
44 area. A release of 100 gallons of perchloroethylene was reported in 2004, when a

1 rail car was being unloaded into a storage tank and the storage tank overflowed.  
2 A release of 50 gallons of tetrachoroethylene was reported in 1998 due to a valve  
3 leak on a storage tank.

- 4 **2. Hycane Corporation (2186 Signal Place).** The Hycane Corporation is listed  
5 on the ERNS database and had two listings for a single release discovered in  
6 1994, when a storage tank was overfilled. The facility experienced an  
7 unauthorized release of 3,000 gallons of “oils, fuel, no. 2-D” to the soil. This site  
8 is adjacent to the proposed project site.
- 9 **3. The Pennzoil Company (2220 Signal Street).** The Pennzoil Company is listed  
10 on the ERNS database for an unauthorized release in January 1993 of 15,000  
11 gallons of “neutral based oil – non hazardous,” to the soil as a result of a “valve  
12 cracked on tank.” This site is adjacent to the proposed project site.
- 13 **4. The Former GATX Terminal (Berths 70–71).** The GATX Terminal is listed  
14 on the ERNS database as having a release affecting soil and groundwater in  
15 1995, and free product was found.
- 16 **5. Foss Maritime (Berths 70–71).** Foss Maritime was listed as having a release in  
17 1998 that was contained on a barge.

### 18 **3.6.2.3.2 Historical Information Review Results**

19 Sanborn Maps were compiled by the Sanborn Fire Insurance Company from the late  
20 1800s to the late 1960s for use by all insurance companies in setting fire insurance  
21 rates based on building construction types. Sanborn maps include a wealth of detail  
22 regarding site development features at a specific moment in time. They are  
23 particularly useful because in many cases they predate aerial photographs and  
24 environmental records and often provide the only source of information regarding  
25 site development and use. The results of the Sanborn Fire Insurance Map review are  
26 summarized below.

- 27 ■ **1921–1950.** The proposed project site and immediate surrounding areas  
28 appeared developed with a hospital, warehouses, U.S. Navy barracks and offices,  
29 and lumber companies. Groundwater contamination concerns included the  
30 following activities: engine maintenance and repair shops, carpenter shops,  
31 blacksmith, and printing shops; fuels, chemicals, and metals. Other concerns  
32 include a 50-foot, 30-barrel oil tank: fuels, steel gas and oil tanks; machine  
33 shops; open transformers; auto repair; sheet metal shop; storage tanks; and  
34 incinerator: fuels, lubricants, and metals.
- 35 ■ **1969.** The proposed project site and immediate surrounding areas appeared  
36 developed with loading docks, freight and cargo sheds, general warehouses,  
37 container storage yard, and maintenance shops. Groundwater contamination  
38 concerns included the San Pedro Boat Works (e.g., lead melting, battery shop,  
39 machine shop, paint stock room, and storage). Berths 70–71 show the current  
40 tank farm with the Pennzoil Company, Marine Tank Farm, Hycane Corporation,  
41 and Chemical Bulk Plant. The tank farm includes steel chemical storage tanks,  
42 machine shops, carpenter shops, drum storage, naval fuel depot, transformers,  
43 fuels, lubricants, metals, PCBs, and chemicals.

### 3.6.2.3.3 Historic Aerial Photographs Review Results

Aerial photographs have been collected for the continental United States since the 1920s, with variable coverage and frequency (generally based on an area's importance to national defense). Aerial photographs offer an opportunity for direct observation of the proposed project conditions across a period of time. These observations may include the locations of tank pits, drums, pits, ponds, lagoons, stained/stressed vegetation, or other development features that can indicate potential contaminant sources.

Aerial photographs were reviewed for the following years: 1937, 1952, 1963, 1972, 1985, 1997, and 2004 with subsequent site visits in 2007 and 2011. The photographs varied in scale and clarity, and were taken from various altitudes. The review served to verify information gained from other sources, and in some cases, served as the primary source of information. Data gathered from aerial photography are summarized below and are limited primarily to parcels of potential concern as revealed by regulatory data or site reconnaissance.

