Chapter 10
HAZARDS AND HAZARDOUS MATERIALS

10.1 Introduction

This chapter describes existing conditions and applicable regulations related to hazards and hazardous materials. It analyzes potential impacts associated with existing and introduced hazards and hazardous materials that would result from implementation of program and project elements during construction and operation, and determines the significance of those impacts. This chapter provides an overview of what hazardous materials are; identifies the types of hazardous materials that currently exist at the regional and program setting, and at the project setting; summarizes the regulations that govern the handling, use, and disposal of hazardous materials; and analyzes the program and project impacts, including mitigation measures, to reduce significant impacts where feasible.

For impacts associated with air pollutants, refer to Chapter 5. For impacts associated with hazards and hazardous materials resulting from construction of the riser and diffuser, and existing ocean outfalls, refer to Chapter 13. Assessments regarding hazards and hazardous materials for construction and operation of project elements were conducted for the Clearwater Program by Parsons. The results of these assessments are documented in the feasibility report (Parsons 2011), which are incorporated herein by reference.

As discussed in Section 3.6.1, a Preliminary Screening Analysis (Appendix 1-A) was performed to determine impacts associated with the construction and operation of program and project elements by resource area. During preliminary screening, each element was determined to have no impact, a less than significant impact, or a potentially significant impact. Those elements determined to be potentially significant were further analyzed in the environmental impact report/environmental impact statement (EIR/EIS). The EIR/EIS analysis discloses the final impact determination for those elements deemed potentially significant in the Preliminary Screening Analysis. The location of the impact analysis for each program element is summarized by alternative in Table 10-1.

Table 10-1. Impact Analysis Location of Program Elements by Alternative

	Alternative						Analysis Location	
Program Element	**1**	**2**	**3**	**4**	**5[a]**	**6[b]**	**PSA**	**EIR/EIS**
Conveyance System								
Conveyance Improvements	X	X	X	X	X	N/A	C,O	-
SJCWRP								
Plant Expansion	X	X	X	X	X	N/A	C,O	O
Process Optimization	X	X	X	X	N/A	N/A	C,O	-
WRP Effluent Management	X	X	X	X	X	N/A	O	-
POWRP								
Process Optimization	X	X	X	X	N/A	N/A	C,O	-
WRP Effluent Management	X	X	X	X	X	N/A	O	-

Table 10-1 (Continued)

	Alternative						Analysis Location	
Program Element	**1**	**2**	**3**	**4**	**5[a]**	**6[b]**	**PSA**	**EIR/EIS**
LCWRP								
Process Optimization	X	X	X	X	N/A	N/A	C,O	-
WRP Effluent Management	X	X	X	X	X	N/A	O	-
LBWRP								
Process Optimization	X	X	X	X	N/A	N/A	C,O	-
WRP Effluent Management	X	X	X	X	X	N/A	O	-
WNWRP								
WRP Effluent Management	X	X	X	X	X	N/A	O	-
JWPCP								
Solids Processing	X	X	X	X	X	N/A	C,O	-
Biosolids Management	X	X	X	X	X	N/A	O	-
JWPCP Effluent Management	X	X	X	X	N/A	N/A	Evaluated at the project level. See Table 10-2.	

WRP effluent management and biosolids management do not include construction.
[a] See Section 10.4.7 for a discussion of the No-Project Alternative.
[b] See Section 10.4.8 for a discussion of the No-Federal-Action Alternative.
PSA = Preliminary Screening Analysis
C = construction
O = operation
N/A = not applicable

As discussed in Section 3.2.2, JWPCP effluent management was the one program element carried forward as a project. The location of the hazards and hazardous materials impact analysis for each project element is summarized by alternative in Table 10-2.

Table 10-2. Impact Analysis Location of Project Elements by Alternative

	Alternative						Analysis Location	
Project Element	**1**	**2**	**3**	**4**	**5[a]**	**6[b]**	**PSA**	**EIR/EIS**
Tunnel Alignment								
Wilmington to SP Shelf (onshore)	X				N/A	N/A	C,O	C
Wilmington to SP Shelf (offshore)	X				N/A	N/A	C,O	C
Wilmington to PV Shelf (onshore)		X			N/A	N/A	C,O	C
Wilmington to PV Shelf (offshore)		X			N/A	N/A	C,O	C
Figueroa/Gaffey to PV Shelf (onshore)			X		N/A	N/A	C,O	C
Figueroa/Gaffey to PV Shelf (offshore)			X		N/A	N/A	C,O	C
Figueroa/Western to Royal Palms (onshore)				X	N/A	N/A	C,O	C
Shaft Sites								
JWPCP East	X	X			N/A	N/A	C,O	C
JWPCP West			X	X	N/A	N/A	C,O	C
TraPac	X	X			N/A	N/A	C,O	C
LAXT	X	X			N/A	N/A	C,O	C

Table 10-2 (Continued)

	Alternative						Analysis Location	
Project Element	**1**	**2**	**3**	**4**	**5[a]**	**6[b]**	**PSA**	**EIR/EIS**
Southwest Marine	X	X			N/A	N/A	C,O	C
Angels Gate			X		N/A	N/A	C,O	C
Royal Palms				X	N/A	N/A	C,O	C
Riser/Diffuser Areas								
SP Shelf	X				N/A	N/A	See Chapter 13.	
PV Shelf		X	X		N/A	N/A	See Chapter 13.	
Existing Ocean Outfalls	X	X	X	X	N/A	N/A	See Chapter 13.	

WRP effluent management and biosolids management do not include construction.
[a] See Section 10.4.7 for a discussion of the No-Project Alternative.
[b] See Section 10.4.8 for a discussion of the No-Federal-Action Alternative.
PSA = Preliminary Screening Analysis
C = construction
O = operation
N/A = not applicable

10.2 Environmental Setting

10.2.1 Program Setting

A hazardous material is any substance or material that, because of its physical or chemical characteristics, may pose a real hazard to human health or the environment. Hazardous materials may be classified as toxic, flammable, corrosive, or reactive. The following classifications of hazardous materials may be stored, handled, or transported within the Joint Outfall System (JOS) service area for the purposes of maintaining operating equipment: corrosive materials, explosive materials, oxidizing materials, toxic materials, unstable materials, radioactive materials, and water-reactive materials. Hazardous materials can also be found in contaminated soil or groundwater in the form of petroleum hydrocarbons, volatile organic compounds (VOCs), or chlorinated solvents that have been released into the subsurface from surface spills, leaking underground storage tanks (LUSTs), which can be from a variety of sources unrelated to the JOS facilities. If contaminated groundwater or soil exceeds certain state or federal thresholds, it is considered hazardous and must be treated and disposed of in designated facilities. See Section 10.3 for additional information regarding state and federal regulations.

Conveyance System

The conveyance system transports all wastewater in the JOS service area to the six upstream water reclamation plants (WRPs) and the JWPCP, which treat the wastewater to appropriate levels. Wastewater generated by industrial facilities and processes could contain hazardous materials. All hazardous materials disposed of within the conveyance system are strictly regulated by the Clean Water Act (CWA) under the federal Pretreatment Program, which are regulations governing the input of wastewater from industrial and commercial dischargers based on the authority of the CWA (Section 10.3.1.4). Each industrial discharger within the JOS service area is issued an Industrial Waste Discharge Permit by the Sanitation Districts of Los Angeles County (Sanitation Districts), setting limits for wastewater discharges to the conveyance system. These discharges are regularly monitored and tested, and results are reported to the Sanitation Districts to ensure that industrial facilities are meeting their discharge permit requirements.

San Jose Creek Water Reclamation Plant

The San Jose Creek Water Reclamation Plant (SJCWRP) currently uses chlorine gas, sulfur dioxide, and aqueous ammonia as part of the wastewater treatment process. These chemicals are considered corrosive and represent inhalation, ingestion, and contact hazards. The plant has a hazardous materials inventory (HMI) statement and a consolidated contingency plan, as well as a federal risk management plan (RMP) and a California Accidental Release Prevention Program (CalARP) RMP, to properly manage and control these hazardous materials. See Section 10.3 for the regulatory details and requirements of these plans. The Los Angeles County Fire Department and United States (U.S.) Environmental Protection Agency (EPA) have authority over the management of hazardous materials at the SJCWRP.

The SJCWRP is not identified in any of the California hazardous materials databases, including the California Environmental Protection Agency's (CalEPA) Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Sites (Cortese) List, the DTSC's EnviroStor database of hazardous substances release sites, or the California database of LUSTs provided on the State Water Resources Control Board's (SWRCB) GeoTracker website (see Section 10.3.2.10). Within the vicinity of the SJCWRP, two LUST cases were reported that are unrelated to the Sanitation Districts. These cases have been completed and closed, and would not present a hazard within the SJCWRP property (SWRCB 2009).

10.2.2 Project Setting

Existing conditions related to hazards and hazardous materials associated with project elements discussed in this EIR/EIS are described in the following section. Areas of known contamination within 0.25 mile of the project elements are summarized in Table 10-3. The tunnel alignments are not included in the table because they are located deep below the ground surface; therefore, the risk of contamination is low.

Table 10-3. Known Contamination Sites Within 0.25 Mile of Project Element

Project Element	Listed Pursuant to California Government Code Section 65962.5?[a]	Known Contamination Onsite?	Known Contamination Within 0.25 Mile of Site?
JWPCP East Shaft Site	Yes	Yes	Yes
JWPCP West Shaft Site	No	No	Yes
TraPac Shaft Site	No	No	Yes
LAXT Shaft Site	No	No	Yes
Southwest Marine Shaft Site	No	No	Yes
Angels Gate Shaft Site	No	No	No
Royal Palms Shaft Site	No	No	No

[a] California Government Code Section 65962.5 is discussed in Section 10.3.2.10.
Source: Parsons 2011

10.2.2.1 Tunnel Alignment

Wilmington to San Pedro Shelf Alignment

The Wilmington to San Pedro Shelf (SP Shelf) alignment would extend beneath the city of Carson and the Wilmington community in the city of Los Angeles to a maximum depth of approximately 200 feet below ground surface (bgs). The alignment would pass through the Wilmington Oil Field, which contains numerous active, idle, and abandoned oil wells (DOGGR 1978). The oil producing strata of the oil field is located at depths of approximately 2,500 to 4,000 feet bgs. As a result, the probability of encountering natural oil deposits during tunneling is low. However, methane and hydrogen sulfide (H_2S) may be encountered within the Wilmington Oil Field, particularly around active, idle, or abandoned wells.

The tunnel would extend through several geologic formations, including the Lakewood, San Pedro, Fernando, Malaga Mudstone, and Monterey Formations. The Malaga Mudstone Formation contains naturally formed hydrogen sulfide. The Fernando and Malaga Mudstone Formations contain naturally occurring hydrocarbons (oil, tar, and methane).

The onshore portion of the tunnel alignment would begin at the JWPCP East shaft site and follow Wilmington Boulevard south to the Port of Los Angeles (at the Trans Pacific Container Service Corporation [TraPac] shaft site) at a depth ranging from approximately 100 to 200 feet bgs. Releases of petroleum products have been recorded at numerous facilities adjacent to the onshore tunnel alignment.

The offshore portion of the tunnel alignment would be constructed approximately 100 to 200 feet bgs or below the seafloor, beginning at the TraPac shaft site, extending past the Los Angeles Export Terminal (LAXT) and Southwest Marine shaft sites, and continuing to the riser and diffuser area on the SP Shelf. Releases of petroleum products have been recorded at numerous facilities adjacent to the portion of the offshore tunnel alignment within the Port of Los Angeles.

Wilmington to Palos Verdes Shelf Alignment

The onshore portion of the Wilmington to Palos Verdes Shelf (PV Shelf) alignment would be the same as the onshore portion of the Wilmington to SP Shelf alignment, and the offshore portion of the tunnel alignment would be the same as the offshore portion of the Wilmington to SP Shelf alignment between the TraPac and Southwest Marine shaft sites (see discussion under the Wilmington to SP Shelf alignment). Beginning at the Southwest Marine shaft site, the offshore portion of the tunnel alignment would be constructed approximately 100 to 250 feet bgs or below the seafloor, extending to the riser and diffuser area on the PV Shelf.

Figueroa/Gaffey to Palos Verdes Shelf Alignment

Portions of the onshore Figueroa/Gaffey to PV Shelf alignment would extend through similar geologic formations as the onshore portion of the Wilmington to SP Shelf alignment. The alignment would skirt the southwestern margin of the Wilmington Oil Field; consequently, it would encounter fewer active, idle, or abandoned oil wells than the Wilmington to SP Shelf alignment.

A site listed with regulatory environmental oversight is the Defense Fuel Support Point (DFSP) located at 3171 North Gaffey Street approximately 0.25 mile west of the Figueroa Street alignment. The DFSP stores petroleum fuels in both aboveground and belowground storage tanks. Leakage of petroleum fluids during the operation of the DFSP resulted in significant contamination of both the soil and groundwater. The Los Angeles Regional Water Quality Control Board (RWQCB) oversees the monitoring and remediation of the DFSP site.

