4.0

CUMULATIVE EFFECTS

4.1 Introduction

This chapter presents the requirements for cumulative impact analysis, and analyzes the potential for the proposed Project to have significant cumulative effects when combined with other past, present, and reasonably foreseeable future projects in each resource area's cumulative geographic scope. The presentation of requirements related to cumulative impact analyses and a description of the related projects are discussed in Sections 4.1.1 and 4.1.2, respectively. Cumulative impacts for the proposed Project when combined with other reasonable and reasonably foreseeable projects in the area are organized by resource topic and analyzed in Section 4.2.

4.1.1 Requirements for Cumulative Impact Analysis

The State CEQA Guidelines (14 Cal. Code Regs. §15130) require a reasonable analysis of the significant cumulative impacts of a proposed project. Cumulative impacts are defined by CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines, Section 15355).

Cumulative impacts are further described as follows:

a) The individual effects may be changes resulting from a single project or a number of separate projects.

b) The cumulative impacts from several projects are the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines, Section 15355[b]).

Furthermore, according to State CEQA Guidelines Section 15130(a)(1):

> As defined in Section 15355, a "cumulative impact" consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.

In addition, as stated in the State CEQA Guidelines, Section 15064(h)(4):

> The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

Therefore, the following cumulative impact analysis focuses on whether the impacts of the proposed Project are cumulatively considerable within the context of impacts caused by other past, present, or future projects (Section 15065(a)(3)). The cumulative impact scenario considers other projects proposed within the area defined for each resource that have the potential to contribute to cumulatively considerable impacts.

For this EIR, related area projects with a potential to contribute to cumulative impacts were identified using one of two approaches or a hybrid of the two: (1) the "list" methodology, or (2) the "projection" methodology. Most of the resource areas were analyzed using a list of closely related projects that would be constructed in the cumulative geographic scope (which differs by resource and sometimes for impacts within a resource; cumulative regions of influence are documented in Section 4.2). The list of related projects is provided in Section 4.1.2.

Air quality, noise, and the traffic/circulation analyses use a combined or hybrid list and projection approach as described below. Cumulative analysis of air quality impacts uses projections from the SCAB 2007 Air Quality Management Plan (AQMP) and the Multiple Air Toxics Exposure Study (MATES-II and MATES-III). The Traffic/Circulation cumulative analysis uses annual regional growth and development rates from the SCAG Regional Travel Demand Forecasting Model, which is described in Section 3.11, "Transportation and Circulation—Ground and Marine." The cumulative analysis of noise impacts uses a hybrid approach, as it relies on both the annual regional growth rates utilized for traffic (because traffic is an important contributor to noise impacts) and the list of related projects documented in Section 4.1.2.

4.1.2 Projects Considered in the Cumulative Analysis

This section describes past, present, and reasonably foreseeable projects in the area that affect cumulative conditions at the Port.

4.1.2.1 Past Development

The following discussions describe the past development that have contributed to cumulative impacts, which is now considered the environmental baseline for the proposed Project.

4.1.2.1.1 History of the Port of Los Angeles

The Port of Los Angeles is located at the San Pedro Bay at the southernmost point of Los Angeles County, approximately 20 miles from downtown Los Angeles. Because of its proximity to the Pacific Ocean, San Pedro Bay has a long history of maritime activity.

In 1822, under the newly independent Mexican government, San Pedro became a robust commercial center and an attractive home for new settlers. The Mexican government granted three ranchos near the bay: Rancho San Pedro, Rancho Los Palos Verdes, and Rancho Los Cerritos. On February 2, 1848, when California came under American control, business at San Pedro Harbor was booming. It was evident, however, that the Harbor needed to be expanded to accommodate the increasing cargo volume coming into the bay for the growing population in Los Angeles. In 1906 the city annexed a 16-mile strip of land on the outskirts of San Pedro and Wilmington. The Port was officially founded in 1907 with the creation of the Los Angeles Board of Harbor Commissioners. Between 1911 and 1912, the first 8,500-foot section of the breakwater was completed, and the Main Channel was widened to 800 feet and dredged to a depth of 30 feet to accommodate the largest vessels of that era. Concurrently, Southern Pacific Railroad completed its first major wharf in San Pedro, allowing railcars to efficiently load and unload goods simultaneously. The Port continued to grow through the twentieth century.

Following World War II, LAHD launched a broad restoration program. Many of the facilities in the harbor required maintenance that had been delayed during the war years. Then, the advent of containerization in the 1950s resulted in dramatic changes at the Port. Because of this new mode of shipping, the Port, like many major new and old harbors, modernized facilities to meet the needs of the new geometry required by containerization. In addition to new configurations (container-sized and shape-driven), larger cranes and concrete wharves (replacing timber) were required to handle the dramatically increased weight of cargo containers. Other major harbor improvements included deepening the main channel to accommodate the larger

container vessels entering the bay, purchasing land to expand terminals, and replacing older wharves that could not bear the increased weight of newer containers.

4.1.2.1.2 History of the Project Area

Historically, the proposed project area (see Figure 2-2) was established as an official point of entry to the United States in 1862. Wilmington serves as the "Heart of the Harbor," the original entry point for immigrants arriving in Los Angeles in the early 1900s.

Early development of Wilmington and the Port in general is in large part associated with the entrepreneur Phineas Banning. Among his many accomplishments, Banning established a freight and passenger transportation business, built the Banning Landing wharf near what is currently the intersection of Avalon Boulevard and Water Street in the proposed Project area to service his transportation concerns, and purchased thousands of acres of land along and adjacent to the harbor where he founded the town of "New San Pedro" in 1857 (what is now Wilmington).

By 1911, the petroleum industry had begun operations at San Pedro Harbor, with Union Oil Company, Associated Petroleum, and Standard Oil Company all establishing a presence, and building refineries and storage tanks. Millions of gallons of oil were shipped via the Port of Los Angeles. Small manufacturing also became increasingly diversified during this time, and smaller scale buildings dedicated to the making and repairing of various goods were erected throughout Wilmington and the harbor area.

The City of Los Angeles built the first municipal piers at Wilmington in 1914, making it the center of harbor activity. Two years later, improvements at Fish Harbor provided safe anchorage for fishing boats, sites for canneries, and housing for a multi-ethnic population of workers including people of Japanese, Italian, Mexican, and Eastern European heritage.

The harbor area's position as a center of commercial trade and industry came to a halt with the advent of World War II. The U.S. Navy immediately assumed control of all ship operations after the Japanese attack on Pearl Harbor in 1941. An official Point of Embarkation was established near the intersection of Fries Avenue and Water Street, and Port facilities were turned over to the war effort. Ship building at the Port increased dramatically, and over 90,000 ship workers were employed locally. Even contentious labor relations were put on hold after organized labor declared a "no-strike" pledge for the duration of the war. The U.S. Navy ended its control of the Port in 1945.

In 1975, the Wilmington–San Pedro Road was relocated and dedicated as John S. Gibson Boulevard, and in 1978 the first comprehensive master plan for the Port of Los Angeles was completed. The Port has continued to develop and is today the

largest port in the United States by volume, and when combined with its neighboring Port of Long Beach, is the fifth largest port internationally.

Historical development of the proposed project area, the Port, and the general vicinity has had various environmental effects, which are described in the individual resource analysis sections below (Section 4.2.2).

4.1.2.1.3 Current and Future Projects

A total of 90 present or reasonably foreseeable future projects (approved or proposed) were identified within the general vicinity of the proposed Project that could contribute to cumulative impacts (Figure 4-1). A corresponding list of the cumulative projects provided by LAHD, the Port of Long Beach, and the Los Angeles Department of Transportation (LADOT) is provided in Table 4-1. (As discussed in Section 4.1.1 and further in the resource-specific sections below, some resource analyses use a projection approach encompassing a larger cumulative geographic scope; for those resources a larger set of past, present, and reasonably foreseeable future projects was included for analysis of cumulative impacts.)

For the purposes of this EIR, the timeframe of present or reasonably foreseeable future projects extends from 2008 to 2020 (proposed Project Build-out), and the vicinity is defined as the area over which effects of the proposed Project could contribute to cumulative effects. The cumulative regions of influence for individual resources are documented further in each of the resource-specific subsections in Section 4.2.