- **1937.** Three structures appear in the GATX Annex Terminal. A tank farm appears along Signal Street. Warehouses also appear along Signal Street (currently Westway Terminal).
- **1952.** The GATX Annex Terminal appears similar to that observed in the 1937 photograph. The tanks seen in the 1937 photograph (within the current Westway Terminal) are no longer visible and have been replaced with rectangular storage or warehouse structures.
- **1963.** The GATX Annex Terminal appears similar to that observed in the 1952 photograph. The structure along Signal Street (in the current Westway Terminal) appears similar to the 1952 photograph.
- **1972.** The GATX Annex Terminal appears similar to that observed in the 1963 photograph. The structures along Signal Street (in the current Westway Terminal) appear similar to those observed in the 1963 photograph. Additional tanks appear. Because of the scale and quality of the photographs, it is hard to detect specific features.
- **1985.** The GATX Annex Terminal appears similar to that observed in the 1972 photograph. The structures along Signal Street (in the current Westway Terminal) appear similar to those observed in the 1972 photograph.
- **1997.** The GATX Annex Terminal to the east of Miner Street is now vacant. The tank farm and warehouses along Signal Street (at the Westway Terminal) appear similar to those observed during the site reconnaissance.
- **2004.** The site appears similar to that observed at the time of the 2007 site reconnaissance.

### 3.6.2.3.4 Historic Topographic Maps

Historical topographic maps were reviewed for 1896, 1925, 1951, 1964, 1972, and 1981 (Ninyo & Moore 2008). United States Geological Survey (USGS) 7.5-minute

1 series maps for the San Pedro, Wilmington, and Long Beach vicinity included the  
2 proposed project area. The site is generally flat and has an approximate elevation  
3 ranging from 0 to 10 feet AMSL. Structures were noted in 1951 consistent with  
4 structures noted on the Sanborn maps. From 1964 through 1981, numerous tanks  
5 were noted on Berths 70–71, consistent with those shown on the Sanborn maps and  
6 with what was observed during the site reconnaissance.

### 7 **3.6.2.3.5 Site Interview Results**

8 Ninyo & Moore interviewed LAHD staff and reviewed previous reports regarding the  
9 status of properties of concern. Ninyo & Moore interviewed Chris Foley and Ken  
10 Ragland from the LAHD Environmental Management Division. According to Mr.  
11 Foley, the Westway Terminal is underlain by a plume resulting from the release of  
12 approximately 200,000 gallons of diesel. Both Mr. Foley and Mr. Ragland indicated  
13 that the nearby former GATX Annex Terminal is undergoing ongoing remediation  
14 and groundwater monitoring that is being overseen by the RWQCB.

### 15 **3.6.2.3.6 Site Reconnaissance Results**

16 A site reconnaissance was conducted to provide specific information about the  
17 proposed project area that was not obtainable through environmental records or aerial  
18 photograph review. The inspection included a reconnaissance of the proposed  
19 project area from public rights-of-way. The site reconnaissance involved observation  
20 of several indicators of potential groundwater and soils pollution including, but not  
21 limited to, chemical bulk storage, warehousing, repair shops, engine service, and  
22 railroad right-of-way. Table 3.6-1 provides a summary of the site reconnaissance.

1 **Table 3.6-1. Summary of Site Reconnaissance**

<i>Address/ General Location</i>	<i>Business Name</i>	<i>Site Use</i>	<i>Chemical Storage Areas</i>	<i>Dumped, Burned Material</i>	<i>Hydraulic Equipment (Lifts)</i>	<i>Bermed, Recessed, or Diked Areas</i>	<i>Chemical/Pesticide Mixing Areas</i>	<i>Sumps, Pits, Ponds, Lagoons, Clarifiers</i>	<i>Discharges/Disposal Areas</i>	<i>Groundwater Monitoring Wells or Other Wells</i>	<i>Remediation Equipment/Evidence or Remediation</i>	<i>Discolored or Polluted Water</i>	<i>Storage Tanks (Underground or Aboveground)</i>	<i>Drums</i>	<i>Stressed Vegetation</i>	<i>Discolored/Stained Soils</i>	<i>Degraded/Heavy Stained Pavement</i>
Northeast of the intersection of Signal Place and East 22 <sup>nd</sup> Street (adjacent to the proposed project site)	Mike’s Main Channel Chevron Lubricants	Refueling	Y <sup>a</sup>	N	N	N	N	N	N	U	U	N	Y <sup>1</sup>	U	N	N	Y
Southeast of the intersection of Signal Place and East 22 <sup>nd</sup> Street (adjacent to the proposed project site)	Mike’s Main Channel fueling station	Storage	Y	N	U	N	N	U	N	U	U	N	Y	Y <sup>a</sup>	N	N	N
Berths 70–71	Westway Terminal Company Inc.	Storage	Y	N	U	N	N	U	N	U	U	N	Y	Y <sup>a</sup>	N	N	N

Notes:

Y—Yes

N—No

U—Unknown

Y<sup>a</sup>—Not directly observed, but assumed to be present.