There are three documented areas within the DFSP under investigation/remediation for environmental impacts.

- **Administration Area.** Depth to groundwater ranges from 20 to 85 feet bgs. Dissolved fuels (JP-4, JP-5, diesel, and gasoline) and related compounds (benzene, toluene, ethyl benzene, and xylenes [BTEX]) were detected in the administration area wells. Recently, a non-dissolved layer of petroleum hydrocarbons was observed as a thin sheen at multiple wells.
- **Pump House Area.** Depth to groundwater ranges from 5 to 40 feet bgs. Dissolved fuels and related compounds (benzene) were detected in the pump house wells. Free product, ranging from a thin sheen to approximately 3.3 feet thick, was observed at multiple wells.
- **Tank Farm Area.** Depth to groundwater ranges from 18 to 137 feet bgs. Dissolved fuels (JP-5, diesel, and gasoline) and related compounds (BTEX) were detected in the tank farm area

wells. Free product, ranging from a thin sheen to approximately 3.8 feet thick, was observed at multiple wells.

Groundwater is generally found between 4 and 74 feet bgs along the onshore portion of the Figueroa/Gaffey to PV Shelf alignment between the JWPCP West and Angels Gate shaft sites (Parsons 2011). Onshore tunnel depths would range from 70 to 370 feet bgs. Releases of petroleum products have been recorded at numerous facilities adjacent to the onshore portion of the tunnel alignment. Beginning at the Angels Gate shaft site, the offshore portion of the tunnel alignment would be constructed approximately 100 to 250 feet bgs or below the seafloor, extending to the riser and diffuser area on the PV Shelf.

Figueroa/Western to Royal Palms Alignment

Portions of the onshore Figueroa/Western to Royal Palms alignment would extend through similar geologic formations as the onshore portion of the Wilmington to SP Shelf alignment. The alignment would briefly skirt the southwestern margin of the Wilmington Oil Field and may include the southeastern margin of the Torrance Oil Field. Relatively few active, idle, or abandoned oil wells are mapped in the vicinity of the alignment (DOGGR 2003; 2005).

The onshore portion of the tunnel alignment would begin at the JWPCP West shaft site and continue south on Figueroa Street, Gaffey Street, Capitol Drive, and Western Avenue to the Royal Palms shaft site. Groundwater is highly variable along the alignment and generally found approximately 30 feet bgs in the lower Wilmington area and up to approximately 140 feet bgs (or more) in the higher Rolling Hills area. The onshore tunnel depth would range from approximately 70 to 450 feet bgs. The tunnel would tie into the Sanitation Districts' existing manifold structure located at Royal Palms Beach. As with the other potential tunnel alignments, releases of petroleum products have been recorded at numerous facilities adjacent to the tunnel alignment.

10.2.2.2 Shaft Sites

JWPCP East

The JWPCP East shaft site would be located on the former Fletcher Oil and Refining Company (FORCO) site, which has at least five abandoned oil wells (Parsons 2011). The FORCO site is currently under remediation for the removal of VOCs and petroleum products that are affecting the groundwater and soil (Parsons 2011). Groundwater is generally 45 to 65 feet bgs. The JWPCP East shaft site is approximately 0.75 mile east of the I-110 Freeway. Aerially deposited lead (ADL) and asbestos on surface soils at the shaft site are likely due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads.

JWPCP West

The JWPCP West shaft site is generally flat and currently used by the Sanitation Districts as a contractor staging area. The site does not have a history of contamination, and there are no records of contaminated soil or groundwater. There are several oil wells on the property, including at least one that appears to be active (Parsons 2011). The JWPCP West shaft site is located adjacent to the I-110 Freeway. ADL and asbestos on surface soils at the shaft site are likely due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads.

TraPac

There are no records of contamination for the TraPac shaft site; however, the site is located on the TraPac Terminal, which is known to have had past groundwater and soil contamination at various locations throughout its 176 acres (Berths 136–147 Terminal EIS/EIR 2007). Furthermore, there is one open LUST

site and one other cleanup site located upgradient and within the general vicinity of the TraPac shaft site (GeoTracker 2011a). Other cleanup sites are not overseen by the Underground Tank Program or the Well Investigation Program, but require investigation and corrective action under the Site Cleanup Program. This program is not restricted to particular pollutants or environments and includes pollutants such as solvents, petroleum fuels, and heavy metals as well as environments such as surface water and groundwater (LARWQCB 2011). The closest open cleanup site is Dichter Lumber Sales located at 221 Gulf Avenue approximately 300 feet to the east of the TraPac shaft site. The contaminants of concern include petroleum, fuels, and oils. A leak was reported in 1965, and a site assessment commenced in December 1998. No clean-up actions have been reported since the case was opened in 1998 (GeoTracker 2011b). The closest open LUST site is Rocket #5 located at 302 Figueroa Street less than 0.5 mile northwest of the TraPac shaft site. The contaminant of concern is gasoline, which has potentially affected an aquifer used for drinking water supply. However, the downgradient extent of the groundwater plume has not been defined, and the extent of contamination has not been determined (GeoTracker 2011c).

The TraPac shaft site is approximately 0.42 mile east of the I-110 Freeway. ADL and asbestos on surface soils at the shaft site could be present due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads.

LAXT

LAXT was historically used for coal and petroleum coke storage and transport activities, which have the potential to impact local exposed soils. Coal and petroleum coke contain semi-volatile organic compounds (SVOCs), some of which are recognized carcinogens. Surficial impacts on local exposed (unpaved) areas are likely (Parsons 2011). Four sites within 0.25 mile of the LAXT shaft site were identified in the Environmental Data Resources, Inc. (EDR) database (Parsons 2011).[1] The LAXT shaft site is also near railroad tracks that were installed just prior to the operation of LAXT in the late 1990s. Friction between railcar wheels and the tracks has been suspected of resulting in emissions of lead particles, which could be deposited along the tracks. Additional contaminants could include arsenic-containing herbicides, which railroad companies have historically sprayed to control vegetation along the railroad tracks, and creosote, which may be present from the use of creosote-treated railroad ties. (Parsons 2011.)

Southwest Marine

The Southwest Marine shaft site is located within the Southwest Marine shipbuilding complex, which has a history of using hazardous materials. Although this shaft site was not listed in the environmental database search, polychlorinated biphenyls (PCB) and heavy metals contamination is reportedly present in soils at the Southwest Marine ship building complex and Berth 240. The DTSC is preparing a unilateral corrective action order to address site contamination north of the shaft site (Parsons 2011).

Two sites that have the potential to affect groundwater in the immediate vicinity of the shaft site were identified in the EDR database (Parsons 2011). Petroleum-based discharges from LUSTs have been reported at both sites, and the status of each site is closed[2] (Parsons 2011).

Berths 243–245 are located immediately west/southwest of the site. Berths 243–245 are currently slips, formerly used as part of the Southwest Marine shipbuilding facility. The contaminated sediments at

[1] Environmental Database Resource reports search local, state, and federal hazardous materials and hazardous waste databases. The results from all the databases searched are compiled for identified locations, (e.g., the LAXT shaft site), and identified radii surrounding the locations (e.g., 0.25 mile).

[2] A governmental agency (or agencies) overseeing the remediation actions at a release site deem a site is "closed" when actions are no longer necessary at the site, and the site has been remediated to certain regulatory standards.

Berths 243–245 are similar to sediments in the Main Channel (to the west), where the contaminant levels were found to be well below state of California Title 22 Total Threshold Limit Concentrations (Port of Los Angeles 2009). Consequently, these sediments are not considered hazardous wastes under state or federal regulatory standards (Port of Los Angeles 2009).

Angels Gate

The Angels Gate shaft site is surrounded by parkland and is located on the former Fort MacArthur Military Reservation. Review of an installation restoration program Phase I abstract indicates that while nine waste disposal and spills sites were found on the military reservation, no potential for residual contamination and/or contaminant migration was noted (Defense Technical Information Center 1985). No records of soil or groundwater contamination were reported at the Angels Gate shaft site. No historic records of commercial or industrial activities were found. There is no record of contaminated sites within 0.25 mile of the shaft site.

Royal Palms

No records of soil or groundwater contamination were reported at the Royal Palms shaft site. No historic records of commercial or industrial activities were found for the site.

10.3 Regulatory Setting

Hazardous materials regulations applicable to the Clearwater Program are generally designed to limit the risk of upset during their use, transport, handling, storage, and disposal. These regulations are also designed to prevent the accidental release of hazardous materials and ensure the security of the Port of Los Angeles area.

10.3.1 Federal

The EPA is the primary federal agency regulating hazardous wastes and materials. The EPA broadly defines a hazardous waste as one that is specifically listed in EPA regulations, has been tested, and meets one of the four characteristics established by the EPA (toxicity, ignitability, corrosiveness, and reactivity), or that has been declared hazardous by the generator based on its knowledge of the waste. The EPA defines hazardous materials as any item or chemical that can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emptying, discharging, injecting, leaching, dumping, or disposing into the environment. Federal regulations pertaining to hazardous wastes and materials are generally contained in Titles 29, 40, and 49 of the Code of Federal Regulations (CFR), which are discussed herein. The terms hazardous wastes and hazardous materials are used interchangeably in this section.

10.3.1.1 Federal Risk Management Plan

Federal RMPs are required at several of the WRPs due the quantities of chlorine gas, sodium hypochlorite, sulfur dioxide, sodium bisulfite, and/or aqueous ammonia stored, handled, and used, as specified in the federal RMP regulations (40 CFR Part 68) and the federal Occupational Safety and Health Administration's (OSHA) Process Safety Management regulations (29 CFR Part 1910.119). The RMPs include the preparation of an offsite consequence analysis of worst-case release of the stored chemicals, and preparation of emergency response plans, including coordination with local emergency response agencies. The RMPs are required to be updated at least every 5 years and when there are significant changes to the quantities of stored chemicals.

10.3.1.2 Resource Conservation and Recovery Act of 1976 (42 United States Code Sections 6901–6987)

The Resource Conservation and Recovery Act of 1976 (RCRA), including the Hazardous and Solid Waste Amendments of 1984 (HSWA), protects human health and the environment, and imposes regulations on hazardous waste generators, transporters, and operators of treatment, storage, and disposal facilities (TSDFs). The HSWA also requires the EPA to establish a comprehensive regulatory program for underground storage tanks. The corresponding regulations in 40 CFR 260–299 provide the general framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste.

10.3.1.3 Hazardous Materials Transportation Act (49 Code of Federal Regulations 171, Subchapter C)

The U.S. Department of Transportation (USDOT), the Federal Highway Administration, and the Federal Railroad Administration are the three entities that regulate the transport of hazardous materials at the federal level. The Hazardous Materials Transportation Act governs the transportation of hazardous materials. These regulations are promulgated by the USDOT and enforced by the EPA.

10.3.1.4 Clean Water Act and the National Pretreatment Program

The CWA requires the elimination of the discharge of pollutants into the nation's waters. To address indirect discharges from industries to publicly owned treatment works (POTWs), the EPA, through CWA authorities, establishes the National Pretreatment Program and a component of the National Pollution Discharge Elimination System (NPDES) Permitting Program. The National Pretreatment Program requires industrial and commercial discharges to treat or control pollutants in their wastewater prior to discharges to POTWs. (EPA 1999.)

10.3.2 State

10.3.2.1 California Accidental Release Prevention Program

As specified in California Code of Regulations (CCR), Title 19, Division 2, Chapter 4.5, Articles 1 through 11, all businesses that handle specific quantities of hazardous materials are required to prepare a CalARP RMP. The CalARP RMP is the state equivalent of the federal RMP. CalARP RMPs include the preparation of an offsite consequence analysis of worst-case release of the stored chemicals and the preparation of emergency response plans, including coordination with local emergency response agencies. CalARP RMPs are required to be updated at least every 5 years, and when there are significant changes to the stored chemicals.

10.3.2.2 Hazardous Materials Release Response Plans and Inventory Act

The Hazardous Materials Release Response Plans and Inventory Act (also known as the Business Plan Act) requires a business using hazardous materials to prepare a Business Plan describing the facility, inventory, emergency response plans, and training programs. Typically, businesses prepare these plans biennially and submit them to the Los Angeles County Fire Department, Hazardous Materials Division, or local fire departments with regulatory jurisdiction over these plans.

10.3.2.3 Hazardous Waste Control Act

The state equivalent of the RCRA is the Hazardous Waste Control Act (HWCA). The HWCA created the State Hazardous Waste Management Program, which is similar to the RCRA program but generally more stringent. The HWCA establishes requirements for the proper management of hazardous substances and wastes with regard to criteria for (1) identification and classification of hazardous wastes; (2) generation and transportation of hazardous wastes; (3) design and permitting of facilities that recycle, treat, store, and dispose of hazardous wastes; (4) treatment standards; (5) operation of facilities; (6) staff training; (7) closure of facilities; and (8) liability requirements.