Table 4-1. Related and Cumulative Projects

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
PORT OF LOS ANGELES PROJECTS			
1	Pier 400 Container Terminal and Transportation Corridor Project, Port of Los Angeles	Element of the 2020 Deep Draft Navigation Improvements Plan: dredging, land filling, and marine terminal construction. The entire Pier 400 site is on a recently constructed landfill in the Port of Los Angeles Outer Harbor. The project is a two-phase development of Pier 400 into a 484-acre (196-hectare) container terminal with rail, highway, and utility access. Phase I consists of construction of rail and highway access and the first 334 acres (135 hectares) of a marine container terminal, including buildings, a wharf, and an intermodal rail yard. Phase II	Approved project and completed. Phase I and Phase II construction completed.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		consists of construction of the remaining 150 acres (61 hectares) into a container terminal. Landfill construction was recently completed. The EIR certified for the project identified significant air, transportation, and noise and vibration impacts.	
2	Berths 136–147 Marine Terminal, West Basin, Port of Los Angeles	Element of the West Basin Transportation Improvement Projects. Reconfiguration of wharves and backlands. Expansion and redevelopment of the TraPac Terminal.	Final EIR certified by the Los Angeles Board of Harbor Commissioners in December 2007. Construction expected to begin in late 2008.
3	San Pedro Waterfront Project, Port of Los Angeles	Five to seven year plan to develop along the west side of the Main Channel, from the Vincent Thomas Bridge to the 22nd Street Landing Area Parcel up to and including Crescent Avenue. Key components include construction of a North Harbor Promenade, construction of a Downtown Harbor Promenade, construction of a Downtown Water Feature, enhancements to the existing John S. Gibson Park, construction of a Town Square at the foot of 6th Street, construction of a 7th Street Pier, construction of a Ports O' Call Promenade, development of the California Coastal Trail along the waterfront, construction of additional cruise terminal facilities, construction of a Ralph J. Scott Historic Fireboat Display, relocation of the Catalina Cruises Terminal and the SS Lane Victory, extension of the Waterfront Red Car Line, and related parking improvements.	A NOP/NOI was released in August 2005. A revised NOP/NOI was released in December 2006. Scoping meeting was held in January 2007. Comment period on NOP/NOI closed on February 28, 2007. Construction expected 2010–2015.
4	Channel Deepening Project, Port of Los Angeles	Dredging and sediment disposal. This project deepened the Main Channel of the Los Angeles Harbor to a maximum depth of –53 feet MLLW (lesser depths are considered as project alternatives) by removing between approximately 3.94 million and 8.5 million cubic yards of sediments. The sediments were disposed at several sites for up to 151 acres (61 hectares) of landfill. The EIR/EIS certified for the project identified significant biology, air, and noise impacts. A Supplemental EIS/EIR is	SNOI/SNOP released in October 2005. SEIS/SEIR released August 2008. Construction expected 2008–2010.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		being prepared for new fill locations. The Additional Disposal Capacity Project would provide approximately 4 million cubic yards of disposal capacity needed to complete the Channel Deepening Project and maximize beneficial use of dredged material by constructing lands for eventual terminal development and provide environmental enhancements at various locations in the Port of Los Angeles.	
5	Cabrillo Way Marina, Port of Los Angeles	Redevelopment of the old marinas in the Watchorn Basin and development of the backland areas for a variety of commercial and recreational uses.	EIR certified December 2, 2003. New construction plan being developed and reviewed in terms of environmental clearance. Construction anticipated late 2008–2009.
6	Artificial Reef, San Pedro Breakwater, Port of Los Angeles	Development of an artificial reef site south of the San Pedro Breakwater. Provides opportunity for suitable reuse of clean construction materials and creates bottom topography to promote local sport fishing.	Negative Declaration issued and certified. Project proceeding (2006–2010).
7	Canners Steam Demolition	Demolition of two unused buildings and other small accessory structures at the former Canner's Steam Plant in the Fish Harbor area of the Port.	EIR under preparation. NOP expected Fall 2008. Construction expected 2009–2010.
8	Berths 226–236 (Evergreen) Container Terminal Improvements Project	Proposed redevelopment of existing container terminal, including improvements to wharves, adjacent backland, crane rails, lighting, utilities, new gate complex, grade crossings, and modification of adjacent roadways and railroad tracks.	EIR/EIS to be prepared. Construction expected 2010–2013
9	Port of Los Angeles Charter School and Port Police Headquarters, San Pedro, Port of Los Angeles	Proposal to lease property for the Port of Los Angeles Charter School and to construct/develop a Port Police Headquarters and office. 330 S. Centre Street, San Pedro.	EIR certified in August 2005. Charter school opened in 2006. Port Police building construction began Spring 2008.
10	SSA Outer Harbor Fruit Facility Relocation, Port of Los Angeles	Proposal to relocate the existing fruit import facility at 22nd and Miner to Berth 153.	On hold.
11	Crescent Warehouse Company Relocation, Port of Los Angeles	Relocate the operations of Crescent Warehouse Company from Port Warehouses 1, 6, 9, and 10 to an existing	Project construction proceeding.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		warehouse at Berth 153. Relocate Catalina Freight operations from Berth 184 to same building at Berth 153.	
12	Pacific L.A. Marine Terminal LLC, Crude Oil Terminal (formerly Plains All American, formerly Pacific Energy), Pier 400, Port of Los Angeles	Proposal to construct a Crude Oil Receiving Facility on Pier 400 with tanks on Terminal Island and other locations on Port property, with the preferred location being the former LAXT terminal; as well as construct new pipelines between Berth 408, storage tanks, and existing pipeline systems.	NOI/NOP released in June 2004. SEIS/SEIR released May 2008. Construction expected 2009–2011.
13	Ultramar Lease Renewal Project, Port of Los Angeles	Proposal to renew the lease between the Port of Los Angeles and Ultramar Inc., for continued operation of the marine terminal facilities at Berths 163–164, as well as associated tank farms and pipelines. Project includes upgrades to existing facilities to increase the proposed minimum throughput to 10 million barrels per year (mby), compared to the existing 7.5 mby minimum.	NOP released for public review in April 2004. Project EIR under preparation. Final EIR expected in 2008.
14	Westway Decommissioning	Decommissioning of the Westway Terminal along the Main Channel (Berths 70–71). Work includes decommissioning and removing 136 storage tanks with total capacity of 593,000 barrels.	Remedial planning underway. Decommissioning anticipated 2009.
15	Consolidated Slip Restoration Project	Remediation of contaminated sediment at Consolidated Slip at Port of Los Angeles. Remediation may include capping sediment or removal/disposal to an appropriate facility. Work includes capping and/or treatment of approximately 30,000 cubic yards of contaminated sediments.	Remedial actions are being evaluated in conjunction with Los Angeles RWQCB and U.S. EPA.
16	Berths 97–109, China Shipping Development Project	Development of the China Shipping Terminal Phases I, II, and III including wharf construction, land fill and terminal construction, and backland development.	Draft EIR/EIS released August 2006. Phase I construction complete. Recirculated Draft EIR/EIS released April 2008.Final EIS/EIR in preparation. Construction expected 2009–2015.
17	Berths 171–181, Pasha Marine Terminal Improvements Project, Port of Los Angeles	Redevelopment of existing facilities at Berths 171–181 as an omni (multi-use) facility.	Project EIR on hold.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
18	Berths 206–209 Interim Container Terminal Reuse Project, Port of Los Angeles	Proposal to allow interim reuse of former Matson Terminal while implementing green terminal measures.	Final EIR certified. Construction on hold.
19	Los Angeles Export Terminal (LAXT) Dome and Site Demolition	Demolition and clean up of existing storage dome and associated buildings on LAXT property.	Demolition began in 2008.
20	Southern California International Gateway (SCIG) Project, Port of Los Angeles	Construction and operation of a 157 acre dock rail yard intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.	Project EIR under preparation. NOP released September 30, 2005. DEIR expected Fall/Winter 2008.
21	Pan-Pacific Fisheries Cannery Buildings Demolition Project, Port of Los Angeles	Demolition of two unused buildings and other small accessory structures at the former Pan-Pacific Cannery in the Fish Harbor area of the Port.	NOP released October 2005. Draft EIR released July 2006. Final EIR under preparation.
22	San Pedro Waterfront Enhancements Project, Port of Los Angeles	Project includes improving existing, and development of new, pedestrian corridors along the waterfront (4 acres); landscaping, parking, increased waterfront access from upland areas, and creating 16 acres of public open space.	MND approved in April 2006. Construction to begin 2008 and will be completed in 2009.
23	Joint Container Inspection Facility, Ports of Los Angeles and Long Beach	Construction and operation of a facility to be used to search and inspect random and suspicious containers arriving at the Ports of Los Angeles and Long Beach.	In planning. EIR to be prepared.
24	Berths 302–305 (APL) Container Terminal Improvements Project	Container terminal and wharf improvements project including a terminal expansion area and new berth on the east side of Pier 300. Currently includes 40 acres of fill that was completed as part of the Channel Deepening Project (#4 above).	EIR/EIS to be prepared. Construction expected 2010–2013.
25	South Wilmington Grade Separation	An elevated grade separation would be constructed along a portion of Fries Avenue or Marine Avenue, over the existing rail line tracks, to eliminate vehicular traffic delays that would otherwise be caused by trains using the existing rail line and the new ICTF rail yard. The elevated grade would include a connection onto Water Street. There would be a minimum 24.5-foot clearance for rail cars traveling under the grade	Conceptual planning. Current planning indicates summer 2011 completion.

No. in Figure 4-1	Project Title and Location	Project Description	Project Status
		separation.	
26	Wilmington Waterfront Master Plan (Avalon Development District Project)	Planned development intended to provide waterfront access and promoting development specifically along Avalon Boulevard.	Proposed Project. NOP released in March 2008. Draft EIR to be released Fall 2008. Construction expected 2009–2020.
27	"C" Street/Figueroa Street Interchange	The "C" Street/ Figueroa Street interchange would be redesigned to include an elevated ramp from Harry Bridges Boulevard to the I-110 Freeway, over John S. Gibson Boulevard. There would be a minimum 15-foot clearance for vehicles traveling on John S. Gibson Boulevard. An additional extension would connect from Figueroa Street to the new elevated ramp, over Harry Bridges Boulevard.	Conceptual planning. Caltrans approval obtained on Project Study Report.
28	Port Transportation Master Plan	Port-wide transportation master plan for roadways in and around its facilities. Present and future traffic improvement needs are being determined, based on existing and projected traffic volumes. Some improvements under consideration include: I-110/SR-47/Harbor Boulevard interchange improvements, south Wilmington grade separations, and additional traffic capacity analysis for the Vincent Thomas Bridge.	Conceptual planning completed.
29	Berths 212–224 (YTI) Container Terminal Improvements Project	Wharf modifications involving wharf upgrades and backland reconfiguration, including new buildings.	EIR/EIS to be prepared. Construction expected 2010–2013.
30	Berths 121–131 (Yang Ming) Container Terminal Improvements Project	Reconfiguration of wharves and backlands. Expansion and redevelopment of the Yang Ming Terminal.	EIR/EIS to be prepared. Construction expected 2010–2013
31	Southwest Marine Demolition Project	Demolition of buildings and other small accessory structures at the Southwest Marine Shipyard.	Draft EIR released September 2006. Final EIR under preparation. Demolition anticipated 2009.
32	I-110/SR 47 Connector Improvement Program	Program may include "C" Street/I-110 access ramp intersection improvements, I-110 NB Ramp/John S. Gibson Boulevard intersection improvements, and SR 47 on- and off-ramp at Front Street. These projects would reduce	Conceptual planning.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		delays and emissions in the I-110/SR 47 area and improve safety and access.	
33	Inner Cabrillo Beach Water Quality Improvement Program	Phased improvements at Cabrillo Beach to reduce the wet and dry weather high concentrations of bacteria. Includes sewer and storm drain work, sand replacement, bird excluders, and circulation improvements (groin removal).	Sand replacement phase under construction.
34	Proposed Marine Research Area	Up to 28-acre site for potential marine research facility at City Dock No. 1.	Conceptual Planning.
PORT OF LOS ANGELES AND/OR PORT OF LONG BEACH POTENTIAL PORT-WIDE OPERATIONAL PROJECTS			
35	Terminal Free Time	Ports of Los Angeles and Long Beach program to reduce container storage time and use gates at off-peak travel times.	Program in progress.
36	Extended Terminal Gates (Pier Pass)	Ports of Los Angeles and Long Beach program to use economic incentives to encourage cargo owners to use terminal gates during off-peak hours.	Program in progress.
37	Shuttle Train/Inland Container Yard	Alameda Corridor Transportation Authority (ACTA) program to encourage rail shuttle service between the ports' on-dock rail facilities and a rail facility in Colton (in the Inland Empire). The pilot program will consist of a daily train to and from Colton. The containers will be trucked between the Colton rail facility and the beneficial cargo owners' facility.	Preliminary study in progress.
38	Origin/Destination and Toll Study	Ports of Los Angeles and Long Beach study to identify the origin and destination of international containers in the Los Angeles area, to determine the location of warehouses, and identify the routes truck drivers use to move containers to and from the Ports. The bridges serving Terminal Island (Vincent Thomas, Gerald Desmond, and Schuyler Heim) are not currently designed to handle the trade volumes projected at the Ports. In order to identify funding mechanisms to replace/ enhance these bridges, the Ports are conducting a toll study to explore potential funding sources for bridge replacement and truck driver behavior if tolls were assessed on the bridges.	Study in progress.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
39	Virtual Container Yard	ACTA, Port of Los Angeles, and Port of Long Beach program to explore implementing a system that would match an empty container from an import move to one from an empty export move.	Conceptual planning.
40	Increased On-Dock Rail Usage	ACTA, Port of Los Angeles, and Port of Long Beach program with shipping lines and terminal operators to consolidate neighboring terminals' intermodal volume to create larger trains to interior points, thereby reducing need for truck transportation.	Conceptual planning. Studies in progress
41	Union Pacific (UP) Railroad Intermodal Container Transfer Facility (ICTF) Modernization Project	UP proposal to modernize existing intermodal yard 4 miles from the Port.	Project application submitted to the Joint Powers Authority (JPA). Environmental analysis under way. Construction expected in 2010-2012.
42	Optical Character Recognition (OCR)	Ports terminals have implemented OCR technology, which eliminates the need to type container numbers in the computer system. This expedites truck driver movement through terminal gates.	Conceptual planning.
43	Truck Driver Appointment System	Appointment system that provides a pre-notification to terminals regarding which containers are planned to be picked up.	Program in progress..
44	Port Police Wilmington Substation	300 Water Street near Berth 195, occupied as a temporary substation.	Occupied sometime in 2008.
45	Port Police new station	330 S. Centre Street (between 3rd and 5th Streets.	Construction in progress.
		COMMUNITY OF SAN PEDRO PROJECTS	
46	15th Street Elementary School, San Pedro	Los Angeles Unified School District construction of additional classrooms at 15th Street Elementary School.	Construction completed (2006) and school operating.
47	Pacific Corridors Redevelopment Project, San Pedro	Development of commercial/retail, manufacturing, and residential components. Construction underway of four housing developments and Welcome Park.	Project underway. Estimated 2032 completion year according to Community Redevelopment Agency of Los Angeles.
48	Cabrillo Marine Aquarium Expansion, San Pedro	Expansion of existing Cabrillo Marine Aquarium.	Construction complete.
49	Gas Station and Mini-	6-pump gas station and 1,390–square-foot mini-mart at 311 N. Gaffey Street, San	Project on hold. No