The existence of, for example, tanks or chemical storage areas alone is generally not cause to classify a property as moderate or high with regard to risk. Evidence of a release, such as significant staining, groundwater monitoring wells or remediation equipment, would be cause to classify a property as Moderate or High.

### 3.6.2.3.7 Specific Properties of Concern

Based on the results of historical research, review of the environmental databases, regulatory agency inquiries, and site reconnaissance, properties were evaluated and classified as high, moderate, or low with regard to the potential for detrimental impacts during construction and operation activities for the proposed Project. Specific properties of high or moderate risk are presented in Table 3.6-2. The likelihood of specific areas of the proposed project area being contaminated by hazardous materials was ranked as high, moderate, or low based on the following descriptions:

- **High**—Property with known or probable contamination within the proposed project area. An example of a property in this category would be leaking underground storage tank (UST) facilities where remediation had not been started or was not yet finished.
- **Moderate**—Property with potential or suspected contamination within the proposed project area. Examples of properties in this category would be leaking UST facilities in the final stages of remediation or in post-remediation monitoring. A second example would be a property with known use and storage of hazardous materials that had received violation notices from an inspecting agency or where visual evidence of inadequate chemical and storage practices (such as significant staining) was observed but where no environmental assessments had occurred. Also included in this category are facilities where USTs are likely present and/or facilities that have used significant quantities of hazardous materials but appear to be abandoned by their former operators.
- **Low**—Property that uses or stores hazardous materials but with no significant violations, known releases, or evidence of inadequate chemical handling practices. Example properties would be UST or dry cleaning facilities with no documented releases or where remediation of previous releases had been completed.

Properties categorized as high or moderate risk in the table were evaluated based on the information obtained and the likelihood that hazardous materials that might impact soil and/or groundwater are likely to be disturbed during construction.

**Table 3.6-2.** Identified Specific Properties of Concern within or adjacent to the Proposed Project Site

<i>Property Name/Address</i>	<i>Site Operations – Reason for Risk Class<sup>a</sup></i>	<i>Data Source<sup>b</sup></i>	<i>Risk Class<sup>c</sup></i>
Mike’s Main Channel Chevron Lubricants (adjacent to proposed project site)	TPH, lubricants	R	M
Westway Terminal Berths 70–71/ Signal Street	Chemical storage: TPH, lubricants, VOCs	R, D, H, I	H
Westway Terminal: Mike’s Main Channel fueling station	Chemical storage: TPH	R	M
Westway Terminal: Hycane Corporation, 2186 Signal	Release: oil, fuel, no2-D	R, D, H	H

Place			
Westway Terminal: Pennzoil Company, 2220 Signal Street	Release: oil	R, D, H	H
Westway Terminal: GATX Terminal, Berths 70–71	Release: fuels	R, D, H, I	H
Westway Terminal Foss Maritime, Berths 70–71	Release: unspecified	R, D, H, I	H
Former GATX Annex Terminal Facility (adjacent to proposed project site)	Chemical storage: TPH, metals, VOCs	D, H, I	H
Warehouse No. 12, 260 East 22 <sup>nd</sup> Street	Known contamination: petroleum, SVOCs, TCE, VOCs	D	H
San Pedro Boat Works	TPH, metals, PAHs, VOCs (on-going remediation)	R, D, H, I	M
<p><sup>a</sup> Description of site operations/primary reasons for risk class.</p> <p><sup>b</sup> Indicates primary information sources for listing: R=Reconnaissance, D=Database, H=Historical Documentation, I= Interviews with LAHD staff</p> <p><sup>c</sup> Risk Class: H = high, M = moderate, L = low</p> <p>PAH = polycyclic aromatic hydrocarbons; SVOCs = semi-volatile organic compounds; TCE = trichloroethylene; TPH = total petroleum hydrocarbon</p>			

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## 2 3.6.3 Applicable Regulations

3 Applicable federal, state, and local laws contain lists of hazardous materials or  
4 hazardous substances that may require special handling in accordance with the  
5 regulations if encountered in soil or groundwater during construction of the proposed  
6 Project.