10.3.2.4 California Labor Code (Division 5; Parts 1, 6, 7, and 7.5)

The California Labor Code includes a collection of workplace regulations that assure appropriate training on the use and handling of hazardous materials and the operation of equipment and machines that use, store, transport, or dispose of hazardous materials. Division 5, Part 1, Chapter 2.5 ensures that employees in charge of handling hazardous materials are appropriately trained and informed regarding the materials they handle. Division 5, Part 6, governs the operation and care of hazardous material storage tanks and boilers. Division 5, Part 7, ensures employees who work with volatile flammable liquids are outfitted in appropriate safety gear and clothing. Division 5, Part 7.5, otherwise referred to as the California Refinery and Chemical Plant Worker Safety Act of 1990, was enacted to prevent or minimize the consequences of catastrophic releases of toxic, flammable, or explosive chemicals. The establishment of process safety management standards is intended to eliminate, to a substantial degree, the risks of worker exposure in petroleum refineries, chemical plants, and other related manufacturing facilities.

10.3.2.5 California Occupational Safety and Health Program

Under an agreement with OSHA, the state of California operates an occupational safety and health program in accordance with Section 18 of the Occupational Safety and Health Act of 1970. Initial approval of the California State Plan was published on May 1, 1973, and certification for completing all developmental steps was received on August 19, 1977.

The Department of Industrial Relations administers the California Occupational Safety and Health Program, commonly referred to as Cal/OSHA. The Division of Occupational Safety and Health is the principal executor of the plan and oversees enforcement and consultation.

10.3.2.6 California Code of Regulations – Environmental Protection, Solid Waste (27 CCR Division 2)

Title 27, Division 2, of the CCR contains a waste classification system that applies to solid wastes that are considered for disposal at landfill facilities. Additionally, this regulation establishes which types of waste can be disposed of at the various classifications of landfills. The regulation also directs the SWRCB and the DTSC to provide guidance on the acceptability of wastes entering landfills in order to protect underlying waters of the state.

Prior to disposal at a landfill facility, contaminated solids must be properly characterized in accordance with EPA publication SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. Based on the analytical results, material will likely be classified as one of the following:

- Nonhazardous waste
- Non-RCRA hazardous waste (state regulated)

- RCRA hazardous waste (federally regulated)

Each waste classification has unique requirements for assessment, handling, and disposal. Many options exist for the disposal of contaminated soils including treatment, recycling, and disposal at a permitted facility or landfill. Landfills in California accepting contaminated solids are classified as:

- Class I – Accepts wastes classified as RCRA hazardous by the CCR
- Class II – Accepts hazardous waste (RCRA or non-RCRA) designated as having a lower risk, or nonhazardous waste that significantly threatens water quality
- Class III – Accepts nonhazardous waste and inert material

10.3.2.7 Emergency Services Act

Under the California Emergency Services Act, the state developed an emergency response plan to coordinate emergency services provided by all governmental agencies. The plan is administered by the California Office of Emergency Services (OES). The OES coordinates the responses of other agencies, including the EPA, the Federal Emergency Management Agency, the California Highway Patrol, RWQCBs, air quality management districts, and county disaster response offices. Local emergency response teams, including the fire, police, and sheriff's departments, provide most of the services to protect public health.

10.3.2.8 California Environmental Protection Agency

The CalEPA has been granted primary responsibility by the EPA for administering and enforcing hazardous materials management plans within the state of California. The CalEPA defines a hazardous material more generally than the EPA as a 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 (26 CCR 25501). Raw materials and products, such as bulk chemicals, stored and used at typical POTWs can be defined as a hazardous material per CalEPA regulations.

California state regulations governing hazardous materials are as stringent as, or in some cases, more stringent than, federal regulations. State regulations include detailed planning and management requirements to ensure that hazardous materials are properly handled, stored, and disposed of in order to reduce human health risks.

In particular, the state has acted to regulate the transfer and disposal of hazardous waste. Hazardous waste haulers are required to comply with regulations that establish numerous standards, including criteria for handling, documenting, and labeling the shipment of hazardous waste (26 CCR 25160 et seq.). Hazardous waste TSDFs are also highly regulated and must meet standard criteria for processing, containment, and disposal of hazardous materials (26 CCR 25220).

10.3.2.9 California Division of Oil, Gas, and Geothermal Resources

The California Division of Oil, Gas, and Geothermal Resources (DOGGR) regulates the drilling, maintenance, and plugging and abandonment of oil, gas, and geothermal wells in California by CCR Title 14, Division 2, Chapters 2 through 4. The project would be located within the administrative boundaries of the Torrance and Wilmington Oil Fields. Numerous active, idle, and abandoned wells are located within or near project boundaries (DOGGR 2003; 2005). The tunnel alignments presented in this document have been located specifically to minimize interference with active and idle wells. In the unlikely event that an abandoned oil well were encountered at a shaft site or during the tunnel boring, the

well would be re-abandoned in accordance with these regulations and the approval of the local DOGGR office. (DOGGR 2008.)

10.3.2.10 California Government Code Section 65962.5

California Government Code Section 65962 (a)(1) requires that the DTSC compile, update, and submit to the Secretary for Environmental Protection, at least annually, a list of all hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code. This list, commonly referred to as the Cortese List, is a compilation of sites designated by the SWRCB (LUST sites), the Integrated Waste Board (solid waste information system sites [SWF/LS]), and the DTSC (Cal-Sites). The list is no longer updated by the CalEPA. Below are the data resources that provide information regarding the facilities or sites identified as meeting Cortese List requirements:

- List of Hazardous Waste and Substances sites from the DTSC EnviroStor database.
- List of LUST sites by county and fiscal year from the SWRCB GeoTracker database.
- List of solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
- List of active cease and desist orders (CDOs) and cleanup and abatement orders (CAOs) from the SWRCB.[3]
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code identified by the DTSC (CalEPA 2009).

10.3.3 Regional and Local

10.3.3.1 Los Angeles Municipal Code (Fire Protection – Chapter 5, Section 57, Divisions 4 and 5)

Divisions 4 and 5 of Chapter 5, Section 57, of the Los Angeles Municipal Code regulate the construction of buildings and other structures used to store flammable hazardous materials and the storage of these same materials. This ensures that businesses are properly equipped and operate in a safe manner and in accordance with all applicable laws and regulations. Permits required by the code are issued by the Los Angeles Fire Department.

10.3.3.2 Los Angeles Municipal Code (Public Property – Chapter 6, Article 4)

Chapter 6, Article 4, of the Los Angeles Municipal Code regulates the discharge of materials into the sanitary sewer and storm drains. It requires the construction of spill-containment structures to prevent the entry of forbidden materials, such as hazardous materials, into sanitary sewers and storm drains.

10.3.3.3 Sanitation Districts of Los Angeles County Standards

The Sanitation Districts perform numerous construction projects in various locations throughout the JOS service area, and are accustomed to encountering soil and groundwater that could be contaminated.

[3] Note that this list contains many CDOs and CAOs that do not concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, for example, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the SWRCB's database does not distinguish between these types of orders. If there is a question about whether a specific order concerns the discharge of wastes that are hazardous materials, the applicable RWQCB should be contacted.

Therefore, standard best management practices (BMPs) are incorporated into all final design plans to guide the contractors on the proper testing, handling, transport, and disposal of contaminated soil and groundwater during site preparation, excavation, and earthwork. Any material deemed unsuitable during construction is tested and inspected prior to removal.

10.3.3.4 South Coast Air Quality Management District Rule 403

The purpose of Rule 403 (Fugitive Dust) is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made dust sources by requiring actions to prevent, reduce, or mitigate dust emissions. This rule applies to any man-made condition capable of generating dust. General provisions of the rule include the following:

- Visible emissions are prohibited from crossing the site property line [Section (d)(1)(A)].
- At least one best available control measure must be implemented for each source [Section (d)(2)].
- The differential for upwind/downwind particulate matter equal to or less than 10 microns (PM_{10}) is prohibited from exceeding 50 micrograms per cubic meter [Section (d)(3)].

10.3.3.5 South Coast Air Quality Management District Rule 1166

Rule 1166 sets requirements to control the emission of VOCs when excavating, grading, handling, or treating certain contaminated soils. General provisions of the rule include the following:

- Prior to excavation, a mitigation plan approved by the executive officer must be obtained.
- The South Coast Air Quality Management District (SCAQMD) must be notified 24 hours prior to excavation.
- The excavation must be monitored at least once every 15 minutes commencing at the beginning of excavation or grading.
- Additional mitigation measures (e.g., spraying, covering, etc.) must be applied if VOCs exceed levels established by the rule.
- A site-specific plan is needed in the volume of contaminated soil exceeds 2,000 cubic yards.

10.3.4 Other Applicable Guidelines and Practices

10.3.4.1 Screening Guidelines for Contaminated Soil and Groundwater

When potentially contaminated sites are encountered during construction, it is necessary to assess if the chemical concentrations in the soil or groundwater exceed regulatory thresholds. Regional screening levels (RSLs) were developed by the EPA using risk assessment guidance from the EPA Superfund program and can be used for Superfund sites or as a reference for non-Superfund sites. They are risk-based concentrations derived from standardized equations combining exposure information assumptions with EPA toxicity data. RSLs are considered by the EPA to be protective for humans (including sensitive groups) over a lifetime; however, RSLs are not always applicable to a particular site and do not address non-human health endpoints, such as ecological impacts. The RSLs are generic and are calculated without site-specific information. They may be recalculated using site-specific data. RSLs are not clean-up standards. Clean-up standards are based on site-specific information and negotiation with state and local agencies, such as the SWRCB, the DTSC, and the Los Angeles County Fire Department.

The state of California Office of Environmental Health Hazard Assessment, on behalf of CalEPA, has developed screening values for 54 common hazardous substances that are typically found at brownfields sites (former industrial sites that are undeveloped). These screening values are known as California Human Health Screening Levels (CHHSLs). These values, which were developed using standard exposure assumptions and chemical toxicity values published by the EPA and Cal-EPA, serve as reference numbers to help developers and local governments estimate the costs and extent of cleanup of contaminated sites while protecting human health. CHHSLs were developed for soil, soil gas, and indoor air under residential and commercial/industrial exposure conditions.

10.4 Environmental Impacts and Mitigation Measures

10.4.1 Methodology and Assumptions

The potential impacts from program-related releases of hazardous materials into the environment, which could affect public health and safety, are qualitatively evaluated using existing federal, state, regional, and local regulations and policies.

The potential impacts from project-related releases of hazardous materials into the environment, which could affect public health and safety, are qualitatively evaluated based on:

- The potential presence of contaminated soils and groundwater as indicated in the feasibility report (Parsons 2011).
- Existing federal, state, regional, and local regulations and policies governing the assessment, handling, and disposal of contaminated soils and groundwater.

Analysis of risk of upset is based primarily on potential frequencies of occurrence for various events and upset conditions as established by historical data. The climate of the world today has added an additional unknown factor for consideration, i.e., terrorism. There are limited data available to indicate the likelihood of a terrorist attack aimed at utilities in the United States; therefore, the probability component of the hazards risk analysis contains a considerable amount of uncertainty. However, this lack of data does not invalidate the analysis contained herein. Terrorism can be viewed as a potential trigger that could initiate events described in this chapter such as hazardous materials release and/or explosion. The potential impact of those events, once triggered by whatever means, would remain as described herein.

The methodology assumes the majority of the excavated material resulting from site preparation, shaft construction, and tunneling would not be contaminated and, therefore, could be properly disposed of within approximately 50 miles of the shaft site.

The excavated material would be regularly tested in accordance with the methods outlined in EPA publication SW-846, as required by state and federal regulations and as directed by the accepting facility. Class III landfills, which can accept soils deemed to be nonhazardous, and material recyclers (construction-related scrap material) are readily available in the greater Los Angeles area. Class I and II landfills, which can accept soils that are non-RCRA and RCRA hazardous, are present in other nearby counties. For the purposes of this document, it is assumed that all of the contaminated excavated material would be disposed of within approximately 200 miles of the JOS service area.

10.4.1.1 Baseline

CEQA Baseline

The CEQA baseline includes hazardous materials conditions in existence in 2008 for all sites where program and project elements would be constructed.

NEPA No-Federal-Action Baseline

The National Environmental Policy Act (NEPA) no-federal-action baseline for the Clearwater Program is described in Section 1.7.4.2. The NEPA baseline in general represents the condition of resources at the year 2022 when construction of project elements under the U.S. Army Corps of Engineers' (Corps') jurisdiction would conclude.

The NEPA baseline is the hazardous materials conditions in existence in 2008 for all sites where project elements would be constructed as described in this chapter. No reliable information concerning future hazards or hazardous materials are available, and no reliable future projections can be made to this effect. As a result, the NEPA no-federal-action baseline is the same as the CEQA baseline. The NEPA baseline may change if unknown hazards or hazardous conditions are encountered during construction.