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
	mart	Pedro (north of Sepulveda Street).	construction has started.
50	Fast Food Restaurant with Drive-thru	Construction of fast food restaurant with drive-through (expand from existing 3000-square-foot to 4816-square-foot restaurant). 303 S. Gaffey Street (at 3rd Street), San Pedro.	Construction is complete and restaurant is operating.
51	Mixed-use Development, 407 Seventh Street	Construction of 5,000-square-foot retail and 87-unit apartment complex. 407 W. Seventh Street (at Mesa Street), San Pedro.	In final stages of construction (completion expected in summer/fall 2007).
52	Condominiums, 28000 Western Avenue	Construction of 140 condominium units. 28000 S. Western Avenue, San Pedro.	In final stages of construction. Building permit cleared March 2006; LADOT Planning Department has no estimated completion year.
53	Pacific Trade Center	Construct 220 housing unit apartments. 255 5th Street, San Pedro (near Centre Street).	In initial stage of construction. Building permit cleared August 2006, but LADOT Planning Department has no estimated completion year.
54	Single Family Homes (Gaffey Street)	Construct 135 single-family homes on approximately 2 acres. 1427 N. Gaffey Street (at Basin Street), San Pedro.	In construction. Estimated 2009 completion year according to LADOT Planning Department.
55	Mixed-use Development, 281 W. 8th Street	Construct 72 condos and 7,000-square-foot retail space. 281 West 8th Street (near Centre Street), San Pedro.	No construction started. LADOT Planning Department has no estimated completion year.
56	Target (Gaffey Street)	Construct 136,000-square-foot discount superstore. 1605 North Gaffey Street, San Pedro (at W. Capitol Drive).	No construction has started. Estimated 2009 completion year, according to LADOT Planning Department.
57	Palos Verdes Urban Village	Construct 251 condos and 4,000-square-foot retail space. 550 South Palos Verdes Street, San Pedro.	No construction has started. Estimated 2011 completion year, according to LADOT Planning Department.
58	Temporary Little League Park	Construction of temporary baseball fields for the Eastview Little League. Baseball fields will be at current location of Knoll Hill Dog Park in San Pedro.	Construction pending. Estimated completion in 2008.
59	Condos, 319 N. Harbor Boulevard	Construction of 94 unit residential condominiums, 319 N Harbor Boulevard, San Pedro.	LADOT Planning Department has no estimated completion year.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
COMMUNITY OF WILMINGTON PROJECTS			
60	Banning Elementary School #1, 500 North Island Avenue, Wilmington	Two-building elementary school consisting of one two-story classroom building with subterranean parking garage and a one-story multipurpose building. The school also provides about 2 acres of playground and green space.	Construction completed (2006) and school operating.
61	East Wilmington Greenbelt Community Center, Wilmington	9,800-square-foot community building, a 25-space parking lot, and landscaped areas.	Construction complete; center opened in 2006.
62	Distribution Center and Warehouse	135,000-square-foot distribution center and warehouse on 240,000-square-foot lot with 47 parking spaces at 755 East L Street (at McFarland Avenue) in Wilmington.	No construction has started; lot is vacant and bare. LADOT Planning Department has no estimated completion year.
63	Dana Strand Public Housing Redevelopment Project	The existing facility is being torn down and redeveloped to provide a 116-unit affordable housing complex with multifamily rental units, senior units, and affordable homes for sale. The plans also include a day care center, lifelong learning center, parks, and landscaped open space.	Construction completed
64	Vermont Christian School Expansion	Private School Expansion to accommodate 72 additional students, for a total of 222 students.	LADOT Planning Department has no estimated completion year.
PROJECTS IN HARBOR CITY, LOMITA, AND TORRANCE			
65	1437 Lomita Boulevard, Condominiums	Construct 160 condominium units and demolish existing closed hospital. 1437 Lomita Boulevard (at Senator Avenue), Harbor City.	Construction is complete and in operation.
66	Harbor City Child Development Center	Conditional use permit to open 50-student preschool at existing church building (25000 South Normandie Avenue, Harbor City, at Lomita Boulevard).	Public hearing in August 2006.
67	Kaiser Permanente South Bay Master Plan	Construct 303,000-square-foot medical office building, 42,500-square-foot records center/office/warehouse, 260 hospital beds. 25825 Vermont Street, Harbor City (at Pacific Coast Highway).	In Construction. Estimated 2009 completion year, according to LADOT Planning Department.
68	Drive-through Restaurant, Harbor City	Construct 2,448-square-foot fast food restaurant with drive-through. 1608 Pacific Coast Highway, Harbor City (at	In planning phase. Old building still in operation.

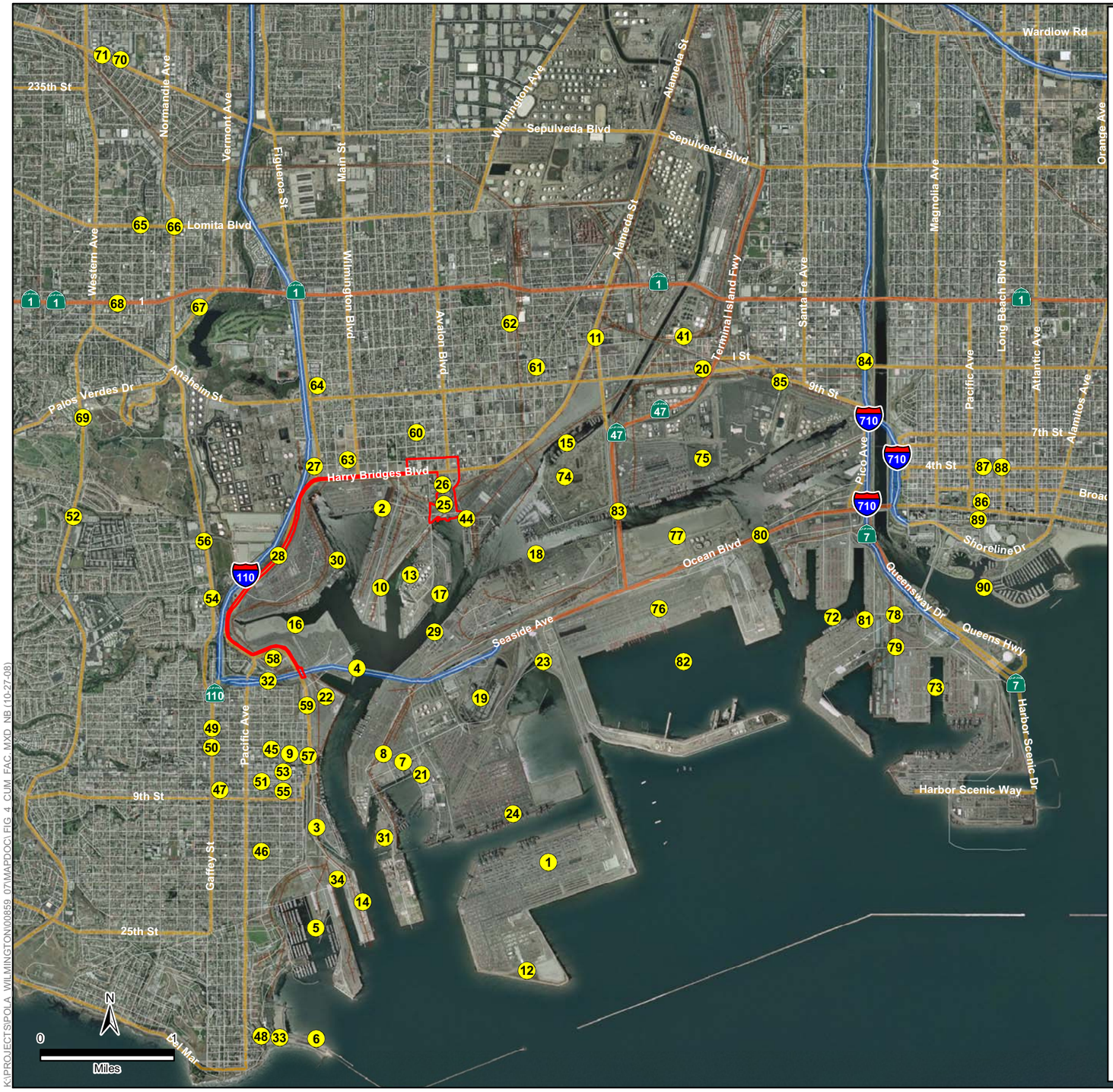
No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		President Avenue).	
69	Ponte Vista	Construct 1725 condos, 575 senior housing units, and 4 baseball fields. 26900 Western Avenue (near Green Hills Park), Lomita. Rolling Hills Prep School being developed in an adjacent lot.	DEIR issued November 2006. LADOT Planning Department reports estimated 2012 completion year.
70	Warehouses, 1351 West Sepulveda Boulevard	Construct warehouses with total capacity of 400,000 square feet. 1351 West Sepulveda Boulevard (at Western Avenue), Torrance.	Project building permit cleared February 2007. LADOT Planning Department estimates completion in 2007.
71	Sepulveda Industrial Park	Construct 154,105-square-foot industrial park (6 lots). Sepulveda Industrial Park (TT65665), 1309 Sepulveda Boulevard, Torrance (near Normandie Avenue).	No construction started. LADOT Planning Department has no estimated completion year.
PORT OF LONG BEACH PROJECTS			
72	Middle Harbor Terminal Redevelopment, Port of Long Beach	Expansion of an existing marine container terminal in the Middle Harbor area of the Port of Long Beach. The project will involve consolidation of two existing container terminals into one 345-acre (138-hectare) terminal. Construction will include approximately 48 acres (19 hectares) of landfill, dredging, wharf construction; construction of an intermodal rail yard; and reconstruction of terminal operations buildings. The Initial Study identified significant air, public health, transportation, biological, and water quality impacts.	Project EIS/EIR under preparation. NOP/NOI released December 20, 2005. Draft EIS/EIR released May 2008. Anticipated construction 2009–2025.
73	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine container terminals into one terminal. The Piers G and J redevelopment project is in the Southeast Harbor Planning District area of the Port of Long Beach. The project will develop a marine terminal of up to 315 acres by consolidating two existing terminals on Piers G and J and several surrounding parcels. Construction will occur in four phases and will include approximately 53 acres of landfills, dredging, concrete wharves, rock dikes, and road and railway improvements. The EIR prepared for this project identified potentially significant air quality and geologic resources	Approved project. Construction underway (anticipated construction period is 2005–2015).