### 7 3.6.3.1 Federal Regulations

#### 8 3.6.3.1.1 Resource Conservation and Recovery Act of 1976 (42 9 USC Sections 6901–6987)

10 The goal of the Resource Conservation and Recovery Act of 1976 (RCRA) is the  
11 protection of human health and the environment, the reduction of waste, the  
12 conservation of energy and natural resources, and the elimination of the generation of  
13 hazardous waste as expeditiously as possible. The Hazardous and Solid Waste  
14 Amendments of 1984 significantly expanded the scope of RCRA by adding new  
15 corrective action requirements, land disposal restrictions, and technical requirements.  
16 The corresponding regulations in 40 CFR 260–299 provide the general framework  
17 for managing hazardous waste, including requirements for entities that generate,  
18 store, transport, treat, and dispose of hazardous waste.

### 3.6.3.1.2 Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)

Proper site characterization and site remediation of hazardous materials is regulated by the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the state Hazardous Substances Account Act (Health and Safety Code Section 25300, et seq.). Additional requirements for hazardous materials are specified under Health and Safety Code Section 25501, hazardous substances under Title 40 of the CFR, Part 116, and priority toxic pollutants under Part 122.

CERCLA, commonly known as Superfund, authorizes EPA to respond to releases, or threatened releases, of hazardous substances that may endanger public health, welfare, or the environment. CERCLA also enables EPA to force parties responsible for environmental contamination to clean it up or to reimburse the Superfund for response or remediation costs incurred by EPA. The Superfund Amendments and Reauthorization Act (SARA) of 1986 revised various sections of CERCLA, extended the taxing authority for the Superfund, and created a free-standing law, SARA Title III, also known as the Emergency Planning and Community Right-to-Know Act (EPCRA).

### 3.6.3.2 State Regulations

#### 3.6.3.2.1 California Code of Regulations, Title 22, Chapter 11, Section 66260 et seq.

CCR Title 22, Chapter 11, Article 2, Section 66261 defines a hazardous material as a substance or combination of substances that, 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 CCR Title 22 (Chapter 11, Article 3), substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous.

Lastly, human health and safety impacts are often reduced by implementing ideas developed by the OEHHA. OEHHA is not a regulatory agency; however, they develop and provide state and local government agencies with toxicological and medical information relevant to decisions involving public health. State agency users of such information include all Boards and departments within the California Environmental Protection Agency (CalEPA), as well as the California Department of Public Health, the Department of Food and Agriculture, the Office of Emergency Services, the CDFG, and the Department of Justice. OEHHA also works with federal agencies, the scientific community, industry, and the general public on issues of environmental as well as public health.

### 3.6.3.2.2 Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5)

CalEPA DTSC is authorized by EPA to enforce and implement federal hazardous materials laws and regulations. Most state hazardous materials regulations are contained in Title 22 of the CCR. DTSC provides cleanup and action levels for subsurface contamination; these levels are equal to, or more restrictive than, federal levels. DTSC acts as the lead agency for some soil and groundwater cleanup projects, and has developed land disposal restrictions and treatment standards for hazardous waste disposal in California.

DTSC is responsible for the enforcement of the Hazardous Waste Control Law, which implements the federal RCRA cradle-to-grave waste management system in California. California hazardous waste regulations can be found in Title 22, Division 4.5, "Environmental Health Standards for the Management of Hazardous Wastes."

### 3.6.3.2.3 Hazardous Material Release Response Plans and Inventory Law (California Health and Safety Code, Chapter 6.6)

This state right-to-know law requires businesses to develop a Hazardous Material Management Plan or a business plan for hazardous materials emergencies if they handle more than 500 pounds, 55 gallons, or 200 cubic feet of hazardous materials. In addition, the business plan would include an inventory of all hazardous materials stored or handled at the facility above these thresholds. This law is designed to reduce the occurrence and severity of hazardous materials releases. The Hazardous Materials Management Plan or business plan must be submitted to the Certified Unified Program Agency (CUPA), which, in this case, is LACFD. In 1997, the Health Hazardous Materials Division (HHMD) within the LACFD became a CUPA to administer the following programs within Los Angeles County: the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the California Accidental Release Prevention Program (Cal-ARP), the Aboveground Storage Tank Program, and the Underground Storage Tank Program. The state has integrated the federal EPCRA reporting requirements into this law; once a facility is in compliance with the local administering agency requirements, submittals to other agencies are not required.