Note that the NEPA analysis includes direct and indirect impacts as discussed in Section 3.5.2. Any impact associated with project elements located within the Corps' geographic jurisdiction (i.e., the marine environment) during construction would be the direct result of the Corps permit and considered a direct impact under NEPA. Any impact associated with project elements located outside the Corps' geographic jurisdiction during construction would be the indirect result of the Corps permit and considered an indirect impact under NEPA. Any impact that occurs during operation would be considered an indirect impact under NEPA.

10.4.2 Thresholds of Significance

The program and/or project would pose a significant impact if it exceeds any of the following thresholds for hazards and hazardous materials (HAZ):

HAZ-1. Creates a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

HAZ-2. Is located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, creates a significant hazard to the public or the environment.

HAZ-3. Creates 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.

HAZ-4. Emits hazardous emissions or involves handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

HAZ-5. Results in a substantial spill, release, or explosion of hazardous material(s) due to a terrorist action.

HAZ-6. Exposes people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Program and project elements were analyzed by threshold in the Preliminary Screening Analysis (Appendix 1-A) to identify potentially significant impacts with respect to hazards and hazardous materials before mitigation. Table 10-4 identifies which elements were brought forward for further analysis by threshold in this EIR/EIS for Alternatives 1 through 4. If applicable, Table 10-4 also identifies thresholds evaluated in this EIR/EIS if an emergency discharge into various water courses were to occur under the No-Project or No-Federal Action Alternatives, as described in Sections 3.4.1.5 and 3.4.1.6.

Table 10-4. Thresholds Evaluated

		Threshold					
	Alt.	**HAZ-1**	**HAZ -2**	**HAZ -3**	**HAZ -4**	**HAZ -5**	**HAZ -6**
Program Element							
SJCWRP Plant Expansion	1–5	X		X		X	
Project Element							
Wilmington to SP Shelf (onshore tunnel)[a]	1,2	X		X			
Wilmington to SP Shelf (offshore tunnel)	1	X		X			
Wilmington to PV Shelf (onshore tunnel)[a]	1,2	X		X			
Wilmington to PV Shelf (offshore tunnel)	2	X		X			
Figueroa/Gaffey to PV Shelf (onshore tunnel)	3	X		X			
Figueroa/Gaffey to PV Shelf (offshore tunnel)	3	X		X			
Figueroa/Western to Royal Palms (onshore tunnel)	4	X		X			
JWPCP East Shaft Site	1,2	X	X	X	X		
TraPac Shaft Site	1,2	X		X			
LAXT Shaft Site	1,2	X		X			
Southwest Marine Shaft Site	1,2	X		X			
JWPCP West Shaft Site	3,4	X		X			
Angels Gate Shaft Site	3	X		X			
Royal Palms Shaft Site	4	X		X			

[a] The onshore tunnel alignment for the Wilmington to SP Shelf is the same as the onshore tunnel alignment for the Wilmington to PV Shelf.
Alt. = alternative

For a detailed discussion of impacts associated with hazards and hazardous materials resulting from construction and operation of the riser and diffuser and the existing ocean outfalls, refer to Chapter 13.

In the alternatives analysis that follows, if a program or project element is common to more than one alternative, a detailed discussion is presented only in the first alternative in which it appears.

10.4.3 Alternative 1

10.4.3.1 Program

Impact HAZ-1. Would Alternative 1 (Program) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

San Jose Creek Water Reclamation Plant – Plant Expansion

Operation

Currently, the SJCWRP uses chlorine to disinfect wastewater effluent. Operation of the expansion of the SJCWRP would result in about 35 additional truck deliveries per year of chlorine. Per existing regulations, the CalARP RMP would be updated accordingly after plant expansion to reflect the additional volume of chlorine that would be transported, used, or disposed of. Added transport, use, or disposal of sulfur dioxide and aqueous ammonia would also require implementation of a revised CalARP RMP. As part of revising the CalARP RMP, the Sanitation Districts would evaluate if current containment systems would be adequate for the additional truck deliveries, and make any necessary modification. Impacts would be less than significant.

CEQA Impact Determination

Operation of Alternative 1 (Program) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact HAZ-3. Would Alternative 1 (Program) 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?

San Jose Creek Water Reclamation Plant – Plant Expansion

Operation

Currently, the SJCWRP uses chlorine to disinfect wastewater effluent. Operation of the expansion of the SJCWRP would increase the volume of chlorine used on site by approximately 33 percent. The transportation of the increased volume of chlorine would be required to comply with the Hazardous Materials Transportation Act and would be transported in a safe and controlled manner similar to how the chlorine is currently transported. Furthermore, as discussed in Impact HAZ-1, the CalARP RMP would be updated to reflect the additional volume of chlorine that would be transported, used, or disposed of. The process for revising the CalARP RMP would include the evaluation of security and prevention measures so that operation of the SJCWRP would not result in reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment through the increased use of

chlorine for disinfection. Any recommended upgrades or procedural changes would be implemented prior to receiving additional truck deliveries. Impacts would be less than significant.

CEQA Impact Determination

Operation of Alternative 1 (Program) would not 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. Impacts would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact HAZ-5. Would Alternative 1 (Program) result in a substantial spill, release, or explosion of hazardous material(s) due to a terrorist action?

San Jose Creek Water Reclamation Plant – Plant Expansion

Operation

Currently, the SJCWRP uses chlorine to disinfect wastewater effluent. Operation of the expansion of the SJCWRP would increase the volume of chlorine used on site. When large volumes of hazardous materials are proposed, the risk of terrorism must be considered. The risk of terrorism can be generally defined by the combination of three factors:

- Threat of a terrorist action (which includes the likelihood of action)
- Vulnerability of a particular facility to a terrorist action
- Consequence(s) of a terrorist action

There are limited data available to indicate how likely or unlikely a terrorist action aimed at the utility infrastructure of Southern California or the SJCWRP expansion would be. Therefore, the probability component of a risk analysis of terrorism contains considerable amount of uncertainty. However, the amount of hazardous materials transported, used, and stored at the SJCWRP as compared to other facilities in the region (e.g., oil refineries, bleach manufacturing facilities, fuel depots, etc.) is relatively small. Furthermore, the SJCWRP would not be considered a high-profile infrastructure target, such as a dam, which could result in massive flooding and damage if destroyed, or a power plant, which could result in economic hardship and loss.

The remaining two components related to the risk of terrorism – vulnerability and consequences – could be qualitatively defined and evaluated within the context of a release, spill, or explosion of hazardous materials.

The vulnerability of activities at the SJCWRP can be described within the context of the procedures and policies in place to specifically safeguard the SJCWRP and the employees against an accidental release or spill of the increased amount of chlorine used at the wastewater treatment facility due to a terrorist action. Chlorine and sulfur dioxide are secured in a concrete building with restricted access and mitigation systems designed to handle any releases, and this building is located within a facility with 24-hour staffing, security fencing, and electronic surveillance. Employees with access into the containment building are specifically trained on the hazards associated with handling these chemicals. All employees

working at the SJCWRP have security badges. Transporters of hazardous materials must be licensed and registered with the state government. Given the extent of security systems that are and would be in place, the operation of the expansion of the SJCWRP would not substantially increase or contribute to the vulnerability of a terrorist action on the project site or adjacent land uses.

Similarly, the environmental consequences of a terrorist action, including threat to human health arising from the release, explosion, or spill of hazardous materials, would remain relatively the same for the expansion when compared to existing conditions. First, the expansion would not increase the number of employees at the SJCWRP, so there would be an equal number of people under future conditions that could be exposed to a spill of chlorine as under existing conditions. Second, the expected consequences of a terrorist action can be reduced by certain measures, such as existing hazardous materials regulations and requirements (e.g., CalARP RMP). Furthermore, any hazardous materials at the expansion site would be stored subject to the applicable state and federal laws and in accordance with the Los Angeles County Fire Department; these laws are designed to (1) prevent hazardous materials spills, releases, and explosions; and (2) reduce the consequences of a hazardous material spill, release, or explosion.

Therefore, overall, the operation of the expansion of the SJCWRP would not result in the release of hazardous materials into the environment due to a terrorist action. Impacts would be less than significant.

CEQA Impact Determination

Operation of Alternative 1 (Program) would not result in a substantial spill, release, or explosion of hazardous material(s) due to a terrorist action. Impacts would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

10.4.3.2 Project

Impact HAZ-1. Would Alternative 1 (Project) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Tunnel Alignment – Wilmington to San Pedro Shelf (Onshore)

Construction

CEQA Analysis

The Wilmington to SP Shelf onshore tunnel alignment would extend from the JWPCP East shaft site to the TraPac shaft site. Onshore tunneling activities would generate a large volume of excavated material that could consist of a bentonite slurry, depending on the tunneling method used. A bentonite slurry would itself not be considered hazardous waste because it does not have any of the RCRA hazardous waste characteristics. However, if tunneling advanced through contaminated soil or groundwater, the excavated soil/slurry mix could be considered hazardous, depending on the levels of contamination encountered. If the soil/slurry were deemed hazardous, it would be handled and transported in strict accordance with federal, state, and local requirements to minimize the impact on human health and the environment, as detailed in Section 10.3. Depending on the levels of soil contamination, it is possible that the soil/slurry would be disposed of at a Class III municipal landfill. However, the soil/slurry would be

profiled to determine disposal options that are in compliance with applicable federal and state guidelines and regulations.

During construction, only a few hazardous materials would be located within the onshore tunnel. These hazardous materials would consist primarily of diesel fuel (to power the locomotives used to transport employees and materials), small quantities of lubricants and solvents, and, possibly, the slurry used during tunneling. Slurry has the potential to be considered hazardous only if it comes in contact with contaminated soil and/or groundwater. Slurry would be completely contained within tubing or piping until it exited the tunnel at the shaft site. The tunnel boring machine (TBM) would be electric, and solvents and lubricants would be used during the maintenance of the TBM and support equipment.

Due to the anticipated small quantities of hazardous materials present in the tunnel during construction, and their limited potential to affect human health and the environment, there are no strict regulations related to their use and storage. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Tunnel Alignment – Wilmington to San Pedro Shelf (Offshore)

Construction

CEQA Analysis

The Wilmington to SP Shelf offshore tunnel alignment would extend from the TraPac shaft site, through the LAXT and the Southwest Marine shaft sites, to the SP Shelf. Offshore tunneling activities would be similar to those conducted onshore; however, there would be less likelihood of tunneling through contaminated soil and/or groundwater in the offshore portions of the tunnel than in the onshore portions because there are fewer contaminated sites located along the offshore alignment. In the event that contaminated soil or groundwater were encountered during offshore tunneling operations, the excavated soil/slurry would be handled in the same manner as described for the onshore tunnel alignment.

During construction, only a few hazardous materials would be located within the offshore tunnel itself. Conditions and hazardous materials located within the offshore tunnel would be the same as described for the onshore tunnel alignment.

Due to the anticipated small quantities of hazardous materials used, and their limited potential to affect human health and the environment, there are no strict regulations related to their use and storage. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered direct impacts.

Shaft Site – JWPCP East

Construction

CEQA Analysis

The transport, use, and disposal of hazardous materials during construction of the JWPCP East shaft site would be related to the handling of contaminated soils and groundwater and the use of fuels and lubricants. The JWPCP East shaft site is near Interstate (I-) 110; therefore, ADL and asbestos in surface soils are likely to be present due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads. There are at least five abandoned oil wells in the property, which was previously owned by FORCO. The site is under remediation to remove VOCs and petroleum products from the soil and groundwater. Even with completion of site remediation and issuance of regulatory closure, small pockets of residual soil contamination could be encountered during shaft construction. In the event that contaminated soils are encountered, the assessment, handling, and disposal would be conducted in strict compliance with federal, state, and local regulations (see Section 10.3).

The JWPCP East shaft would be excavated through alluvial deposits, which generally contain shallow, unconfined aquifers and deeper confined units. The shaft would penetrate the unconfined water-bearing zone that could potentially contain contamination related to previous site operations or from operations in the vicinity of the site.

There are several methods proposed for the construction of the shaft (Parsons 2011). Each method would require heavy construction equipment (e.g., crane, excavator, slurry/cement pumps), the operation and maintenance of which would involve the use and handling of hazardous materials, including diesel fuel, gasoline, lubricants, and solvents (Parsons 2011). These hazardous materials would be used and stored within the area designated for shaft and tunnel support and laydown areas. Diesel fuel would be used to power the equipment and would be present in the fuel tanks of the individual pieces of equipment and potentially in larger quantity storage tanks used to refuel the equipment. Additionally, during construction of the shaft and the tunnel, small quantities of lubricants and solvents would be stored in the support area for maintenance of construction equipment. The quantities of hazardous materials could exceed regulatory thresholds and thus require handling and storage in accordance with federal, state, or local regulations. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations.