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		impacts.	
74	Pier A West Remediation Project, Port of Long Beach	Remediation of approximately 90 acres of oil production land, including remediation of soil and groundwater contamination, relocation of oil wells, filling, and paving.	Project EIR/EIS under preparation. NOP/NOI released January 26, 2006. Expected duration through 2011.
75	Pier A East, Port of Long Beach	Redevelopment of 32 acres of existing auto storage area into container terminal.	EIR to be prepared.
76	Pier T, TTI (formerly Hanjin) Terminal, Phase III, Port of Long Beach	Development of a container terminal, liquid bulk facility, and satellite launch facility. The Port of Long Beach is redeveloping the former Long Beach Naval Complex on Terminal Island. The project consists of expanding a 300-acre marine container terminal to 375 acres, including a wharf, terminal operations buildings, utilities, and rail yard. Construction includes 22 acres of landfill. The SEIS/EIR certified for this project identified significant air quality, transportation, public health and safety, cultural resources, biological resources, and vibration impacts.	Approved project. Under construction.
77	Pier S Marine Terminal, Port of Long Beach	Development of a 150-acre container terminal and construction of navigational safety improvements to the Back Channel.	EIS/EIR to be prepared. Assessment/construction expected 2007–2012.
78	Administration Building Replacement Project, Port of Long Beach	Replacement of the existing Port Administration Building with a new facility on an adjacent site.	EIR being prepared. Assessment/construction expected 2007–2010.
79	San Pedro Bay Rail Study	Port-wide rail transportation plan with multiple projects in and around Harbor District.	Planning document under preparation.
80	Gerald Desmond Bridge Replacement Project, Port of Long Beach and Caltrans/FHWA	Replacement of the existing 4-lane Gerald Desmond highway bridge over the Port of Long Beach Back Channel with a new 6- to 8-lane bridge.	EIR being prepared. NOP/NOI released in 2005. Anticipated construction 2008–2013.
81	Chemoil Marine Terminal, Tank Installation, Port of Long Beach	Construction of two petroleum storage tanks and associated relocation of utilities and reconfiguration of adjoining marine terminal uses between Berths F210 and F211 on Pier F.	EIR to be prepared.
82	Port of Long Beach Installation Restoration	Removal of about 700,000 cubic yards of contaminated sediments at the Port of	In planning stages. Dredging is

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
	Site (West Basin) Dredging Project	Long Beach, with beneficial/sustainable reuse of the material in the Pier G landfill.	expected in 2008–2009.
ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY AND CALTRANS PROJECTS			
83	Schuyler Heim Bridge Replacement and SR 47 Terminal Island Expressway	ACTA/Caltrans project to replace the Schuyler Heim Bridge with a fixed structure and improve the SR 47/Henry Ford Avenue/Alameda Street transportation corridor by constructing an elevated expressway from the Schuyler Heim Bridge to SR 1 (Pacific Coast Highway).	NOP issued by ACTA and Caltrans. Anticipated construction 2009–2012.
84	I-710 (Long Beach Freeway) Major Corridor Study	Develop multi-modal, timely, cost-effective transportation solutions to traffic congestion and other mobility problems along approximately 18 miles of the I-710, between the San Pedro Bay ports and SR 60. Early Action Projects include: a) Port Terminus: Reconfiguration of SR 1 (Pacific Coast Highway) and Anaheim Interchange, and expansion of the open/green space at Cesar E. Chavez Park. b) Mid Corridor Interchange: Reconfiguration Project for Firestone Boulevard Interchange and Atlantic/Bandini Interchange.	EIR being prepared.
85	Edison Avenue Closure	Close a short section of Edison Avenue between Ninth and Pier B streets to improve public safety and traffic by rerouting cars and trucks away from three rail lines that cross Edison at Pier B Street.	Initial Study and Negative Declaration released June 2007.
CITY OF LONG BEACH PROJECTS			
86	Renaissance Hotel Project, City of Long Beach	Development of a 374-room hotel on the southeast corner of Ocean Boulevard and the Promenade.	Approved project. Construction complete.
87	D'Orsay Hotel Project, City of Long Beach	Development of a 162-room boutique-style hotel on the northwest corner of Broadway and the Promenade.	Approved project. Construction underway. Anticipated completion in Fall 2008.
88	City Place Development, City of	Development of commercial and residential space at the former Long	Construction complete (2005).

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
	Long Beach	Beach Plaza Mall, downtown between 3rd and 6th Streets and between Long Beach Boulevard and Pacific Avenue. The approved project redeveloped the former mall area and two blocks of vacant land east of Long Beach Boulevard with approximately 450,000 square feet of commercial space and up to 200 residential units. The EIR prepared for this project identified significant air quality impacts.	
89	The Pike at Rainbow Harbor, City of Long Beach	Commercial use development. This project is south of Ocean Boulevard on the site of the former Pike Amusement Park between Pine and Magnolia Avenues in Long Beach. This approved project includes approximately 770 residential units, a 500-room hotel, and 25,000 square feet of commercial space. The EIR prepared for this project identified significant air quality, cultural resources, noise, public service, and transportation impacts.	Approved project. Construction complete.
90	Queensway Bay Master Plan, City of Long Beach	Construction of Long Beach Aquarium, new urban harbor, office building, and entertainment complex. This project, designed to create a major waterfront attraction in downtown Long Beach, includes a recreational harbor, 150,000-square-foot aquarium, 125,000-square-foot entertainment complex, 59,000 square feet of restaurant/retail space, an 800-room hotel, 95,000 square feet of commercial office space, and 487 boat slips in and around Queensway Bay. The recreational harbor and aquarium have been completed. The EIR certified for this project identified significant transportation impacts.	Approved project. Construction complete.
Note: Construction date for Port projects based on an assumption that the project would be approved by LAHD.			

1



Port of Los Angeles Projects
1. Pier 400 Container Terminal and Transportation Corridor Project
2. Berths 136-147 Marine Terminal, West Basin
3. San Pedro Waterfront Project
4. Channel Deepening Project
5. Cabrillo Way Marina, Phase II
6. Artificial Reef, San Pedro Breakwater
7. Canners Steam Demolition
8. Berth 226-236 (Evergreen) Container Terminal Improvements Project
9. Port of Los Angeles Charter School and Port Police Headquarters, San Pedro
10. SSA Outer Harbor Fruit Facility Relocation
11. Crescent Warehouse Company Relocation
12. Plains All American (formerly Pacific Energy) Oil Marine Terminal, Pier 400
13. Ultramar Lease Renewal Project
14. Westway Decommissioning
15. Consolidated Slip Restoration Project
16. Berths 97-109, China Shipping Development Project
17. Berths 171-181, Pasha Marine Terminal Improvements Project
18. Berths 206-209 Interim Container Terminal Reuse Project
19. LAXT Dome and Site Demolition
20. Southern California International Gateway Project (SCIG)
21. Pan-Pacific Fisheries Cannery Buildings Demolition Project
22. San Pedro Waterfront Enhancements Project
23. Joint Container Inspection Facility
24. Berth 302-305 (APL) Container Terminal Improvements Project
25. South Wilmington Grade Separation
26. Wilmington Waterfront Master Plan (Avalon Blvd. Corridor Project)
27. "C" Street/Figueroa Street Interchange
28. Port Transportation Master Plan
29. Berths 212-224 (YTI) Container Terminal Improvements Project
30. Berths 121-131 (Yang Ming) Container Terminal Improvements Project
31. Southwest Marine Demolition Project
32. I-110 / SR 47 Connector Improvement Program
33. Inner Cabrillo Beach Water Quality Improvement Prog.
34. Proposed Marina Research Area

Port of Los Angeles and/Or Port of Long Beach Potential Port-Wide Operational Projects
35. Terminal Free Time*
36. Extended Terminal Gates (Pier Pass)*
37. Shuttle Train/Inland Container Yard*
38. Origin/Destination and Toll Study*
39. Virtual Container Yard*
40. Increased On-Dock Rail Usage*
41. Union Pacific Railroad ICTF Modernization Project
42. Optical Character Recognition*
43. Truck Driver Appointment System*
44. Port Police Wilmington Substation
45. Port Police New Station

Community of San Pedro Projects
46. 15th Street Elementary School
47. Pacific Corridors Redevelopment Project
48. Cabrillo Marine Aquarium Expansion
49. Gas station and mini-mart
50. Fast Food Restaurant w/drive-thru
51. Mixed use development, 407 Seventh Street
52. Condominiums, 28000 Western Ave.
53. Pacific Trade Center
54. Single Family Homes (Gaffey Street)
55. Mixed-use development, 281 W 8th Street
56. Target (Gaffey Street)
57. Palos Verdes Urban Village
58. Temporary Little League Park
59. Condos, 319 N. Harbor Boulevard

Community of Wilmington Projects
60. Banning Elementary School #1, 500 North Island Avenue
61. East Wilmington Greenbelt Community Center
62. Distribution center and warehouse
63. Dana Strand Public Housing Redevelopment Project
64. Vermont Christian School Expansion

Projects in Harbor City, Lomita, and Torrance
65. 1437 Lomita Boulevard Condominiums
66. Harbor City Child Development Center
67. Kaiser Permanente South Bay Master Plan
68. Drive-through restaurant, Harbor City
69. Ponte Vista
70. Warehouses, 1351 West Sepulveda Blvd
71. Sepulveda Industrial Park

Port of Long Beach Projects
72. Middle Harbor Terminal Redevelopment
73. Piers G & J Terminal Redevelopment Project
74. Pier A West Remediation Project
75. Pier A East
76. Pier T, TTI (formerly Hanjin) Terminal, Phase III
77. Pier S Marine Terminal
78. Administration Building Replacement Project
79. San Pedro Bay Rail Study
80. Gerald Desmond Bridge Replacement Project
81. Chemoil Marine Terminal, Tank Installation
82. Port of Long Beach Installation Restoration Site (West Basin) Dredging Project

Alameda Corridor Transportation Authority and Caltrans Projects
83. Schuyler Heim Bridge Replacement and State Route (SR) 47 Terminal Island Expressway
84. I-710 (Long Beach Freeway) Major Corridor Study

City of Long Beach Projects
85. Edison Avenue Closure
86. Renaissance Hotel Project
87. D'Orsay Hotel Project
88. City Place Development
89. The Pike at Rainbow Harbor
90. Queensway Bay Master Plan

*Project not shown on figure because it is not specific to a location, or the location has not been determined.

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SOURCE: ESRI Streetmap USA (2007), ESRI Imagery (2006)

ICF Jones & Stokes
an ICF International Company

Figure 4-1
Cumulative Projects Location Map
Wilmington Waterfront Development Project

4.2 Cumulative Impact Analysis

The following sections analyze the cumulative impacts identified for each resource area for the proposed Project.

4.2.1 Aesthetics

Provided below is an analysis of the potential cumulative impacts on aesthetics and visual resources.

4.2.1.1 Scope of Analysis

The geographic scope of analysis for cumulative impacts on aesthetics and visual resources to which the proposed Project may contribute is the set of public viewing positions (KOPs) from which one may see the proposed Project, whether as part of a single view or a series of related views (e.g., a scenic route). Outside of this set of points, the proposed Project would not be within public views and therefore would have no potential to contribute to cumulative visual impacts.

The resulting area for visual impact analysis generally encompasses Wilmington south of Pacific Coast Highway; those portions of the Port occurring north of the Vincent Thomas Bridge (i.e., West Basin, Turning Basin, East Basin, Channel East Basin, and the western portions of Cerritos Channel); the northeastern portion of San Pedro (located north of the Vincent Thomas Bridge and east of Gaffey Street); and those portions of the Port of Long Beach occurring west of the Schuyler Heim/Terminal Island Freeway (SR 47). The delineated area for cumulative visual impacts extends from the proposed project area in a loose radius of 1.5 miles.