### 3.6.3.2.4 Porter-Cologne Water Quality Control Act

Sites that have contaminated groundwater fall within the jurisdiction of the Los Angeles 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

1 Code Section 13260. Additional restrictions may be imposed upon discharges to  
2 water bodies that are listed as impaired under Section 303(d) of the CWA, including  
3 San Pedro Bay.

### 4 **3.6.3.3 Local Regulations**

5 In addition to the State and Federal definitions, hazardous materials are frequently  
6 defined under local hazardous materials ordinances, such as the Uniform Fire Code.  
7 Depending on the type and degree of contamination that is present in soil and  
8 groundwater, any of several governmental agencies may have jurisdiction over a  
9 proposed project site. Generally, the agency with the most direct statutory authority  
10 over the affected media is designated as the lead agency for purposes of overseeing  
11 any necessary investigation or remediation. Typically, sites that are nominally  
12 contaminated with hazardous materials remain within the jurisdiction of local  
13 hazardous materials agencies, such as LACFD, which is the local CUPA as  
14 mentioned above.

## 15 **3.6.4 Impact Analysis**

### 16 **3.6.4.1 Methodology**

17 The existing conditions, potential impacts, and mitigation measures related to  
18 contaminated sites described in this Draft EIR are based on the HMA (Ninyo &  
19 Moore 2008) and updated records searches performed in June 2011 for the entire  
20 proposed project site including Berth 260.

#### 21 **3.6.4.1.1 Analytical Framework**

22 Groundwater and onshore soils impacts have been evaluated with respect to several  
23 general parameters, including groundwater quality, groundwater quantity, and soil  
24 contaminants. The impact of the proposed Project on each of these parameters has  
25 been evaluated with respect to the significance criteria listed below. The assessment  
26 of impacts is also based on regulatory controls and on the assumptions that the  
27 proposed Project would include the following:

- 28 ■ An individual NPDES permit for stormwater discharges or coverage under the  
29 General Construction Activity Storm Water Permit would be obtained for the  
30 proposed Project.
- 31 ■ All contaminated soil and groundwater occurring as a result of oil spills related to  
32 the proposed Project would be remediated, in accordance with LAHD lease  
33 conditions and all federal, state, and local regulations.

34 Potential impacts on surface water, off-shore sediments, and marine water quality are  
35 addressed in Section 3.13, "Water Quality, Sediments, and Oceanography."

## 3.6.4.2 Thresholds of Significance

Significance criteria used in this assessment are based on the *L.A. CEQA Threshold Guide* (City 2006), LAHD criteria, and the scientific judgment of the report preparers. As noted in the IS/NOP for the proposed Project, the proposed project site is not within 0.25 mile of an existing or planned school, and, as such, potential impacts on schools are not included in the following groundwater and soils analysis. The effects on groundwater and soils resources are considered to be significant if the proposed Project would result in any of the following:

**GW-1:** 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.

**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:** Demonstrable and sustained reduction in potable groundwater recharge capacity or 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:** Violation of regulatory water quality standards at an existing production well, as defined in CCR, Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act.

Note that GW-1 above considers the following questions contained in Appendix G of the CEQA Guidelines as they relate to groundwater and soil contamination. These questions include whether the proposed Project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; or
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

### 3.6.4.3 Impacts and Mitigation

#### 3.6.4.3.1 Construction Impacts

**Impact GW-1a: Construction of the proposed Project would not 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.**

As noted in Table 3.6-2, soil and groundwater at Berths 70–71 have been impacted by hazardous substances and petroleum products from spills and accidents associated with industrial land uses and, consequently, the potential for toxic substances encounters exists at the proposed project site. Contaminated areas are in various stages of contaminant site characterization and remediation, as described in Section 3.6.2 above. As noted in the Environmental Setting, the demolition of the structures on the Westway Terminal site and the follow up remediation of the groundwater and soils at the site was analyzed under the 2009 SPW EIR/EIS. Moreover, a conceptual phasing plan for the Westway site was prepared in 2010 to address soil and groundwater remediation (Tetra Tech 2010). Future development of the Westway site could safely begin after remediation activities are completed. No other areas of the site were identified with recognized areas of environmental concern that would expose people to contamination.