Excavated material (e.g., soil, slurry, and groundwater) has the potential to be considered hazardous and would be monitored and tested at the shaft site prior to disposal. If excavated material were deemed hazardous, it would be subject to strict federal, state, and local regulations (e.g., permit to operate, NPDES permit). Impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Shaft Site – TraPac

Construction

CEQA Analysis

The transport, use, and disposal of hazardous materials during construction of the TraPac shaft site would be related to the handling of contaminated soils and groundwater and the use of fuels and lubricants. The TraPac shaft site is located about 0.42 mile from the I-110 freeway; therefore, ADL and asbestos in surface soils could be present due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads. The EDR database identified two sites that have the potential to affect groundwater in the immediate vicinity of the TraPac shaft site. Both sites report petroleum-based discharges from LUSTs (Parsons 2011). The TraPac shaft would be excavated through alluvial deposits, which generally contain shallow, unconfined aquifers and deeper confined units. The shaft would penetrate the unconfined water-bearing zone that could potentially contain contamination related to operations in the vicinity of the site.

While there is no evidence of contaminated soil or groundwater beneath the site, it is possible that unidentified/undocumented soil and groundwater contamination exists and could be encountered during shaft construction. Excavated material would be monitored and tested at the shaft site prior to disposal. If contaminated material were encountered and deemed hazardous, it would be subject to strict federal, state, and local regulations (e.g., permit to operate, NPDES permit). Additionally, the use of heavy construction equipment and procedures to minimize the risk of hazardous materials spills would be the same as described for the JWPCP East shaft site. Impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Shaft Site – LAXT

Construction

CEQA Analysis

The routine transport, use, and disposal of hazardous materials during construction of the LAXT shaft site would be related to the handling of contaminated soils and groundwater and the routine use of fuels and lubricants. The LAXT site was formerly used for the storage and export of coal and petroleum coke, and the shaft site appears to be covered with coal or coke dust, which can contain carcinogenic SVOCs (Parsons 2011). The EDR database identified four sites within 0.25 mile of the LAXT shaft site, and there is a potential for groundwater migration. The LAXT shaft would be excavated through alluvial deposits, which generally contain shallow, unconfined aquifers and deeper confined units. The shaft would penetrate the unconfined water-bearing zone that could potentially contain contamination related to previous site operations or from operations in the vicinity of the site.

Excavated material (e.g., soil, slurry, and groundwater) has the potential to be considered hazardous and would be monitored and tested at the shaft site prior to disposal. If excavated material were deemed hazardous, it would be subject to strict federal, state, and local regulations (e.g., permit to operate, NPDES permit). Additionally, the use of heavy construction equipment and procedures to minimize the

risk of hazardous materials spills would be the same as described for the JWPCP East shaft site. Impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Shaft Site – Southwest Marine

Construction

CEQA Analysis

The routine transport, use, and disposal of hazardous materials during construction of the Southwest Marine shaft site would be related to the handling of contaminated soils and groundwater and the routine use of fuels and lubricants. The Southwest Marine shaft site is part of the Southwest Marine ship building complex, which has a history of hazardous materials use. Although this site was not listed in the environmental database search, PCBs and heavy metals contamination is reportedly present in the soils at Berth 240 and the Southwest Marine ship building complex (Parsons 2011). PCBs and heavy metals are relatively insoluble in most soil conditions and thus are not mobile in the soil. Therefore, when released to the soil, the PCBs and heavy metals tend to stay in the upper portion of the soil profile and do not readily dissolve into the groundwater. Given the physical and chemical characteristics of these contaminants and the fact that the shaft would be a vertical structure, large volumes of contaminated soil would not be expected at this shaft site. Furthermore, the soil boring conducted on the shaft site indicated no contamination was present.

The Southwest Marine shaft would be excavated through alluvial deposits, which generally contain shallow, unconfined aquifers and deeper confined units. The shaft would penetrate the unconfined water-bearing zone that could potentially contain contamination related to previous site operations or from operations in the vicinity of the site.

Excavated material (e.g., soil, slurry, and groundwater) has the potential to be considered hazardous and would be monitored and tested at the shaft site prior to disposal. If excavated material were deemed hazardous, it would be subject to strict federal, state, and local regulations (e.g., permit to operate, NPDES permit). Additionally, the use of heavy construction equipment and procedures to minimize the risk of hazardous materials spills would be the same as described for the JWPCP East shaft site. Impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

CEQA Impact Determination

Construction of Alternative 1 (Project) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts under CEQA would be less than significant.

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

NEPA Impact Determination
Construction of Alternative 1 (Project) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

Impact HAZ-2. Would Alternative 1 (Project) be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

Shaft Site – JWPCP East

Construction

CEQA Analysis
The JWPCP East shaft site would be located on the former FORCO property, which is under remediation to remove VOCs and petroleum products that are affecting the groundwater and soil (Parsons 2011). The FORCO site is on the Cortese list, and residual contaminated soil and groundwater associated with the FORCO site has the potential to create a hazard during shaft construction. The Brea Canyon Oil Company spill, which occurred adjacent to the site, is also on the Cortese list. Pre-construction assessment would be conducted at the shaft site to determine if residual contaminant concentrations are above RSL or CHHSL thresholds, as discussed in Section 10.3. If contamination were found that exceeded threshold levels, measures that comply with Cal/OSHA regulations would then be employed to ensure worker and public safety during construction. If material excavated during shaft construction were deemed hazardous, it would be subject to strict federal, state, and local regulations (e.g., permit to operate, NPDES permit). Impacts on the public and the environment would be less than significant.

NEPA Analysis
Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

CEQA Impact Determination
Construction of Alternative 1 (Project) would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 but would not create a significant hazard to the public or the environment. Impacts under CEQA would be less than significant.

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

NEPA Impact Determination
Construction of Alternative 1 (Project) would be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 but would not create a significant hazard to the public or the environment. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

Impact HAZ-3. Would Alternative 1 (Project) 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?

Tunnel Alignment – Wilmington to San Pedro Shelf (Onshore)

Construction

CEQA Analysis
The Wilmington to SP Shelf onshore tunnel alignment would extend from the JWPCP East shaft site to the TraPac shaft site. Potential impacts on the public or the environment would be related to the upset or accidental release of hazardous materials from the soil/slurry conveyance system, an upset or accidental release of hazardous materials (e.g., fuels, lubricants, and solvents), and an upset or accidental release associated with encountering undocumented oil wells.

Onshore tunneling activities would generate a large volume of excavated material that could consist of a bentonite slurry, depending on the tunneling method used. A bentonite slurry would itself not be considered hazardous waste because it does not have any of the RCRA hazardous waste characteristics. However, if tunneling advanced through contaminated soil or groundwater, the excavated soil/slurry mix could be considered hazardous depending on the levels of contamination encountered. An upset or accidental release from the conveyance system would be responded to immediately, would be of small quantity, and would be contained within the tunnel. Spill response activities would include transport of hazardous materials out of the tunnel for disposal in accordance with federal, state, and local regulations.

During construction, only a few hazardous materials would be located within the onshore tunnel. These hazardous materials would consist primarily of diesel fuel (to power the locomotives used to transport employees and materials), small quantities of lubricants and solvents, and, possibly, the slurry used during tunneling. Slurry has the potential to be considered hazardous only if it comes in contact with contaminated soil and/or groundwater. Slurry would be completely contained within tubing or piping until it exited the tunnel at the shaft site. The TBM would be electric, and solvents and lubricants would be used during the maintenance of the TBM and support equipment.

In an effort to avoid active and idle oil wells, the onshore tunnel alignment generally would follow historically established rights of way; therefore, the likelihood of encountering active or idle oil wells would be relatively low. Historic abandoned oil wells could be encountered and could result in the vertical migration of oil, natural gas, H_2S, or drilling fluids into excavated soils, fluids, and ventilation exhaust. It is likely that no perceivable change in tunneling operations would be noticed if abandoned oil wells were encountered by the TBM; however, because the tunnel could be located in a potentially gaseous environment, the excavated material generated by tunneling activities would be monitored to assess worker safety and allow for proper handling and disposal of any contaminated material. If monitoring indicated contaminated soil or fluids were present, they would be handled and disposed of in accordance with federal, state, and local regulations described in Section 10.3. If a well casing were severed by the TBM, the casing would be sealed off as the tunnel lining is grouted, which would prevent seepage.

Any upset or accidental releases from the soil/slurry conveyance system would be small and contained within the tunnel; releases associated with the use of hazardous materials (e.g., fuels, lubricants, and solvents) would be small and contained; and potential releases from oil wells would be contained within the soil/slurry conveyance system. As previously discussed, if contaminated soil or fluids were present, they would be handled and disposed of in accordance with federal, state, and local regulations described in Section 10.3. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Tunnel Alignment – Wilmington to San Pedro Shelf (Offshore)

Construction

CEQA Analysis

The Wilmington to SP Shelf offshore tunnel alignment would extend from the TraPac shaft site, through the LAXT and Southwest Marine shaft sites, to the SP Shelf. Offshore tunneling activities would be similar to those conducted onshore; however, there would be less likelihood of tunneling through contaminated soil and/or groundwater in the offshore portions of the tunnel than in the onshore portions because there are fewer contaminated sites located along the offshore alignments.

As discussed in the evaluation of the onshore section of the Wilmington to SP Shelf tunnel alignment, any upset or accidental releases from the soil/slurry conveyance system would be small and contained within the tunnel, releases associated with the use of hazardous materials (e.g., fuels, lubricants, and solvents) would be small and contained, and potential releases from oil wells would be contained within the soil/slurry conveyance system. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered direct impacts.

Shaft Site – JWPCP East

Construction

CEQA Analysis

Potential impacts on the public or the environment would be related to the upset or accidental release of contaminated soil or groundwater generated during construction of the shaft, upset or accidental release of hazardous materials (e.g., fuels, lubricants, and solvents), and the upset or accidental release associated with encountering undocumented oil wells.

The JWPCP East shaft site is near I-110; therefore, ADL and asbestos in surface soils are likely to be present due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads. Additionally, the site, which was previously owned by FORCO, is under remediation to remove VOCs and petroleum products from the soil and groundwater. Even with completion of site remediation and issuance of regulatory closure, small pockets of residual soil contamination could be encountered during shaft construction. In the event that contaminated soils were encountered, the assessment, handling, and disposal would be conducted in strict compliance with federal, state, and local regulations (see Section 10.3). The removal, transport, and disposal of any contaminated groundwater or soil would follow requirements discussed in Section 10.3; therefore, there would be a low probability of upset or accidental release during the removal, transport, and disposal of contaminated groundwater or soils. Furthermore, if a spill or release of contaminated soil or groundwater were to occur, it would be localized and contained immediately and would not pose a significant hazard to the public or environment.

Although construction-related spills of fuels, lubricating fluids, solvents, and other hazardous materials are not uncommon, the potential consequences of such accidents are generally small due to the localized, short-term nature of the releases. The volume of spills likely would be relatively small; the volume in any single vehicle or container would generally be less than 50 gallons, and fuel trucks would be limited to 10,000 gallons or less.

Additionally, quantities of hazardous materials that exceed the thresholds provided in Chapter 6.95 of the California Health and Safety Code would be subject to a release response plan (RRP) and an HMI. Federal and state regulations that govern the storage of hazardous materials in containers (i.e., the types of materials and the size of packages containing hazardous materials) and the separation of containers holding hazardous materials would limit the potential adverse effects of contamination to a relatively small area. As such, all hazardous materials utilized during construction of the JWPCP East shaft site would be used and stored in compliance with applicable state and federal requirements.

The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Runoff control requirements are discussed in detail in Chapter 11. Furthermore, through adherence to federal, state, and local regulations discussed in Section 10.3, impacts resulting from reasonably foreseeable upset and accident conditions would be minimized.

There are at least five abandoned oil wells at the JWPCP East shaft site, which was previously owned by FORCO. However, the shaft would be sited to avoid existing wells if feasible. If avoiding a well were infeasible, the well would be properly abandoned consistent with DOGGR requirements prior to shaft construction, or remedial plugging of undocumented wells would be conducted.

As previously discussed, upset or accidental releases associated with the removal, transport, and disposal of contaminated groundwater or soil would follow the requirements discussed in Section 10.3; the use and transport of hazardous materials (e.g., fuels, lubricants, and solvents) would be of a small quantity and

contained within the shaft; and potential releases from oil wells would be avoided by adjusting the shaft location or abandonment prior to shaft construction. Therefore, impacts would be less than significant.

NEPA Analysis
Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Shaft Sites – TraPac, LAXT, and Southwest Marine

Construction

CEQA Analysis
The analysis and impacts for the construction of the TraPac, LAXT, and Southwest Marine shaft sites would be the same as described for the JWPCP East shaft site. However, unlike the JWPCP East shaft site, the TraPac, LAXT, and Southwest Marine shaft sites have no documented onsite contamination; therefore, impacts would be less than significant.