The visual changes that would be brought about by the proposed Project would take place in the distinctive landscape region created by the Ports of Los Angeles and Long Beach, which collectively constitute one of the largest port complexes in the world. In this area, over the course of the past century, the construction of breakwaters, the dredging of channels, filling for creation of berths and terminals, and construction of the infrastructure required to support Port operations have completely transformed the original natural setting to create a landscape that is highly engineered and is visually dominated by large-scale man-made features.

Past, present, planned, and foreseeable future development that would have the potential to contribute to cumulative impacts on aesthetics and visual resources are those that have involved, or would involve, grading, paving, landscaping, construction of roads, buildings and other working port facilities, as well as the presence and operation of upland equipment, such as gantry cranes, rail and trucking facilities and backland storage sites. Views may also be affected by in-water activities such as dredging, filling, wharf demolition and construction, and container ship traffic.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.1, "Aesthetics."

4.2.1.2 Cumulative Impact AES-1: Adverse Effect on a Scenic Vista from a Designated Scenic Resource due to Obstruction of Views—Less than Cumulatively Considerable

This City of Los Angeles criterion is related to CEQA Appendix D Aesthetics question I.c, "Would the project substantially degrade the existing visual character or quality of the site and its surroundings?" The *L.A. CEQA Thresholds Guide* (City 2006): directs that:

> The determination shall be made on a case-by-case basis, considering the following factors:
>
> - Amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, which would be removed, altered, or demolished
> - Amount of natural open space to be graded or developed
> - Degree to which proposed structures in natural open space areas would be integrated effectively into the aesthetics of the site, through appropriate design, etc.
> - Degree of contrast between proposed features and existing features that represent the valued aesthetic image of an area
> - Degree to which a proposed zone change would result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements
> - Degree to which the project would contribute to the aesthetic value of the area
> - Applicable guidelines and regulations

4.2.1.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The visual changes that would be brought about by the proposed Project would be taking place in the distinctive landscape region created by the Ports of Los Angeles and Long Beach, which collectively constitute one of the largest port complexes in the world. In this area, over the course of the past century, the construction of

breakwaters, the dredging of channels, filling for creation of berths and terminals, and construction of the infrastructure required to support Port operations have completely transformed the original natural setting to create a landscape that is highly engineered, nearly entirely altered, and visually dominated by large-scale man-made features. Past projects at the Port have had a demonstrable negative effect related to elimination of natural features, reductions in views from the surrounding area of the open waters of the Port's channels and basins, and an intensification of the level of development that is visible.

Current projects, such as the development of the Pier 400 Container Terminal and Transportation Corridor Project, reduced far-off views of open waters from hillside areas in San Pedro, and this project increased the concentration of large-scale developed facilities in the Port complex; however, according to that project's EIR, it did not reach the threshold for a significant visual effect. In large measure, this is due to the panoramic character of views into the Port, in which most features, small and large, become one of numerous components that can be glimpsed, As a result, there is only a small degree of contrast between proposed features and existing features that represent the valued aesthetic image of an area. Due to the extensive nature of past actions, and the degree to which the visual setting already has been transformed by numerous changes and by the disparate number of visual elements that have been added to it over time, the threshold for a cumulatively considerable and significant impact on aesthetics for present and future projects would be very high. Such an impact would occur if proposed development resulted in a fundamental change in the visual character of the Port or high levels of contrast with the existing visual setting, called for development on significant portions of existing natural open space, or led to partial or total blockages of views from key scenic vantage points.

Projects within the Geographic Area

While the overwhelming majority of related projects are far outside the area for cumulative visual effects, of the cumulative projects within the geographic area for cumulative visual effects, most are expected to significantly improve visual quality within the Port, as they call for the demolition of a number of unattractive utilitarian structures, such as oil storage tanks and other deteriorated Port structures that are not considered visual resources. These projects include China Shipping Terminal (#16), Berths 212–224 Container Terminal Improvements (#29), and Middle Harbor Terminal Redevelopment—Port of Long Beach (#75), and Pier A (oil production land) West Remediation Project (#74) (see Table 4-1). Other Port projects, such as the proposed project (#26), San Pedro Waterfront Enhancements Project (#22), and East Wilmington Greenbelt Community Center (#61) would incorporate new landscaping to improve visual quality, and/or public open space.

There are cumulative projects that call for the construction of new facilities, which by virtue of the siting, height, and massing could affect scenic vistas. Three of these cumulative projects include elevated ramps, train overcrossings, or other related road improvement components that have the potential to partially block views: South Wilmington Grade Separation (#25), I-110/C Street/Figueroa Street Interchange ramp

(#27), and ramps associated with the 110/State Route 47 Connector (#32). However, such features would be viewed as extensions of the existing freeway and road systems rather than as significant new intrusive elements. The total or partial blockage of views from scenic view vantage points would not occur, nor would the insertion of a substantial distracting element into scenic views. None of the present or reasonably foreseeable future projects would pose a direct impact to a scenic vista, by either blocking or by inserting a substantially distracting element into a scenic vista. Therefore, the impact from present and reasonably foreseeable future projects is not cumulatively considerable as identified under Cumulative Impact AES-1.

4.2.1.2.2 Contribution of the Proposed Project

The proposed Project would demolish non-historic buildings and utilitarian structures that are not deemed important visual resources, enhance open space areas, and create new waterfront access for the public that includes an observation tower. The proposed features would not block scenic views (e.g., views of the Vincent Thomas Bridge) and would have no effect on scenic vantage points.

The list of related and cumulative projects was reviewed to determine if development associated with any related project would, in combination with the proposed Project, result in a cumulative impact to aesthetics and visual resources. No project-specific impacts would occur, and therefore, the proposed Project would not contribute to a significant cumulative effect. Therefore, contribution of the proposed Project would not be cumulatively considerable under Cumulative Impact AES-1 when combined with past, present, and reasonably foreseeable future projects.

4.2.1.2.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.1.3 Cumulative Impact AES-2: Damage to Scenic Resources (Including, but not Limited to, Trees, Rock Outcroppings, and Historic Buildings) within View of a State Scenic Highway—No Cumulative Impact

This City of Los Angeles criterion is related to CEQA Appendix D Aesthetics questions I.a, "Would the project have a substantial adverse effect on a scenic vista?" and I.b, "Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historical buildings within a state scenic highway?" The *L.A. CEQA Thresholds Guide* directs that:

The determination shall be made on a case-by-case basis, considering the following factors:

- The nature and quality of recognized or valued views (such as natural topography, settings, man-made or natural features of visual interest, and resources such as mountains or the ocean);
- Whether the project affects views from a designated scenic highway, corridor, or parkway;
- The extent of obstruction (e.g., total blockage, partial interruption, or minor diminishment); and
- The extent to which the project affects recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single, fixed vantage point.

4.2.1.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.1.3.2 Contribution of the Proposed Project

There are no designated state scenic highways within the proposed project area. Portions of John S. Gibson Boulevard and Front Street, however, are within the area for cumulative visual effects, and have been designated a local scenic highway by the City of Los Angeles (City of Los Angeles 1999a). Other streets that have been designated as scenic highways in the General Plan of the City of Los Angeles, such as Harbor Boulevard and all but the northernmost 1,000 feet of Pacific Avenue, fall outside the cumulative area for visual effects. Views toward the proposed Project from the scenic routes are substantially blocked by stacked shipping containers, Port facilities structures, topography, landscaping, or a combination of these factors. Thus, significant impacts on views from scenic roadways are not anticipated.

The proposed Project calls for the retention of historic buildings, such as Bekins Storage (245 N. Fries Avenue/312–316 C Street), the College of Oceanography (272 S. Fries Avenue), as well as other historic structures. It also would establish new landscaped open space, a promenade, and an observation tower linking the Banning Landing area with downtown Wilmington in a manner that is expected to enhance aesthetic quality of the visual setting. No rock outcroppings or other significant natural features, such as trees would be affected by the project.

There would be no proposed project–specific impact under AES-2; therefore, the proposed Project would not contribute to a cumulative impact in this regard.

4.2.1.3.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.1.4 Cumulative Impact AES-3: Degradation of Existing Visual Character or Quality of a Site and its Surroundings—No Cumulative Impact

Cumulative Impact AES-3 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in significant adverse impacts on visual character or quality within the cumulative study area.

A cumulative impact would occur if implementing the proposed Project, in combination with related projects, would alter or remove valued features that substantially define the character of the Wilmington community or the Port in positive terms; such alteration or removal would also have to significantly diminish visual quality within the cumulative visual impacts study area. Significant impacts could occur from the demolition of visual landmarks or the addition of new development that substantially degrades visual quality.

4.2.1.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.1.4.2 Contribution of the Proposed Project

The proposed Project would not degrade the existing visual character or quality of the site and its surroundings. Because the proposed Project would have no impacts on the existing visual character or quality of the site and its surroundings, it also would have no cumulatively considerable contribution to any cumulative impact. Since the proposed Project would not contribute to a significant cumulative impact, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.1.4.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.1.5 Cumulative Impact AES-4: Negative Shading on the Existing Visual Character or Quality of the Site or its Surroundings—No Cumulative Impact

Cumulative Impact AES-4 represents the potential for the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in significant adverse impacts within the cumulative study area through negative shadow effects that would affect shade-sensitive land uses and facilities.

4.2.1.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.1.5.2 Contribution of the Proposed Project

The proposed Project would not result in negative shading on the existing visual character or quality of the site or its surrounding. Therefore, because the proposed Project would by itself have no impact on shading, it also would have no cumulatively considerable contribution to a cumulative impact. It is therefore not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.1.5.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.1.6 Cumulative Impact AES-5: New Source of Substantial Light or Glare that would Adversely Affect Day or Nighttime Views of the Area—Less than Cumulatively Considerable

This City of Los Angeles criterion is related to CEQA Appendix D Aesthetics question I.d, "Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?" The *L.A. CEQA Thresholds Guide* directs that:

> The determination shall be made on a case-by-case basis, considering the following factors:
>
> - The change in ambient illumination levels as a result of project sources; and
> - The extent to which project lighting would spill off the project site and affect adjacent light sensitive areas.

The assessment of light and glare, for this analysis, is directed only at night lighting sources. Glare from reflected sunlight can occur during the daytime, depending on the reflectivity of materials of construction, the direction of sunlight, and the position of the observer. However, in the case of the proposed Project, daytime glare is not an issue because construction materials used would not be reflective.

4.2.1.6.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects at the Port and in surrounding industrial districts have created sources of unshielded, or poorly shielded and directed, light that have caused light spill and changes to ambient illumination levels in nearby areas. Because of current Port standards that minimize lighting impacts from new projects, the contributions of present and future projects to cumulative lighting impacts in the area would be limited. However, the net effect of past projects has been to create a significant cumulative impact.

The study area is currently brightly lit at night to ensure a safe nighttime outdoor work environment. Major sources of illumination are down lights on tall light standards and floodlighting, including floodlights on crane booms used to load and unload cargo. This lighting is designed to provide an almost daylight environment.

There are 11 present and reasonably foreseeable future projects that could contribute added light and glare to the overall lighting environment within the Port and Wilmington, including the following cumulative projects (see Table 4-1): Pier 400 Container (#1), TraPac (#2), Evergreen Container Terminal (#8), Pacific L.A. Marine Terminal (#12), China Shipping (#16), Pasha Marine Terminal Improvements Project

(#17), SCIG (#20), Joint Container Inspection Facility (#23), APL Container Terminal Improvement (#24), YTI Container Terminal Improvement (#29), and Yang Ming Container Terminal (#30). These projects would include lighting designed to provide a near-daylight environment through the use of tall light standards. Therefore, the cumulative adverse impacts associated with the light and glare of each of the past, present, and reasonably foreseeable future projects would result in a cumulatively considerable impact.