The proposed Project would occur within two phases, with Phase I occurring between 2012 and 2016 and Phase II between 2013 and 2024. Construction would not involve the routine transport, use, or disposal of hazardous materials. The small amounts of petroleum, fuels, lubricants, paints and other common hazardous materials used in construction would not involve quantities that would result in harm to construction workers or other visitors to the area. The use and handling of these materials is regulated by the local City of Los Angeles Fire Department, DTSC, and RWQCB, and would not require any special considerations.

The proposed Project could result in the short-term or long-term exposure of onsite personnel, visitors, or recreational users of the Phase I facilities (e.g., the Learning Center or SCMI Research Facilities at Berths 56–57, respectively) to soils containing toxic substances and to petroleum hydrocarbons that could be disturbed during Phase II construction (e.g., removal of the existing rail line within Signal Street, and excavation for the proposed NOAA building, wave tank building, and opportunity site at Berths 70-71) if proper containment measures are not followed.<sup>1</sup> Compliance with applicable laws would ensure containment measures would be implemented as appropriate.

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<sup>1</sup> Demolition activities within Berth 57 and 260 during Phase I could result in the exposure of toxic substances (e.g., asbestos and lead-based paint) to surrounding areas. This potential impact is addressed in Section 3.7, “Hazards.”

1                   **Impact Determination**

2                   Any contaminated soil or groundwater encountered during construction of the  
3                   proposed Project would be handled, transported, remediated, and/or disposed of in  
4                   accordance with all applicable federal, state, and local laws and regulations and in  
5                   accordance with the regulatory lead agency (e.g., DTSC, Los Angeles RWQCB) and  
6                   LAHD lease measures pertaining to the development of a contamination contingency  
7                   plan. Compliance with these measures would ensure that should contaminated  
8                   materials be encountered on site, personnel on site would not have short-term and/or  
9                   long-term exposure to toxic substances or other contaminants associated with historic  
10                  uses at the proposed project site, and impacts would be less than significant.

11                  **Mitigation Measures**

12                  No mitigation is required.

13                  **Residual Impacts**

14                  Impacts would be less than significant.

15                  **Impact GW-2a: Construction of the proposed Project would  
16                  not result in changes in the rate or direction of movement of  
17                  existing contaminants, expansion of the area affected by  
18                  contaminants, or increased level of groundwater  
19                  contamination, which would increase risk of harm to  
20                  humans.**

21                  As discussed for Impact GW-1a, soil and groundwater in portions of the proposed  
22                  project site have been affected by hazardous substances and petroleum products as a  
23                  result of spills associated with historic industrial land uses; however, future  
24                  development of the Westway site could safely begin after remediation activities are  
25                  completed. Excavation and grading in contaminated soils could result in inadvertent  
26                  spreading of such contamination to areas that were previously unaffected by spills of  
27                  petroleum products or hazardous substances, and demolition activities within Berths  
28                  57 and 260 during Phase I could result in the exposure of toxic substances (e.g.,  
29                  asbestos and lead-based paint) to surrounding areas. However, these impacts would  
30                  be avoided with compliance with existing state laws concerning contaminants and  
31                  groundwater contamination accordance with the regulatory lead agency (e.g., DTSC,  
32                  Los Angeles RWQCB) and LAHD lease measures pertaining to the development of a  
33                  contamination contingency plan.

34                  **Impact Determination**

35                  Compliance with existing rules and regulations would avoid the movement of  
36                  existing contaminants, expansion of the area affected by contaminants, or increased  
37                  level of groundwater contamination, which would increase risk of harm to humans.  
38                  Impacts would be less than significant.