NEPA Analysis
Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

CEQA Impact Determination
Construction of Alternative 1 (Project) would not 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. Impacts under CEQA would be less than significant.

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

NEPA Impact Determination
Construction of Alternative 1 (Project) would not 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. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

Impact HAZ-4. Would Alternative 1 (Project) emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Shaft Site – JWPCP East

Construction

CEQA Analysis

The JWPCP East shaft site is located within 0.25 mile of an existing school. The school is located southeast of this shaft site. Construction-related traffic and site ingress and egress would be to the north and west ends of the site through the existing JWPCP facilities. The handling of hazardous or acutely hazardous materials, substances, or waste would be related to the excavation of contaminated soil or groundwater or the use of hazardous materials (e.g., fuels, lubricants, and solvents).

The JWPCP East shaft site is near I-110; therefore, ADL and asbestos in surface soils are likely to be present due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads. Additionally, the site, which was previously owned by FORCO, is under remediation to remove VOCs and petroleum products from the soil and groundwater. Even with completion of site remediation and issuance of regulatory closure, small pockets of residual soil contamination could be encountered during shaft construction.

Monitoring and abatement of VOCs, which are vapor forms of some common industrial pollutants, and fugitive dust (non-controlled dust emissions) associated with the excavation of contaminated soil are required by SCAQMD Rules 1166 and 403; these rules are discussed in more detail in Section 10.3. Compliance with these rules would minimize the potential for receptors (students and workers) at nearby schools and other sensitive receptors, such as terrestrial and marine wildlife, to be exposed to these constituents.

The handling of hazardous materials would include the use and transport of diesel fuel, gasoline, lubricants, and solvents. These hazardous materials would be used and stored within the shaft site. Diesel fuel would be used to power equipment and would be present in the fuel tanks of the individual pieces of equipment and potentially in larger quantity storage tanks used to refuel the equipment tanks. Additionally, during construction of the shaft and the tunnel, small quantities of lubricants and solvents would be stored in the support area for maintenance of construction equipment. The quantity of hazardous material could exceed regulatory thresholds, thus requiring handling and storage in accordance with federal, state, or local regulations. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations.

Hazardous waste (e.g., contaminated soil, groundwater, slurry) would be handled in accordance with the regulations discussed in Section 10.3 of this chapter and could involve stockpiling of contaminated soils on site. Stockpiles would be managed in accordance with Rules 1166 and 403 to minimize potential exposure to VOCs and fugitive dust. Furthermore, access to the shaft site would be controlled through the use of fencing and controlled access locations.

As previously discussed, the potential impacts associated with emissions of VOCs and fugitive dust and handling of hazardous materials would be minimized by adhering to regulations presented in Section 10.3. The use and storage of hazardous materials would follow the requirements discussed in Section 10.3; therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

CEQA Impact Determination

Construction of Alternative 1 (Project) would emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school; however, this would not result in a significant impact. Adherence to regulations, implementation of BMPs, and site controls would minimize exposure to emissions. Impacts under CEQA would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of Alternative 1 (Project) would emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school; however, this would not result in a significant impact. Adherence to regulations, implementation of BMPs, and site controls would minimize exposure to emissions. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

10.4.3.3 Impact Summary – Alternative 1

Impacts on hazards and hazardous materials analyzed in this EIR/EIS for Alternative 1 are summarized in Table 10-5 and Table 10-6. The proposed mitigation, where feasible, and the significance of the impact before and following mitigation are also listed in the table.

Table 10-5. Impact Summary – Alternative 1 (Program)

Program Element	Impact Determination Before Mitigation	Mitigation	Residual Impact After Mitigation
Impact HAZ-1. Would Alternative 1 (Program) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			
SJCWRP			
Plant Expansion	CEQA Less Than Significant Impact During Operation	No mitigation is required.	CEQA Less Than Significant Impact During Operation
Impact HAZ-3. Would Alternative 1 (Program) 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?			
SJCWRP			
Plant Expansion	CEQA Less Than Significant Impact During Operation	No mitigation is required.	CEQA Less Than Significant Impact During Operation
Impact HAZ-5. Would Alternative 1 (Program) result in a substantial spill, release, or explosion of hazardous material(s) due to a terrorist action?			
SJCWRP			
Plant Expansion	CEQA Less Than Significant Impact During Operation	No mitigation is required.	CEQA Less Than Significant Impact During Operation

Table 10-6. Impact Summary – Alternative 1 (Project)

Project Element	Impact Determination Before Mitigation	NEPA Direct or Indirect	Mitigation	Residual Impact After Mitigation
Impact HAZ-1. Would Alternative 1 (Project) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
Tunnel Alignment				
Wilmington to SP Shelf (Onshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Wilmington to SP Shelf (Offshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Direct	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Shaft Site				
JWPCP East	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction

Table 10-6 (Continued)

Project Element	Impact Determination Before Mitigation	NEPA Direct or Indirect	Mitigation	Residual Impact After Mitigation
TraPac	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
LAXT	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Southwest Marine	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Impact HAZ-2. Would Alternative 1 (Project) be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?				
Shaft Site				
JWPCP East	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Impact HAZ-3. Would Alternative 1 (Project) 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?				
Tunnel Alignment				
Wilmington to SP Shelf (Onshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Wilmington to SP Shelf (Offshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Direct	No mitigation is required.	NEPA Less Than Significant Impact During Construction

Table 10-6 (Continued)

Project Element	Impact Determination Before Mitigation	NEPA Direct or Indirect	Mitigation	Residual Impact After Mitigation
Shaft Site				
JWPCP East	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
TraPac	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
LAXT	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Southwest Marine	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Impact HAZ-4. Would Alternative 1 (Project) emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?				
Shaft Site				
JWPCP East	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction

10.4.4 Alternative 2

10.4.4.1 Program

Alternative 2 (Program) is the same as Alternative 1 (Program).

10.4.4.2 Project

The impacts for the onshore tunnel and the JWPCP East, TraPac, LAXT, and Southwest Marine shaft sites for Alternative 2 (Project) would be the same as for Alternative 1 (Project).

Impact HAZ-1. Would Alternative 2 (Project) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Tunnel Alignment – Wilmington to Palos Verdes Shelf (Offshore)

Construction

CEQA Analysis

The Wilmington to PV Shelf offshore tunnel alignment would extend from the TraPac shaft site, through the LAXT and Southwest Marine shaft sites, to the PV Shelf. Offshore tunneling activities would be similar to those conducted onshore (see Alternative 1 [Project]); however, there would be less likelihood of tunneling through contaminated soil and/or groundwater in the offshore portions of the tunnel than in the onshore portions because there are fewer contaminated sites located along the offshore alignments. In the event that contaminated soil or groundwater were encountered during offshore tunneling operations, the excavated soil/slurry would be handled in the same manner described for the onshore tunnel alignment under Alternative 1 (Project).

During construction, only a few hazardous materials would be located within the offshore tunnel. These hazardous materials would consist primarily of diesel fuel (to power the locomotives used to transport employees and materials), small quantities of lubricants and solvents, and, possibly, the slurry used during tunneling. Slurry has the potential to be considered hazardous only if it comes in contact with contaminated soil and/or groundwater. Slurry would be completely contained within tubing or piping until it exited the tunnel at the shaft site. The TBM would be electric, and solvents and lubricants would be used during the maintenance of the TBM and support equipment.

Due to the anticipated small quantities of hazardous materials used and their limited potential to affect human health and the environment, there are no strict regulations related to their use and storage. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered direct impacts.

CEQA Impact Determination

Construction of Alternative 2 (Project) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts under CEQA would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts
Impacts would be less than significant.

NEPA Impact Determination
Construction of Alternative 2 (Project) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

Impact HAZ-3. Would Alternative 2 (Project) 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?

Tunnel Alignment – Wilmington to Palos Verdes Shelf (Offshore)

Construction

CEQA Analysis
The Wilmington to PV Shelf offshore tunnel alignment would extend from the TraPac shaft site, through the LAXT and Southwest Marine shaft sites, to the PV Shelf. Offshore tunneling activities would be similar to those conducted onshore (see Alternative 1 [Project]); however, there would be less likelihood of tunneling through contaminated soil and/or groundwater in the offshore portions of the tunnel than in the onshore portions because there are fewer contaminated sites located along the offshore alignments.

As discussed in the evaluation of the onshore segment of Alternative 1 (Project), upset or accidental releases from the soil/slurry conveyance system would be small and contained within the tunnel, releases associated with the use of hazardous materials (e.g., fuels, lubricants, and solvents) would be small and contained, and potential releases from oil wells would be contained within the soil/slurry conveyance system. Therefore, impacts would be less than significant.

NEPA Analysis
Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered direct impacts.

CEQA Impact Determination
Construction of Alternative 2 (Project) would not 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. Impacts under CEQA would be less than significant.

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

NEPA Impact Determination
Construction of Alternative 2 (Project) would not 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. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation
No mitigation is required.

Residual Impacts
Impacts would be less than significant.

10.4.4.3 Impact Summary – Alternative 2

Impacts on hazards and hazardous materials for Alternative 2 (Program), which are the same as Alternative 1 (Program), are summarized in Table 10-5. Impacts analyzed in this EIR/EIS for Alternative 2 (Project) are summarized in Table 10-7. The proposed mitigation, where feasible, and the significance of the impact before and following mitigation are also listed in the table.

Table 10-7. Impact Summary – Alternative 2 (Project)

Project Element	Impact Determination Before Mitigation	NEPA Direct or Indirect	Mitigation	Residual Impact After Mitigation
Impact HAZ-1. Would Alternative 2 (Project) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
Tunnel Alignment				
Wilmington to PV Shelf (Onshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Wilmington to PV Shelf (Offshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Direct	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Shaft Site				
JWPCP East	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction

Table 10-7 (Continued)

Project Element	Impact Determination Before Mitigation	NEPA Direct or Indirect	Mitigation	Residual Impact After Mitigation
TraPac	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
LAXT	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Southwest Marine	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Impact HAZ-2. Would Alternative 2 (Project) be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?				
Shaft Site				
JWPCP East	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Impact HAZ-3. Would Alternative 2 (Project) 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?				
Tunnel Alignment				
Wilmington to PV Shelf (Onshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Wilmington to PV Shelf (Offshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Direct	No mitigation is required.	NEPA Less Than Significant Impact During Construction

Table 10-7 (Continued)

Project Element	Impact Determination Before Mitigation	NEPA Direct or Indirect	Mitigation	Residual Impact After Mitigation
Shaft Site				
JWPCP East	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
TraPac	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
LAXT	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Southwest Marine	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Impact HAZ-4. Would Alternative 2 (Project) emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?				
Shaft Site				
JWPCP East	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction

10.4.5 Alternative 3

10.4.5.1 Program

Alternative 3 (Program) is the same as Alternative 1 (Program).

10.4.5.2 Project

Impact HAZ-1. Would Alternative 3 (Project) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Tunnel Alignment – Figueroa/Gaffey to Palos Verdes Shelf (Onshore)

Construction

CEQA Analysis

The Figueroa/Gaffey to PV Shelf onshore tunnel alignment would extend from the JWPCP West shaft site to the Angels Gate shaft site. Although this alignment passes within 0.25 mile of the DFSP, there would be a low risk of contamination during tunnel construction because the tunnel would be constructed below the depth of contaminated groundwater documented on site (see Section 10.2.2.1).

Onshore tunneling activities would generate a large volume of material. If a slurry TBM were utilized, the bentonite slurry would not be considered hazardous waste because it does not have any of the RCRA hazardous waste characteristics. However, if tunneling advanced through contaminated soil or groundwater, the soil/slurry could be considered hazardous, depending on the levels of contamination encountered. If the soil/slurry were deemed hazardous, it would be handled and transported in strict accordance with federal, state, and local requirements to minimize the impact on human health and the environment, as detailed in Section 10.3. Depending on the levels of soil contamination, it is possible that the soil/slurry would be disposed of at a Class III municipal landfill. However, the soil/slurry would be profiled to determine disposal options that are in compliance with applicable federal and state guidelines and regulations.

During construction, only a few hazardous materials would be located within the onshore tunnel. These hazardous materials would consist primarily of diesel fuel (to power the locomotives used to transport employees and materials), small quantities of lubricants and solvents, and, possibly, the slurry used during tunneling. Slurry has the potential to be considered hazardous only if it comes in contact with contaminated soil and/or groundwater. Slurry would be completely contained within tubing or piping until it exited the tunnel at the shaft site. The TBM would be electric, and solvents and lubricants would be used during the maintenance of the TBM and support equipment.