4.2.1.6.2 Contribution of the Proposed Project

The proposed Project calls for the creation of new open space and waterfront access, including the construction of a new observation tower. The intent of the lighting scheme is to improve safety considerations and provide a unified theme for the new facilities. There are no large sources of flood lighting being proposed that would have the potential to result in sources of spill-light. Other sources of new lighting under the proposed Project would be both functional and decorative to enhance visual quality. This lighting would not add to the existing lighting, glare, and spill caused by other Port uses. Lighting associated with proposed project components would comply with the PMP, which requires an analysis of design and operational effects on existing community areas and the Wilmington Waterfront Development Program and Master Plan lighting guidelines. Design consistency with these guidelines and regulations would ensure that views of the area would not be adversely affected. The proposed project features that would contribute to ambient nighttime illumination, including the accent lighting associated with the observation tower and land bridge, would be negligible within the context of the functional lighting of the Port.

Despite the potential cumulative effect of other lighting related to shipping terminals and container storage yards, the proposed Project is expected to have a less-than-significant impact with respect to creating new sources of nighttime lighting due to the standards that would govern the lighting components of the proposed Project, including designing the proposed project lighting in accordance with the Wilmington Waterfront lighting guidelines, meeting Night Sky guidelines, and avoiding spillover lighting effects and glare. The contribution of the proposed Project would therefore not be cumulatively considerable under AES-5 when combined with present and reasonable foreseeable future projects because the proposed Project's contribution to the Port's lighting environment would be negligible.

4.2.1.6.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.2 Air Quality and Meteorology

4.2.2.1 Scope of Analysis

For Cumulative Impacts AQ-1 through AQ-8, the region of analysis for cumulative effects on air quality is the South Coast Air Basin; for AQ-9 (global climate change), it is the entire planet. The highest proposed project impacts would occur within the adjacent communities, including San Pedro, Wilmington, and Long Beach.

4.2.2.2 Cumulative Impact AQ-1: Construction-Related Increase of a Criteria Pollutant for which the Proposed Project Region is in Nonattainment under a National or State Ambient Air Quality Standard—Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-1 assesses the potential for proposed project construction when combined with past, present, and reasonably foreseeable future projects to produce a cumulatively considerable increase in criteria pollutant emissions for which the proposed project region is in nonattainment under a national or state ambient air quality standard or for which the SCAQMD has set a daily emission threshold.

4.2.2.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Due to the substantial number of emission sources and topographical/meteorological conditions that inhibit atmospheric dispersion, the South Coast Air Basin is a "severe-17" nonattainment area for 8-hour O_3, a "serious" nonattainment area for PM_{10}, a nonattainment area for $PM_{2.5}$, and a maintenance area for CO in regard to NAAQS. SCAB is in attainment of the NAAQS for SO_2, NO_2, and lead. In regard to CAAQS, SCAB is presently in nonattainment for O_3, PM_{10}, and $PM_{2.5}$. SCAB is in attainment of the CAAQS for SO_2, NO_2, CO, sulfates, and lead, and is unclassified for hydrogen sulfide and visibility-reducing particles. These pollutant nonattainment conditions within the proposed project region are therefore cumulatively significant. Between 2008 and 2020, a number of large construction projects will occur at the two ports and surrounding areas (see Table 4-1) that will overlap and contribute to significant cumulative construction impacts.

The *2007 Air Quality Management Plan* predicts attainment of all NAAQS within SCAB, including $PM_{2.5}$ by 2014 and O_3 by 2020. However, the predictions for $PM_{2.5}$ and O_3 attainment are speculative at this time.

The construction impacts of related projects would be cumulatively significant if their combined construction emissions would exceed the SCAQMD daily emission thresholds for construction. Because this almost certainly would be the case for all analyzed criteria pollutants and precursors (VOCs, CO, NO_X SO_X, PM_{10}, and $PM_{2.5}$), the related projects would result in a significant cumulative air quality criteria pollutant impact.

4.2.2.2.2 Contribution of the Proposed Project

Construction of the proposed Project would contribute emissions of VOCs, CO, NO_X SO_X, PM_{10}, and $PM_{2.5}$. These emissions would combine with construction emissions from other projects that would already be cumulatively significant. As a result, without mitigation, emissions from proposed project construction would make a cumulatively considerable contribution to a cumulatively significant impact for VOCs, CO, NO_X SO_X, PM_{10}, and $PM_{2.5}$ emissions under CEQA.

4.2.2.2.3 Mitigation Measures and Residual Cumulative Impacts

After implementation of mitigation measures MM AQ-1 through MM AQ-9, emissions from construction of the proposed Project would be reduced; however, they would not be eliminated altogether. Therefore, during construction, the proposed Project would make a cumulatively considerable and unavoidable contribution to significant cumulative impacts for VOCs, CO, NO_X SO_X, PM_{10}, and $PM_{2.5}$ emissions under CEQA.

4.2.2.3 Cumulative Impact AQ-2: Construction-Related Emissions that Exceed an Ambient Air Quality Standard or Substantially Contribute to an Existing or Projected Air Quality Standard Violation—Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-2 assesses the potential for proposed project construction when combined with past, present, and reasonably foreseeable future projects to produce ambient pollutant concentrations that exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation.

4.2.2.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The past, present, and reasonably foreseeable future projects for Cumulative Impact AQ-2 would result in significant cumulative impacts if their combined ambient

pollutant concentrations, during construction, would exceed SCAQMD ambient concentration thresholds for pollutants from construction. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for NO_X, could exceed the thresholds for PM_{10} and $PM_{2.5}$, and are unlikely to exceed for CO. Consequently, construction of the related projects would result in a significant cumulative air quality impact related to exceedances of the significance thresholds for NO_X, PM_{10}, and $PM_{2.5}$.

4.2.2.3.2 Contribution of the Proposed Project

SCAQMD develops ambient pollutant thresholds that signify cumulatively considerable increases in criteria pollutant concentrations. Project construction emissions would produce offsite impacts that would exceed SCAMQD ambient thresholds for NO_2, PM_{10}, and $PM_{2.5}$. Any concurrent emission-generating activity that occurs near the proposed project site would add additional air emission burdens to these already significant levels. As a result, without mitigation, emissions from proposed project construction would make cumulatively considerable contributions to significant cumulative ambient NO_X, PM_{10}, and $PM_{2.5}$ levels.

4.2.2.3.3 Mitigation Measures and Residual Cumulative Impacts

With mitigation measures MM AQ-1 through MM AQ-9, impacts from construction would still exceed SCAQMD NO_2, PM_{10}, and $PM_{2.5}$ ambient thresholds. As such, construction emissions would still make cumulatively considerable (and unavoidable) contributions to significant cumulative ambient NO_2, PM_{10}, and $PM_{2.5}$ levels from concurrent related project construction.

4.2.2.4 Cumulative Impact AQ-3: Operations-Related Increase of a Criteria Pollutant for which the Project Region is in Nonattainment under a National or State Ambient Air Quality Standard—Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-3 assesses the potential for proposed project operation when combined with past, present, and reasonably foreseeable future projects to produce a cumulatively considerable increase in criteria pollutant emissions for which the project region is in nonattainment under a national or state ambient air quality standard or for which SCAQMD has set a daily emission threshold.

4.2.2.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Other projects would be cumulatively significant if their combined operational emissions would exceed SCAQMD daily emission thresholds for operations. Because this almost certainly would be the case for all analyzed criteria pollutants, the related projects would result in a significant cumulative air quality criteria pollutant impact.

4.2.2.4.2 Contribution of the Proposed Project

Peak daily emissions from proposed project operations would increase relative to CEQA baseline emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ during one or more project analysis years. These emission increases would combine with operation emissions from other projects near the proposed project site, which would already be cumulatively significant. As a result, without mitigation, emissions from proposed project operations would make a cumulatively considerable contribution to significant cumulative impacts for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under CEQA.

4.2.2.4.3 Mitigation Measures and Residual Cumulative Impacts

After mitigation, peak daily emissions from the proposed Project would increase relative to CEQA baseline emissions for VOCs, CO, NO_X, SO_X PM_{10}, and $PM_{2.5}$. As a result, after mitigation, emissions from the proposed Project would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under CEQA.

4.2.2.5 Cumulative Impact AQ-4: Operations-Related Emissions that Exceed an Ambient Air Quality Standard or Substantially Contribute to an Existing or Projected Air Quality Standard Violation—Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-4 assesses the potential for proposed project operations when combined with past, present, and reasonably foreseeable future projects to produce ambient concentrations that exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation

4.2.2.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Related projects would result in significant cumulative impacts if their combined ambient concentration levels during operations would exceed SCAQMD ambient concentration thresholds for operations. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for NO_X, could exceed the thresholds for PM_{10} and $PM_{2.5}$, and are unlikely to exceed for CO. Consequently, operation of related projects would result in a significant cumulative air quality impact related to exceedances of significance thresholds for NO_X, PM_{10}, and $PM_{2.5}$.

4.2.2.5.2 Contribution of the Proposed Project

SCAQMD develops ambient pollutant thresholds that signify cumulatively considerable increases in concentrations of these pollutants. Proposed project operations emissions would have concentrations below SCAQMD concentration thresholds for all pollutants. Nonetheless, operations emissions could still make cumulatively considerable (and unavoidable) contributions to significant cumulative ambient NO_2, PM_{10}, and $PM_{2.5}$ levels from concurrent related project operations under CEQA.

4.2.2.5.3 Mitigation Measures and Residual Cumulative Impacts

Proposed project operations emissions would already be below SCAQMD concentration thresholds for all pollutants. As such, mitigation measures are not required. However, as described above, operations emissions could still make a cumulatively considerable and unavoidable contribution to significant cumulative ambient pollutant levels from concurrent related project operations under CEQA.

4.2.2.6 Cumulative Impact AQ-5: Operations-Related Onroad Traffic Contribution to an Exceedance of the 1-hour or 8-hour CO Standards—Cumulatively Insignificant

Cumulative Impact AQ-5 assesses the potential for proposed project operations when combined with past, present, and reasonably foreseeable future projects to create onroad traffic that would contribute to an exceedance of the 1- or 8-hour CO standards.

4.2.2.6.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Related projects would result in significant cumulative impacts on air quality if they would generate traffic levels that cause exceedances of the ambient air quality standards for CO near roadways and intersections. Because this is unlikely to occur, the cumulative impacts of other projects would be considered less than significant.

4.2.2.6.2 Contribution of the Proposed Project

Based on CO hot spot modeling analysis, which includes cumulative growth in traffic levels, significant hot spot impacts under CEQA for proposed project operations are not anticipated because CO standards would not be exceeded. As a result, without mitigation, proposed project operations would not result in cumulatively considerable contributions to CO hot spot impacts within the proposed project region under CEQA.

4.2.2.6.3 Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project would not result in cumulatively considerable contributions to significant cumulative CO hot spot impacts.

4.2.2.7 Cumulative Impact AQ-6: Objectionable Odors at the Nearest Sensitive Receptor—Cumulatively Insignificant

Cumulative Impact AQ-6 assesses the potential of proposed project operations when combined with past, present, and reasonably foreseeable future projects to create objectionable odors at the nearest sensitive receptor.