1                   **Mitigation Measures**

2                   No mitigation is required.

3                   **Residual Impacts**

4                   Impacts would be less than significant.

5                   **Impact GW-3a: Construction of the proposed Project would**  
6                   **not result in a demonstrable and sustained reduction in**  
7                   **potable groundwater recharge capacity nor would**  
8                   **construction result in a change in potable water levels.**

9                   Drinking water would continue to be provided to the proposed project area by  
10                  LADWP. Although shallow groundwater may be locally extracted during  
11                  construction dewatering, this perched groundwater is highly saline and non-potable.  
12                  Localized groundwater withdrawal would have no impact on potential underlying  
13                  potable water supplies. Water extracted during construction dewatering would be  
14                  tested and disposed of in accordance with local and state water quality regulations, as  
15                  described in Section 3.13, “Water Quality, Sediments, and Oceanography.”

16                  **Impact Determination**

17                  Because drinking water is provided to the proposed project area by LADWP, no  
18                  impacts would occur under CEQA with respect to changes in potable water levels  
19                  beneath the site.

20                  **Mitigation Measures**

21                  No mitigation is required.

22                  **Residual Impacts**

23                  No impacts would occur.

24                  **Impact GW-4a: Construction of the proposed Project would**  
25                  **not result in a violation of regulatory water quality standards**  
26                  **at an existing production well, as defined in CCR, Title 22,**  
27                  **Division 4, Chapter 15 and in the Safe Drinking Water Act.**

28                  **Impact Determination**

29                  Drinking water is provided to the proposed project area by LADWP. No existing  
30                  production wells are located in the vicinity of the proposed project site as the  
31                  underlying groundwater is not suitable for drinking.

1                   **Mitigation Measures**

2                   No mitigation is required.

3                   **Residual Impacts**

4                   No impacts would occur.

5   **3.6.4.3.2   Operational Impacts**

6                   **Impact GW-1b: Operation of the proposed Project would not**  
7                   **result in exposure of soils containing toxic substances and**  
8                   **petroleum hydrocarbons associated with prior operations,**  
9                   **which would be deleterious to humans based on regulatory**  
10                   **standards established by the lead agency for the site.**

11                   Soil and groundwater in limited portions of the proposed project site have been  
12                   affected by hazardous substances and petroleum products as a result of spills during  
13                   historic industrial land uses. These areas are in various stages of contaminant site  
14                   characterization and remediation, as described above under the discussion of Impact  
15                   GW-1a. Compliance with all applicable federal, state, and local laws and regulations  
16                   and in accordance with the regulatory lead agency (e.g., DTSC, Los Angeles  
17                   RWQCB) and LAHD lease measures pertaining to the development of a  
18                   contamination contingency plan would reduce onsite contamination to levels  
19                   acceptable by the applicable lead regulatory agency prior to proposed project  
20                   operations.

21                   **Impact Determination**

22                   No excavating of potentially contaminated soils would occur during proposed Project  
23                   operation. Furthermore, because soils would have been remediated prior to  
24                   construction activities in accordance with the regulatory lead agency (e.g., DTSC,  
25                   Los Angeles RWQCB) and LAHD lease measures pertaining to the development of a  
26                   contamination contingency plan, no contaminants would be present on-site at the  
27                   point of proposed Project operations. Therefore, impacts during operation would be  
28                   less than significant.

29                   **Mitigation Measures**

30                   No mitigation is required.

31                   **Residual Impacts**

32                   Impacts would be less than significant.

1                   **Impact GW-2b: Operation of the proposed Project would not**  
2                   **result in expansion of the area affected by contaminants.**

3                   As discussed for Impact GW-1b, soil and groundwater in limited portions of the  
4                   proposed project site have been impacted by hazardous substances and petroleum  
5                   products as a result of spills during historic industrial land uses. These areas are in  
6                   various stages of contaminant site characterization and remediation, as described  
7                   above. However, once the proposed Project is operational, soils under portions of the  
8                   proposed project site under development would have been remediated or determined  
9                   not to contain contaminants that would pose a risk to construction workers and future  
10                  site occupants.

11                  **Impact Determination**

12                  No excavating of potentially contaminated soils would occur during proposed Project  
13                  operation. Furthermore, because soils would have been remediated prior to  
14                  construction activities in accordance with the regulatory lead agency (e.g., DTSC,  
15                  Los Angeles RWQCB) and LAHD lease measures pertaining to the development of a  
16                  contamination contingency plan, no contaminants would be present on-site at the  
17                  point of proposed Project operations. Therefore, impacts during operation would be  
18                  less than significant.