Due to the anticipated small quantities of hazardous materials present in the tunnel and their limited potential to affect human health and the environment, there are no strict regulations related to their use and storage. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Tunnel Alignment – Figueroa/Gaffey to Palos Verdes Shelf (Offshore)

Construction

CEQA Analysis

The Figueroa/Gaffey to PV Shelf offshore tunnel alignment would extend from the Angels Gate shaft site to the PV Shelf. Offshore tunneling activities would be similar to those conducted onshore; however, there would be less likelihood of tunneling through contaminated soil and/or groundwater in the offshore portions of the tunnel than in the onshore portions because there are fewer contaminated sites located along the offshore alignments.

Conditions and hazardous materials located within the offshore tunnel would be the same as described for the onshore tunnel alignment.

Due to the small quantities of hazardous materials used, and their limited potential to affect human health and the environment, there are no strict regulations related to their use and storage. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered direct impacts.

Shaft Site – JWPCP West

Construction

CEQA Analysis

The routine transport, use, and disposal of hazardous materials during construction of the JWPCP West shaft site would be related to the handling of contaminated soils and groundwater and the routine use of fuels and lubricants. The JWPCP West shaft site is near I-110. ADL and asbestos on surface soils are likely due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads. The site does not have a history of contamination, and there are no records of contaminated soil or groundwater. There are several oil wells associated with this property, which is located within the Wilmington Oil Field.

The JWPCP West shaft would be excavated through alluvial deposits, which generally contain shallow, unconfined aquifers and deeper confined units. The shaft would penetrate the unconfined water-bearing zone that could potentially contain contamination related to operations near the site.

There are several methods proposed for the construction of the shaft (Parsons 2011). Each method would require heavy construction equipment (e.g., crane, excavator, slurry/cement pumps) whose operation and maintenance would involve the use and handling of hazardous materials, including diesel fuel, gasoline, lubricants, and solvents. These hazardous materials would be used and stored within the area designated for shaft and tunnel support and laydown areas. Diesel fuel would be used to power the equipment and would be present in the fuel tanks of the individual pieces of equipment and potentially in larger quantity storage tanks used to refuel the equipment. Additionally, during construction of the shaft and the tunnel, small quantities of lubricants and solvents would be stored in the support area for maintenance of

construction equipment. The quantities of hazardous materials may exceed regulatory thresholds and thus require handling and storage in accordance with federal, state, or local regulations. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations.

While there is no evidence of contaminated soil or groundwater beneath the site or sites in the immediate vicinity, it is possible that unidentified/undocumented soil and groundwater contamination exists and could be encountered during shaft construction. Excavated material would be monitored and tested at the shaft site prior to disposal. If contaminated material were encountered and deemed hazardous, it would be subject to strict federal, state, and local regulations (e.g., permit to operate, NPDES permit). Impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Shaft Site – Angels Gate

Construction

CEQA Analysis

The routine transport, use, and disposal of hazardous materials during construction of the Angels Gate shaft site would be related to the handling of contaminated soils and groundwater and the routine use of fuels and lubricants. The Angels Gate site is surrounded by parkland and is a portion of the former Fort MacArthur Military Reservation. No records of soil or groundwater contamination were reported at the Angels Gate shaft site, and no historic records of commercial or industrial activities were found. The Angels Gate shaft would be excavated through fluvial deposits (in the upper 20 feet) and bedrock (predominantly shales). The fluvial deposits could contain shallow, unconfined, or perched water-bearing zones. The shale units below the fluvial deposits are most likely not water bearing, but may contain lenses of water if the units are adequately deformed and fractured.

While there is no evidence of contaminated soil or groundwater beneath the site, it is possible that unidentified/undocumented soil and groundwater contamination exists and could be encountered during shaft construction. Excavated material would be monitored and tested at the shaft site prior to disposal. If contaminated material were encountered and deemed hazardous, it would be subject to strict federal, state, and local regulations. Additionally, the use of heavy construction equipment and procedures to minimize the risk of hazardous materials spills would be the same as described for the JWPCP East shaft site. Impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

CEQA Impact Determination

Construction of Alternative 3 (Project) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts under CEQA would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of Alternative 3 (Project) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact HAZ-3. Would Alternative 3 (Project) 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?

Tunnel Alignment – Figueroa/Gaffey to Palos Verdes Shelf (Onshore)

Construction

CEQA Analysis

The Figueroa/Gaffey to PV Shelf onshore tunnel alignment would extend from the JWPCP West shaft site to the Angels Gate shaft site. Potential impacts on the public or the environment would be related to the upset or accidental release of hazardous material from the soil/slurry conveyance system and an upset or accidental release of hazardous materials (e.g., fuels, lubricants, and solvents).

Onshore tunneling activities would generate a large volume of material. If a slurry TBM were utilized, the bentonite slurry would not be considered hazardous waste because it does not have any of the RCRA hazardous waste characteristics. However, if tunneling advances through contaminated soil or groundwater, the excavated material could be considered hazardous depending on the levels of contamination encountered. An upset or accidental release from the conveyance system would be responded to immediately, would be of small quantity, and would be contained within the tunnel. Spill response activities would include transport of hazardous materials out of the tunnel for disposal in accordance with federal, state, and local regulations.

During construction, only a few hazardous materials would be located within the onshore tunnel. These hazardous materials would consist primarily of diesel fuel (to power the locomotives used to transport employees and materials), small quantities of lubricants and solvents, and, possibly, the slurry used during tunneling. Slurry has the potential to be considered hazardous only if it comes in contact with contaminated soil and/or groundwater. Slurry would be completely contained within tubing or piping

until it exited the tunnel at the shaft site. The TBM would be electric, and solvents and lubricants would be used during the maintenance of the TBM and support equipment.

As previously discussed, any upset or accidental releases from the soil/slurry conveyance system would be small and contained within the tunnel; releases associated with the use of hazardous materials (e.g., fuels, lubricants, and solvents) would be small and contained; and potential releases from oil wells would be contained within the soil/slurry conveyance system. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Tunnel Alignment – Figueroa/Gaffey to Palos Verdes Shelf (Offshore)

Construction

CEQA Analysis

The Figueroa/Gaffey to PV Shelf offshore tunnel alignment would extend from the Angels Gate shaft site to the PV Shelf. Offshore tunneling activities would be similar to those conducted onshore; however, there would be less likelihood of tunneling through contaminated soil and/or groundwater in the offshore portions of the tunnel than in the onshore portions because there are fewer contaminated sites located along the offshore alignments.

As previously discussed in the evaluation of the onshore segment of the Figueroa/Gaffey to PV Shelf tunnel alignment, upset or accidental releases from the soil/slurry conveyance system would be small and contained within the tunnel, releases associated with the use of hazardous materials (e.g., fuels, lubricants, and solvents) would be small and contained, and potential releases from oil wells would be contained within the soil/slurry conveyance system. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered direct impacts.

Shaft Site – JWPCP West

Construction

CEQA Analysis

Potential impacts on the public or the environment would be related to the upset or accidental release of contaminated soil or groundwater generated during construction of the shaft, upset or accidental release of hazardous materials (e.g., fuels, lubricants, and solvents), and the upset or accidental release associated with encountering undocumented oil wells.

The JWPCP West shaft site is near I-110; therefore, ADL and asbestos on surface soils are likely due to vehicle emissions that occurred prior to the use of unleaded fuel and asbestos-free brake pads. The JWPCP West shaft site does not have a history of contamination, and there are no records of

contaminated soil or groundwater on the site activities or on sites in the immediate vicinity. There are several oil wells on the property, which is located within the Wilmington Oil Field, including at least one that appears to be active.

Although construction-related spills of fuels, lubricating fluids, solvents, and other hazardous materials are not uncommon, the potential consequences of such accidents are generally small due to the localized, short-term nature of the releases. The volume of spills likely would be relatively small; the volume in any single vehicle or container would generally be less than 50 gallons, and fuel trucks would be limited to 10,000 gallons or less.

Additionally, quantities of hazardous materials that exceed the thresholds provided in Chapter 6.95 of the California Health and Safety Code would be subject to an RRP and an HMI. Federal and state regulations that govern the storage of hazardous materials in containers (i.e., the types of materials and the size of packages containing hazardous materials) and the separation of containers holding hazardous materials would limit the potential adverse effects of contamination to a relatively small area. As such, all hazardous materials utilized during construction of the JWPCP West shaft site would be used and stored in compliance with applicable state and federal requirements.

The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Runoff control requirements are discussed in detail in Chapter 11. Furthermore, through adherence to federal, state, and local regulations discussed in Section 10.3, impacts resulting from reasonably foreseeable upset and accident conditions would be minimized.

Several existing oil wells, at least one of which appears to be active, have been identified at the JWPCP West shaft site. However, the shaft would be sited to avoid existing wells if feasible. If avoiding a well were infeasible, the well would be properly abandoned consistent with DOGGR requirements prior to shaft construction, or remedial plugging of undocumented wells would be conducted.

As previously discussed, upset or accidental releases associated with the removal, transport, and disposal of contaminated groundwater or soil would follow the requirements discussed in Section 10.3; the use and transport of hazardous materials (e.g., fuels, lubricants, and solvents) would be of a small quantity and contained within the shaft; and potential releases from oil wells would be avoided by adjusting the shaft location or abandonment prior to shaft construction. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Shaft Site – Angels Gate

Construction

CEQA Analysis

Potential impacts on the public or the environment would be related to the upset or accidental release of contaminated soil or groundwater generated during construction of the shaft, upset or accidental release of hazardous materials (e.g., fuels, lubricants, and solvents), and the upset or accidental release associated with encountering undocumented oil wells.

The analysis and impacts associated with construction-related spills of fuels, lubricating fluids, solvents, and other hazardous materials would be the same as those described for the JWPCP West shaft site. Additionally, if hazardous materials exceeded the thresholds provided in Chapter 6.95 of the California Health and Safety Code, an RRP and an HMI would be required, as discussed for the JWPCP West shaft site. Therefore, all hazardous materials utilized during construction of the Angels Gate shaft site would be used and stored in compliance with applicable state and federal requirements.

The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Runoff control requirements are discussed in detail in Chapter 11. Furthermore, through adherence to federal, state, and local regulations discussed in Section 10.3, impacts resulting from reasonably foreseeable upset and accident conditions would be minimized.

As previously discussed, upset or accidental releases associated with the removal, transport, and disposal of contaminated groundwater or soil would follow the requirements discussed in Section 10.3, and the use and transport of hazardous materials (e.g., fuels, lubricants, and solvents) would be of a small quantity and contained within the shaft. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

CEQA Impact Determination

Construction of Alternative 3 (Project) would not 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. Impacts under CEQA would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of Alternative 3 (Project) would not 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. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

10.4.5.3 Impact Summary – Alternative 3

Impacts on hazards and hazardous materials for Alternative 3 (Program), which are the same as Alternative 1 (Program), are summarized in Table 10-5. Impacts analyzed in this EIR/EIS for

Alternative 3 (Project) are summarized in Table 10-8. The proposed mitigation, where feasible, and the significance of the impact before and following mitigation are also listed in the table.

Table 10-8. Impact Summary – Alternative 3 (Project)

Project Element	Impact Determination Before Mitigation	NEPA Direct or Indirect	Mitigation	Residual Impact After Mitigation
Impact HAZ-1. Would Alternative 3 (Project) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
Tunnel Alignment				
Figueroa/ Gaffey to PV Shelf (Onshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Figueroa/ Gaffey to PV Shelf (Offshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Direct	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Shaft Site				
JWPCP West	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Angels Gate	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Impact HAZ-3. Would Alternative 3 (Project) 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?				
Tunnel Alignment				
Figueroa/ Gaffey to PV Shelf (Onshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction

Table 10-8 (Continued)

Project Element	Impact Determination Before Mitigation	NEPA Direct or Indirect	Mitigation	Residual Impact After Mitigation
Figueroa/ Gaffey to PV Shelf (Offshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Direct	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Shaft Site				
JWPCP West	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Angels Gate	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction

10.4.6 Alternative 4 (Recommended Alternative)

10.4.6.1 Program

Alternative 4 (Program) is the same as Alternative 1 (Program).

10.4.6.2 Project

The impacts for the JWPCP West shaft site for Alternative 4 (Project) would be the same as for Alternative 3 (Project), except tunnel construction would occur over a period of 4 years instead of 5 years.

Impact HAZ-1. Would Alternative 4 (Project) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Tunnel Alignment – Figueroa/Western to Royal Palms (Onshore)

Construction

CEQA Analysis

The Figueroa/Western to Royal Palms onshore tunnel alignment would extend from the JWPCP West shaft site to the Royal Palms shaft site. Onshore tunneling activities would generate a large volume of excavated material. If a slurry TBM were utilized, the bentonite slurry would not be considered

hazardous waste because it does not have any of the RCRA hazardous waste characteristics. However, if tunneling advanced through contaminated soil or groundwater, the soil/slurry could be considered hazardous, depending on the levels of contamination encountered. If the soil/slurry were deemed hazardous, it would be handled and transported in strict accordance with federal, state, and local requirements to minimize the impact on human health and the environment, as detailed in Section 10.3. Depending on the levels of soil contamination, it is possible that the soil/slurry would be disposed of at a Class III municipal landfill. However, the soil/slurry would be profiled to determine disposal options that are in compliance with applicable federal and state guidelines and regulations.