4.2.2.7.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

There are temporary and semi-permanent sources of odors within the Port region, including mobile sources powered by diesel and residual fuels and stationary industrial sources, such as petroleum storage tanks. Some individuals may sense that diesel combustion emissions are objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. Due to the large number of sources within the Port that emit diesel emissions and the proximity of residents

(sensitive receptors) to Port operations, odorous emissions in the proposed project region are cumulatively significant.

4.2.2.7.2 Contribution of the Proposed Project

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed Project does not include any uses identified by the SCAQMD as being associated with odors and therefore would not produce objectionable odors. As such, the proposed Project would not result in odor impacts and would not make a cumulatively considerable contribution to significant cumulative odor impacts under CEQA.

4.2.2.7.3 Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project would not result in cumulatively considerable contributions to significant cumulative odor impacts.

4.2.2.8 Cumulative Impact AQ-7: Exposure of Receptors to Significant Levels of Toxic Air Contaminants—Cumulatively Significant and Unavoidable

Cumulative Impact AQ-7 assesses the potential of the proposed Project's construction and operations when combined with past, present, and reasonably foreseeable future projects to produce TACs that exceed acceptable public health criteria.

4.2.2.8.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

MATES-II, conducted by the SCAQMD in 2000, estimated the existing cancer risk from TACs in SCAB to be 1,400 in 1,000,000 (SCAQMD 2000). In MATES III, completed by SCAQMD in 2008, the existing cancer risk from TACs was estimated at 1,000 to 2,000 in 1,000,000 in the San Pedro and Wilmington areas. In the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, the CARB estimates that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach occur within and in proximity to the two Ports (CARB 2006). Based on this information, airborne cancer and noncancer levels within the proposed project region are cumulatively significant.

The Port has approved Port-wide air pollution control measures through their San Pedro Bay Ports CAAP (LAHD et al. 2006). Implementation of these measures will reduce the health risk impacts from the proposed Project and future projects at the Port. Currently adopted regulations and future rules proposed by CARB and EPA will further reduce air emissions and associated cumulative health impacts from Port operations. However, because future proposed measures (other than CAAP measures) and rules have not been adopted, it is unknown at this time how these measures would reduce cumulative health risk impacts within the proposed project area, and therefore, airborne cancer and noncancer impacts within the proposed project region would be cumulatively significant.

4.2.2.8.2 Contribution of the Proposed Project

SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions. In addition, typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. Since the proposed Project would not contain such uses, it does not warrant a health risk assessment. Potential proposed project–generated air toxic impacts on surrounding land uses would be less than significant. Nonetheless, proposed project emissions could still make cumulatively considerable (and unavoidable) contributions to significant cumulative TAC emissions from concurrent related project construction and operations under CEQA.

4.2.2.8.3 Mitigation Measures and Residual Cumulative Impacts

Mitigation measures are not required because proposed project TAC emissions would be negligible. However, as described above, TAC emissions could still make a cumulatively considerable and unavoidable contribution to significant cumulative TAC levels from concurrent related project construction and operations under CEQA.

4.2.2.9 Cumulative Impact AQ-8: Conflict with or Obstruction of Implementation of an Applicable AQMP—Less than Cumulatively Considerable

Cumulative Impact AQ-8 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to conflict with or obstruct implementation of an applicable AQMP.

4.2.2.9.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Related projects would result in significant cumulative air quality impacts if they result in population growth or operational emissions that exceed the assumptions in the AQMP. Related projects would be subjected to regional planning efforts and applicable land use plans (such as the General Plan, Community Plans, or Port Master Plan) or transportation plans such as the Regional Transportation Plan and the Regional Transportation Improvement Program. Because the AQMP accounts for population projections that are developed by SCAG, and accounts for planned land use and transportation infrastructure growth, related projects would be consistent with the AQMP. Because of this, related projects would not result in significant cumulative impacts related to an obstruction of the AQMP.

4.2.2.9.2 Contribution of the Proposed Project

As discussed in Section 3.8, "Land Use and Planning," the proposed Project is consistent with all local plans, and development of the proposed Project would be compatible with surrounding uses.

Because the proposed Project is consistent with the local general plan, pursuant to SCAQMD guidelines, it is also considered consistent with the region's AQMP. As such, proposed project–related emissions are accounted for in the AQMP, which is crafted to bring the Basin into attainment for all criteria pollutants. Accordingly, the proposed Project would be consistent with the projections in the AQMP, thus resulting in a less-than-significant impact. The proposed Project would result in a less than cumulatively considerable contribution in terms of conflicting with or obstructing implementation of the AQMP under CEQA.

4.2.2.9.3 Mitigation Measures and Residual Cumulative Impacts

Mitigation measures are not required because cumulative impacts would be less than significant.

4.2.2.10 Cumulative Impact AQ-9: Contribution to Global Climate Change—Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-9 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to contribute to global climate change.

4.2.2.10.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Scientific evidence indicates a trend of warming global surface temperatures over the past century due at least partly to the generation of greenhouse gas emissions from human activities, as discussed in Section 3.2, "Air Quality and Meteorology." Some observed changes include shrinking glaciers, thawing permafrost, and shifts in plant and animal ranges. Credible predictions of long-term impacts from increasing GHG levels in the atmosphere include sea level rise, changes to weather patterns, changes to local and regional ecosystems including the potential loss of species, and significant reductions in winter snow packs. These and other effects would have environmental, economic, and social consequences on a global scale. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (CEC 2006a). Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. In California alone, CO_2 emissions totaled approximately 477.77 million metric tons in 2003 (CEC 2006), which was an estimated 6.4% of global CO_2 emissions from fossil fuels. Based on this information, past, current, and future global GHG emissions, including emissions from projects in the Ports of Los Angeles and Long Beach (Table 4-1) and elsewhere in California, are cumulatively significant.

4.2.2.10.2 Contribution of the Proposed Project

The challenge in assessing the significance of an individual project's contribution to global GHG emissions and associated global climate change impacts is determining whether a project's GHG emissions, which are at a micro-scale relative to global emissions, result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. As noted above, CO_2 emissions in California totaled approximately 477.77 million metric tons in 2003 (CEC 2006). As shown in Table 3.2-22, the proposed Project would produce higher GHG emissions when compared to CEQA baseline levels. Any concurrent emissions-generating activity that occurs global-wide would add additional GHG emission burdens to these already significant levels, which could further exacerbate environmental effects (as discussed in Chapter 3.2, "Air Quality and Meteorology").

Considering Significance Threshold AQ-9, which states that any GHG increase over the CEQA baseline is significant, without mitigation, emissions from proposed project construction and operation would produce cumulatively considerable contributions to global climate change under CEQA.

4.2.2.10.3 Mitigation Measures and Residual Cumulative Impacts

As shown in Table 3.2-23, with mitigation measures MM AQ-1 through MM AQ-15 implemented, the proposed Project would produce higher GHG emissions when compared to CEQA baseline levels. The way in which CO_2 emissions associated with the proposed Project might or might not influence actual physical effects of global climate change cannot be determined. For these reasons, it is uncertain whether emissions from the proposed Project would make a significant contribution to the impact of global climate change when considered with emissions generated by human activity. Nevertheless, as discussed in Chapter 3.2, existing GHG levels are projected to result in changes to the climate of the world, with significant warming seen in some areas, which, in turn, will have numerous indirect effects on the environment and humans.

Proposed project GHG emissions would contribute to existing levels and therefore would contribute to the causes of global climate change. Considering Significance Threshold AQ-9, which states that any increase in GHG emissions over the CEQA baseline is significant, emissions from construction and operation of the proposed Project would produce cumulatively considerable and unavoidable contributions to global climate change under CEQA.

4.2.3 Biological Resources

4.2.3.1 Scope of Analysis

Depending on the biological resource analyzed, there are several different geographical regions identified for the biological resource cumulative impacts. The geographical region of analysis for benthic communities, water column communities (plankton and fish), and water-associated birds includes the terrestrial and aquatic areas of the Los Angeles/Long Beach Harbor (Inner and Outer Harbor areas) because the uplands, basins, channels, and open water areas are hydrologically and ecologically connected. For marine mammals, the analysis area includes the Los Angeles–Long Beach Harbor as well as the Pacific Ocean from near Angels Gate out to Catalina Island in order to cover vessel traffic effects. Special status bird species have differing population sizes and dynamics, distributional ranges, breeding locations, and life history characteristics. For special status birds, the area for cumulative analysis is limited to the harbor (water and adjacent port lands) where impacts from noise and the potential for disturbance associated with the proposed Project and other projects in the harbor could affect such birds. Sea turtles are not expected to occur in the harbor and their presence in the nearshore areas where vessel traffic could affect them is unlikely and unpredictable; consequently, these animals are not considered in the cumulative analysis.

Past, present, and reasonably foreseeable future development that could contribute to cumulative impacts on terrestrial and aquatic biological resources are those projects that involve land disturbance such as grading, paving, landscaping, construction of

roads and buildings, and related noise and traffic impacts. Noise, traffic, and other operational impacts can also be expected to have cumulative impacts on terrestrial species. Marine organisms could be affected by activities in the water such as dredging, filling, wharf demolition and construction, and vessel traffic. Runoff of pollutants from construction and operations activities on land into harbor waters via storm drains or sheet runoff also has the potential to affect marine biota, at least in the vicinity of the drains.

The significance criteria used for the cumulative analysis are the same as those used in Section 3.3.4.2. This cumulative effects analysis considers past, present, and reasonably foreseeable projects in the proposed project area. The timeline for biological resources would date back to pre-Port development (~1869) condition, and future effects would be those that would take place by 2020. The year of NOP publication (2008) is the year that separates past and present projects and serves as the environmental baseline for the proposed Project.

4.2.3.2 Cumulative Impact BIO-1: Adverse Impact on Sensitive Species—Cumulatively Considerable

Cumulative Impact BIO-1 represents the potential for the proposed Project when combined with past, present, and reasonably foreseeable future projects to cause a loss of individuals, or the reduction of existing habitat, of a state- or federally listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern; or the loss of federally designated critical habitat. No critical habitat for any federally listed species is present in the harbor, and thus, no cumulative impacts on critical habitat would occur.

4.2.3.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction of past landfill projects in the Harbor has reduced the amount of marine surface water present and thus foraging and resting areas for special status bird species, but these projects have also added more land and structures that can be used for perching near the water. Construction of Terminal Island, Pier 300, and later Pier 400 provided new nesting sites for the California least tern, and the Pier 400 site is still being used by this species. Shallow water areas that provide foraging habitat for the California least tern and other bird species have been constructed on the east side of Pier 300 and inside the San Pedro breakwater as mitigation for loss of such habitat from past projects, and more such habitat is to be constructed as part of the Channel Deepening project. Cumulative impacts of marine habitat loss on special status species would be less than significant.

Past projects that have increased vessel traffic have also increased underwater sound in the Harbor and in the ocean from the vessel traffic lanes to Angels Gate and

Queens Gate. Ongoing and future terminal upgrade and expansion projects (e.g., Berths 136–147 Marine Terminal [#2], Channel Deepening [#4], Evergreen Improvements [#8], Pier 400 Oil Marine Terminal [#12], Ultramar [#13], Berths 97–109 [#16], Berths 212–214 YTI [#29], Berths 121–131 [#30], Middle Harbor [#72], Piers G & J [#73], Pier T TTI [#76], and Pier S [#77], as well as the San Pedro Waterfront Project [#3]) would add additional cruise ships to the Port, and increase vessel traffic and its associated underwater sound (see Table 4-1). The frequency of vessel sound events would increase and contribute a small increment to the average underwater sound level within the harbor that would not be expected to affect the hearing or behavior of marine mammals. While the number of vessels would increase in the Port over the life of the proposed Project, the number of vessels transiting the main channel at any given time would not increase. Individual marine mammals would likely respond to noise from vessels that pass near them by moving away. Cumulative impacts from past, present, and reasonably foreseeable future project of underwater sound from vessels on marine mammals would be less than significant.