19                  **Mitigation Measures**

20                  No mitigation is required.

21                  **Residual Impacts**

22                  Impacts would be less than significant.

23                  **Impact GW-3b: Operation of the proposed Project would not**  
24                  **result in a change to potable water levels.**

25                  Drinking water is provided to the proposed project area by LADWP, which does not  
26                  obtain water from any wells within the proposed project area.

27                  **Impact Determination**

28                  Because drinking water is provided to the proposed project area by LADWP, and not  
29                  from wells within the proposed project area, no impacts would occur with respect to  
30                  changes in potable water levels beneath the proposed project site.

31                  **Mitigation Measures**

32                  No mitigation is required.

1 **Residual Impacts**

2 No impacts would occur.

3 **Impact GW-4b: Operation of the proposed Project would not**  
 4 **result in a violation of regulatory water quality standards at**  
 5 **an existing production well, as defined in CCR, Title 22,**  
 6 **Division 4, Chapter 15 and in the Safe Drinking Water Act.**

7 As discussed under Impact GW-3b, drinking water is provided to the proposed  
 8 project area by LADWP. No existing production wells are located in the vicinity of  
 9 the proposed project site.

10 **Impact Determination**

11 Because no existing production wells are located in the vicinity of the proposed  
 12 project site, no impacts would occur.

13 **Mitigation Measures**

14 No mitigation is required.

15 **Residual Impacts**

16 No impacts would occur.

17 **3.6.4.3.3 Summary of Impact Determinations**

18 Table 3.6-3 summarizes the impact determinations of the proposed Project related to  
 19 groundwater and soils, as described in the detailed discussion in Sections 3.6.4.3.1  
 20 and 3.6.4.3.2. Identified impacts may be based on federal, state, or City and LAHD  
 21 significance criteria.

22 For each type of potential impact, the table describes the impact, notes the impact  
 23 determinations, describes any applicable mitigation measures, and notes the residual  
 24 impacts (i.e., the impact remaining after mitigation). All impacts, whether significant  
 25 or not, are included in this table.

26 **Table 3.6-3.** Summary Matrix of Potential Impacts and Mitigation Measures for Groundwater and Soils  
 27 Associated with the Proposed Project

<i>Environmental Impacts</i>	<i>Significance of Impact before Mitigation</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
<b>3.6 Groundwater and Soils</b>			
<b>Construction</b>			
<b>GW-1a.</b> Construction of the proposed Project would not encounter toxic substances or other contaminants associated with historical uses of	Less than significant	No mitigation is required.	Less than significant

<i>Environmental Impacts</i>	<i>Significance of Impact before Mitigation</i>	<i>Mitigation Measures</i>	<i>Impacts after Mitigation</i>
the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants.			
<b>GW-2a:</b> Construction of the proposed Project would not result in 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.	Less than significant	No mitigation is required.	Less than significant
<b>GW-3a:</b> Construction of the proposed Project would not result in a demonstrable and sustained reduction in potable groundwater recharge capacity nor would construction result in a change in potable water levels.	No impact	No mitigation is required.	No impact
<b>GW-4a:</b> Construction of the proposed Project would not result in a violation of regulatory water quality standards at an existing production well, as defined in CCR, Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act.	No impact	No mitigation is required.	No impact
<b>Operations</b>			
<b>GW-1b:</b> Operation of the proposed Project would not result in 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.	Less than significant	No mitigation is required.	Less than significant
<b>GW-2b:</b> Operation of the proposed Project would not result in expansion of the area affected by contaminants.	Less than significant	No mitigation is required.	Less than significant
<b>GW-3b:</b> Operation of the proposed Project would not result in a change to potable water levels.	No impact	No mitigation is required.	No impact
<b>GW-4b:</b> Operation of the proposed Project would not result in a violation of regulatory water quality standards at an existing production well, as defined in CCR, Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act.	No impact	No mitigation is required.	No impact

1

2 **3.6.4.4 Mitigation Monitoring**

3

No mitigation is required.

1 **3.6.4.5 Significant Unavoidable Impacts**

2 The proposed Project would not result in any significant unavoidable impacts  
3 regarding groundwater and soils. Compliance with applicable laws, regulations, and  
4 the LAHD leasing policy would ensure that contaminated sites would pose no  
5 significant risks to soil, groundwater, worker exposure, or public exposure.

6