During construction, only a few hazardous materials would be located within the onshore tunnel. These hazardous materials would consist primarily of diesel fuel (to power the locomotives used to transport employees and materials), small quantities of lubricants and solvents, and, possibly, the slurry used during tunneling. Slurry has the potential to be considered hazardous only if it comes in contact with contaminated soil and/or groundwater. Slurry would be completely contained within tubing or piping until it exited the tunnel at the shaft site. The TBM would be electric, and solvents and lubricants would be used during the maintenance of the TBM and support equipment.

Due to the anticipated small quantity of hazardous materials present in the tunnel, and the limited potential for their impact to human health and the environment, there are no strict regulations related to their use and storage. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Shaft Site – Royal Palms

Construction

CEQA Analysis

The routine transport, use, and disposal of hazardous materials during construction of the Royal Palms shaft site would be related to the handling of contaminated soils and groundwater and the use of fuels and lubricants. No records of soil or groundwater contamination were reported and no historic records of commercial or industrial activities were found for the Royal Palms shaft site. Therefore, impacts from soil and/or groundwater contamination are not likely. Furthermore, due to Royal Palms shaft site's proximity to the Angels Gate shaft site, the geologic conditions are considered to be similar with only a relatively thin deposit of fluvial deposits anticipated. These fluvial deposits are likely underlain by shale bedrock, thus the likelihood of water-bearing materials to be encountered is low.

During construction, only a few hazardous materials would be located within the onshore tunnel. These hazardous materials would consist primarily of diesel fuel (to power the locomotives used to transport employees and materials), small quantities of lubricants and solvents, and, possibly, the slurry used during tunneling. Slurry has the potential to be considered hazardous only if it comes in contact with contaminated soil and/or groundwater. Slurry would be completely contained within tubing or piping until it exited the tunnel at the shaft site. The TBM would be electric, and solvents and lubricants would be used during the maintenance of the TBM and support equipment. The quantities of hazardous material

may exceed regulatory thresholds and thus require handling and storage in accordance with federal, state, or local regulations. The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations.

Excavated material (e.g., soil and groundwater, if encountered) has a low potential to be considered hazardous, but would be monitored and profiled at the shaft site prior to disposal. If excavated material were deemed hazardous, it would be subject to strict federal, state, and local regulations (e.g., permit to operate, NPDES permit). Impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

CEQA Impact Determination

Construction of Alternative 4 (Project) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts under CEQA would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of Alternative 4 (Project) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact HAZ-3. Would Alternative 4 (Project) 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?

Tunnel Alignment – Figueroa/Western to Royal Palms (Onshore)

Construction

CEQA Analysis

The Figueroa/Western to Royal Palms onshore tunnel alignment would extend from the JWPCP West shaft site to the Royal Palms shaft site. Potential impacts on the public or the environment would be related to the upset or accidental release of hazardous material from the soil/slurry conveyance system and an upset or accidental release of hazardous materials (e.g., fuels, lubricants, and solvents).

Onshore tunneling activities would generate a large volume of excavated material. If a slurry TBM were utilized, the bentonite slurry would not be considered hazardous waste because it does not have any of the RCRA hazardous waste characteristics. However, if tunneling advances through contaminated soil or groundwater, the excavated material could be considered hazardous depending on the levels of contamination encountered. An upset or accidental release from the conveyance system would be responded to immediately, would be of small quantity, and would be contained within the tunnel. Spill response activities would include transport of hazardous materials out of the tunnel for disposal in accordance with federal, state, and local regulations.

During construction, only a few hazardous materials would be located within the onshore tunnel. These hazardous materials would consist primarily of diesel fuel (to power the locomotives used to transport employees and materials), small quantities of lubricants and solvents, and, possibly, the slurry used during tunneling. Slurry has the potential to be considered hazardous only if it comes in contact with contaminated soil and/or groundwater. Slurry would be completely contained within tubing or piping until it exited the tunnel at the shaft site. The TBM would be electric, and solvents and lubricants would be used during the maintenance of the TBM and support equipment.

As previously discussed, upset or accidental releases from the soil/slurry conveyance system would be small and contained within the tunnel, and releases associated with the use of hazardous materials (e.g., fuels, lubricants, and solvents) would be small and contained. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

Shaft Site – Royal Palms

Construction

CEQA Analysis

Potential impacts on the public or the environment would be related to the upset or accidental release of contaminated soil or groundwater generated during construction of the shaft and upset or accidental release of hazardous materials (e.g., fuels, lubricants, and solvents).

No known sources of contamination have been identified at the site or within the site vicinity; therefore, the likelihood of encountering contaminated soil or groundwater is low and associated upset conditions are not likely. Although construction-related spills of fuels, lubricating fluids, solvents, and other hazardous materials are not uncommon, the potential consequences of such accidents are generally small due to the localized, short-term nature of the releases. The volume of spills likely would be relatively small; the volume in any single vehicle or container would generally be less than 50 gallons, and fuel trucks would be limited to 10,000 gallons or less.

Additionally, quantities of hazardous materials that exceed the thresholds provided in Chapter 6.95 of the California Health and Safety Code would be subject to an RRP and an HMI. Federal and state regulations that govern the storage of hazardous materials in containers (i.e., the types of materials and the size of packages containing hazardous materials) and the separation of containers holding hazardous materials would limit the potential adverse impacts of contamination to a relatively small area. As such, all

hazardous materials utilized during construction of the Royal Palms shaft site would be used and stored in compliance with applicable state and federal requirements.

The Sanitation Districts' Health and Safety Plan for the project would include appropriate procedures for handling hazardous situations. Runoff control requirements are discussed in detail in Chapter 11. Furthermore, through adherence to federal, state, and local regulations discussed in Section 10.3, impacts resulting from reasonably foreseeable upset and accident conditions would be minimized.

As previously discussed, upset or accidental releases associated with the removal, transport, and disposal of contaminated groundwater or soil would follow the requirements discussed in Section 10.3, and the use and transport of hazardous materials (e.g., fuels, lubricants, and solvents) would be of a small quantity and contained within the shaft. Therefore, impacts would be less than significant.

NEPA Analysis

Environmental impacts would be the same as described for the CEQA analysis, and would occur for the duration of construction. Baseline conditions would resume upon termination of construction. With respect to the Corps' NEPA scope of analysis described in Section 3.5, the environmental impacts would be considered indirect impacts.

CEQA Impact Determination

Construction of Alternative 4 (Project) would not 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. Impacts under CEQA would be less than significant.

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Construction of Alternative 4 (Project) would not 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. Impacts under NEPA would be less than significant with respect to the No-Federal-Action Alternative (see Section 3.4.1.6).

Mitigation

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

10.4.6.3 Impact Summary – Alternative 4

Impacts on hazards and hazardous materials for Alternative 4 (Program), which are the same as Alternative 1 (Program), are summarized in Table 10-5. Impacts analyzed in this EIR/EIS for Alternative 4 (Project) are summarized in Table 10-9. The proposed mitigation, where feasible, and the significance of the impact before and following mitigation are also listed in the table.

Table 10-9. Impact Summary – Alternative 4 (Project)

Project Element	Impact Determination Before Mitigation	NEPA Director Indirect	Mitigation	Residual Impact After Mitigation
Impact HAZ-1. Would Alternative 4 (Project) create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
Tunnel Alignment				
Figueroa/ Western to Royal Palms (Onshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Shaft Site				
JWPCP West	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Royal Palms	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Impact HAZ-3. Would Alternative 4 (Project) 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?				
Tunnel Alignment				
Figueroa/ Western to Royal Palms (Onshore)	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction
Shaft Site				
JWPCP West	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction

Table 10-9 (Continued)

Project Element	Impact Determination Before Mitigation	NEPA Director Indirect	Mitigation	Residual Impact After Mitigation
Royal Palms	CEQA Less Than Significant Impact During Construction	N/A	No mitigation is required.	CEQA Less Than Significant Impact During Construction
	NEPA Less Than Significant Impact During Construction	Indirect	No mitigation is required.	NEPA Less Than Significant Impact During Construction

10.4.7 Alternative 5 (No-Project Alternative)

Pursuant to CEQA, an environmental impact report (EIR) must evaluate a no-project alternative. A no-project alternative describes the no-build scenario and what reasonably would be expected to occur in the foreseeable future if the project were not approved. Under the No-Project Alternative for the Clearwater Program, the Sanitation Districts would continue to expand, upgrade, and operate the JOS in accordance with the JOS 2010 Master Facilities Plan (2010 Plan) (Sanitation Districts 1994), which includes all program elements proposed under the Clearwater Program, excluding process optimization at the WRPs, as described in Section 3.4.1.5. A new or modified ocean discharge system would not be constructed. As a result, there would be a greater potential for an emergency discharge into various water courses, as described in Section 3.4.1.5.

Because there would be no construction of a new or modified JWPCP ocean discharge system, the Corps would not make any significance determinations under NEPA and would not issue any permits or discretionary approvals for dredge or fill actions or for transport or ocean disposal of dredged material.

10.4.7.1 Program

Alternative 5 (Program) would consist of the implementation of the 2010 Plan. The impacts for conveyance improvements, plant expansion at the SJCWRP, WRP effluent management, JWPCP solids processing, and JWPCP biosolids management for Alternative 5 (Program) would be the same as for Alternative 1 (Program) and would be subject to mitigation in accordance with the EIR prepared for the 2010 Plan (Jones & Stokes 1994). Based on the current flow projections and the recommendations of the 2010 Plan, only the SJCWRP would be expanded by 25 million gallons per day. This is identical to Alternative 1 (Program). Therefore, the impacts for the expansion of the SJCWRP for Alternative 5 (Program) would be the same as for Alternative 1 (Program), and impacts under CEQA related to hazardous materials would be less than significant.

10.4.7.2 Project

Alternative 5 does not include a project; therefore, a new or modified ocean discharge system would not be constructed. Alternative 5 (Project) would not involve construction of shafts, tunnels, and other ancillary facilities and construction areas; thus, hazardous soils would not be excavated, and no transport of hazardous soils would occur. No impacts on human health or the environment would be associated with Alternative 5 (Project).

As a consequence of taking no action, there would be a greater potential for emergency discharges into various water courses, as described in Section 3.4.1.5. Discharges would be considered a violation of the JWPCP NPDES permit and of the CWA but would not result in significant hazard to the public or

environment through the release of hazardous materials. The lack of a new ocean discharge system would not have a significant impact on hazardous materials. Therefore, Alternative 5 (Project) would result in less than significant impacts under CEQA and NEPA related to hazardous materials.

10.4.7.3 Impact Summary – Alternative 5

Impacts on hazards and hazardous materials for Alternative 5 (Program) would be the same as those summarized for Alternative 1 (Program) in Table 10-5, excluding process optimization. Note that the mitigation measures for Alternatives 1 through 4 (Program) are not applicable to Alternative 5 (Program). There would be less than significant impacts related to hazards and hazardous materials for Alternative 5 (Project).

10.4.8 Alternative 6 (No-Federal-Action Alternative)

Pursuant to NEPA, an environmental impact statement (EIS) must evaluate a no-federal-action alternative. The No-Federal-Action Alternative for the Clearwater Program consists of the activities that the Sanitation Districts would perform without the issuance of the Corps' permits. The Corps' permits would be required for the construction of the offshore tunnel, construction of the riser and diffuser, the rehabilitation of the existing ocean outfalls, and the ocean disposal of dredged material. Without a Corps permit to work on the aforementioned facilities, the Sanitation Districts would not construct the onshore tunnel and shaft sites. Therefore, none of the project elements would be constructed under the No-Federal-Action Alternative. The Sanitation Districts would continue to use the existing ocean discharge system, which could result in emergency discharges into various water courses, as described in Sections 3.4.1.6 and 10.4.7.2. The program elements for the recommended alternative would be implemented in accordance with CEQA requirements. However, based on the NEPA scope of analysis established in Sections 1.4.2 and 3.5, these elements would not be subject to NEPA because the Corps would not make any significance determinations and would not issue any permits or discretionary approvals.

10.4.8.1 Program

The program elements are beyond the NEPA scope of analysis.

10.4.8.2 Project

The impact analysis for Alternative 6 (Project) is the same as described for Alternative 5 (Project).

10.4.8.3 Impact Summary – Alternative 6

The program is not analyzed under Alternative 6. Impacts for Alternative 6 would be the same as discussed under Alternative 5 (Project); therefore, there would be less than significant impacts on hazards and hazardous materials for Alternative 6.

10.4.8.4 Comparison of Significant Impacts and Mitigation for All Alternatives

The impacts on hazards and hazardous materials for all alternatives would be less than significant. No mitigation is required. Therefore, a table summarizing significant impacts and mitigation is not included in this chapter.