Past, present, and future projects will increase offshore vessel traffic. Ship strikes involving marine mammals and sea turtles, although uncommon, have been documented for the following listed species in the eastern North Pacific: blue whale, fin whale, humpback whale, sperm whale, southern sea otter, loggerhead sea turtle, green sea turtle, olive ridley sea turtle, and leatherback sea turtle (NOAA Fisheries and USFWS 1998a, 1998b, 1998c, 1998d; Stinson 1984; Carretta et al. 2001). Ship strikes have also been documented involving gray, minke, and killer whales. The blue whale, fin whale, humpback whale, sperm whale, gray whale, and killer whale are all listed as endangered under the ESA, although the Eastern Pacific grey whale population was delisted in 1994.

In southern California, potential strikes to blue whales are of the most concern due to their migration patterns relative to established shipping channels. Collisions between whales and large commercial vessels are most likely to lead to reported whale mortality or injury. Blue whales normally pass through the Santa Barbara Channel en route from breeding grounds in Mexico to feeding grounds to the north. Blue whales have historically been a target of commercial whaling activities worldwide. In the North Pacific, the pre-whaling population was estimated at approximately 4,900, and the current population estimate is approximately 3,300 with 1,700 in the eastern North Pacific (NMFS 2008). Along the California coast, blue whale abundance has increased over the past two decades (Calambokidis et al. 1990, Barlow 1995, Calambokidis 1995). However, the increase is too large to be accounted for by population growth alone and is more likely attributed to a shift in distribution. Incidental ship strikes and fisheries interactions are listed by NMFS as the primary threats to the California population. The number of strikes per year ranged from 0 to 7 and averaged 2.6, but the actual number is likely to be greater because not all strikes are reported. As the number of vessels increases, the number of incidents are also expected to increase. The proposed Project will not increase shipping traffic, and thus the potential for whale strikes would not be a cumulatively considerable impact. However, the cumulative impacts associated with past, present,

and reasonably foreseeable future projects could be significant and unavoidable due to the low population size of blue whales relative to historic levels and the potential risk for strikes as vessels cross their migration path to enter the harbor. However, the projects contribution to the potential cumulative impacts associated with vessel strikes would not be cumulatively considerable because smaller recreational vessels, such as those that would use the facilities constructed in Slip 5 as part of the project would not be likely to contribute to injury or mortality of whales from strikes.

Development of the vacant land on Pier 400 adjacent to the California least tern nesting site (Pier 400 Oil Marine Terminal Project [#12]) has the potential to adversely affect that species during construction. Also, construction of the Cabrillo Shallow Water Habitat Expansion and Eelgrass Habitat Area as part of the Channel Deepening Project (#4) has the potential to adversely affect California least tern foraging during construction activities. Any significant impacts to the California least tern could be avoided or minimized through timing of construction activities in areas used for foraging to avoid work when the least terns are present. With respect to other special status species, it is not expected that any nesting habitat, foraging habitat, or individuals would be lost as a result of backland developments. The cumulative impacts of past, present, and reasonably foreseeable future actions on special status species would be less than significant, and the proposed Project's incremental contribution would not be cumulatively considerable.

In-water construction activities (e.g., Berths 136–147 Marine Terminal [#2], San Pedro Waterfront Project [#3], Channel Deepening [#4], Cabrillo Way Marina [#5], Evergreen Improvements [#8], Pier 400 Oil Marine Terminal [#12], Berths 97–109 [#16], Berths 212–214 YTI [#29], Berths 121–131 [#30], Middle Harbor [#72], Piers G & J Redevelopment [#73], Pier T TTI [#76], Pier S [#77], and Schuyler Heim Bridge [#83]; see Table 4-1) could disturb or cause special status birds, other than the California least tern addressed above, to avoid the construction areas for the duration of the activities. Because these projects would occur at different locations throughout the harbor and only some are likely to overlap in time, the birds could use other undisturbed areas in the harbor, and few individuals would be affected at any one time. Construction of the Schuyler Heim Bridge (#80), however, would have the potential to adversely affect the peregrine falcon if any are nesting at the time of construction. If nesting were to be affected, impacts would be significant but mitigable by scheduling the work to begin after the nesting season is complete. Because no other related projects would affect the peregrine falcon or other special status species, cumulative impacts on other special status species would be less than significant and the proposed Project would not have a cumulatively considerable impact on special status species.

In-water construction activities, and particularly pile driving (including the soft start method, which begins impact pile driving at 40–60% of full force for a period of 5 minutes), would also result in underwater sound pressure waves that could affect the behavior of marine mammals, as they abandon the area where pile driving activities are occurring. The locations where these activities (e.g., driving of piling and sheet piling) occur are in areas where few marine mammals occur, where projects in close

proximity are not expected to occur concurrently, and where marine mammals would avoid the disturbance area by moving to other areas within the harbor. Therefore, cumulative impacts on marine mammals from underwater sound associated with pile driving from present and reasonably foreseeable future projects would be less than significant and the proposed Project's contribution would not be cumulatively considerable.

A small (e.g., up to 238 bbl) or larger oil spill within the harbor, even though associated with a low probability of occurrence, could result in significant and unavoidable impacts on Special Status water birds. The proposed Project would increase recreational boat traffic. Thus, the proposed project would slightly increase the potential for an accidental oil spill, and would make a cumulatively considerable contribution to the significant and unavoidable cumulative impacts of oil spills for Special Status water birds. Effects of oil spills on other special status species would be less than significant and would not result in a considerable contribution to cumulative impacts.

4.2.3.2.2 Contribution of the Proposed Project

As discussed in Section 3.3.4.3.1 (Impact BIO-1), construction of the proposed Project would have a less-than-significant impact on special status species, because the proposed Project would not cause injury to these animals. In addition, no injuries to whales associated with vessel strikes would occur since the proposed Project would only slightly increase recreational vessel traffic (and not commercial vessel traffic, which would be more likely to cause injury due to a vessel strike) within the harbor via the small public dock and potential operation of a water taxi, and whales are not typically found within the breakwaters of the harbor. The proposed Project would have no impact on critical habitat as a result of construction and operations because no critical habitat is present. Construction activities would result in no loss of individuals or habitat for special status species.

The slight increase in vessel traffic associated with the proposed Project would increase the risk for an accidental oil spill, which, as mentioned above, would be a cumulatively considerable impact on sensitive species (i.e. California least tern and California brown pelican), when other past, present and reasonably foreseeable future projects are taken into account.

4.2.3.2.3 Mitigation Measures and Residual Cumulative Impacts

There is potential for an accidental oil spill to have a cumulatively considerable contribution to a significant cumulative impact on special status species associated with vessels using proposed project amenities during operation. No mitigation measures are available to reduce the potential for an accidental oil spill; therefore, the contribution of the proposed project would be cumulatively considerable.

4.2.3.3 Cumulative Impact BIO-2: Alteration or Reduction of Natural Habitats, Special Aquatic Sites, or Plant Communities—Cumulatively Considerable

Cumulative Impact BIO-2 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to substantially reduce or alter state-, federally, or locally designated natural habitats, special aquatic sites, or plant communities, including wetlands.

4.2.3.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Essential Fish Habitat (EFH) has been and will be lost due to past, present, and future landfill projects in the harbor. EFH protection requirements began in 1996, and thus, only apply to projects since that time. The projects in Table 4-1 that could result in a loss of EFH are Pier 400 (#1), Berths 136–147 Marine Terminal (#2), Channel Deepening (#4), Berths 97–109 (#16), Middle Harbor Terminal redevelopment (#72), Piers G & J (#73), and Pier T (#76). The Pier S Marine Terminal (#77) project could alter EFH through Back Channel safety improvements, and the West Basin Installation Restoration Site 7 Dredging Project (#82) could alter EFH through dredging. The losses since 1996 include fill for the Pier 400 project (#1) and part of the Channel Deepening project (#4). These impacts were significant but mitigable under CEQA, and the use of mitigation bank credits for the marine habitat loss impacts also offset the losses of EFH. Impacts of fill for the future projects would also be offset by use of mitigation bank credits.

Temporary disturbances to EFH also would occur during in-water construction activities from cumulative projects: San Pedro Waterfront (#3), Channel Deepening (#4), Cabrillo Way Marina (#5), Berths 226–236 Improvements (#8), Consolidated Slip Restoration (#15), Berths 97–109 (#16), Berths 212–214 (#29), Berths 121–131 (#30), Middle Harbor Terminal Redevelopment (#72), Piers G & J (#73), Pier T (#76), Pier S (#77), and West Basin Installation Restoration Site 7 Dredging Project (#82). These disturbances occur at specific locations that are scattered in space and time across the harbor and would not likely cause a significant impact on EFH. Increased vessel traffic and runoff from on-land construction activities and operations resulting from the cumulative projects would not result in a loss of EFH, nor would these activities substantially degrade EFH. Thus, cumulative impacts on EFH would be less than significant from past, present, and reasonably foreseeable future projects.

Natural habitats, special aquatic sites (e.g., eelgrass beds, mudflats), and plant communities (wetlands) have a limited distribution and abundance in the harbor. The 40-acre Pier 300 expansion project caused a loss of eelgrass beds that was mitigated as part of the Pier 300 Project. The Southwest Slip fill in the West Basin completed as part of the Channel Deepening Project resulted in a small loss of saltmarsh that was also mitigated. Prior to agreements to preserve natural habitats such as

mitigation credit systems, losses of eelgrass, mudflats, and saltmarsh from early landfill projects were not documented but were likely to have occurred due to the physical changes to the Port. Therefore, cumulative impacts of construction activities are considered significant. Oil spills from tankers in the harbor would have the potential to affect eelgrass beds at Cabrillo Beach and the Pier 300 Shallow Water Habitat, mudflats, and the Cabrillo saltmarsh under a worst-case scenario. Cumulative oil spill impacts would be significant, and unavoidable for eelgrass beds and other natural habitats.

4.2.3.3.2 Contribution of the Proposed Project

The proposed Project would result in the reduction of 2,200 square feet (0.05 acres) of marine habitat. While the habitat in the Inner Harbor is generally considered of relatively low quality due to its location and the level of shoreline development, the loss of this habitat would be considered significant.

There is a remote possibility of an accidental oil spill from vessels during the operation of the proposed Project, and if an accidental oil spill occurred, it would represent a cumulatively considerable contribution to a potentially significant cumulative impact on natural habitats. Therefore, the contribution of the proposed Project on natural habitats would be cumulatively considerable.

Because the proposed Project would result in a significant impact, it would have a cumulatively considerable contribution associated with other past, present, or reasonably foreseeable future projects.

4.2.3.3.3 Mitigation Measures and Residual Cumulative Impacts

The marine habitat that would be lost is considered Essential Fish Habitat and would be mitigated at the Inner Harbor Mitigation Bank at a ratio of 1.5 acres for each 1 acre impacted. The loss of 2,200 square feet (0.05 acres) of marine habitat within the Inner Harbor will be offset by allocating 3,300 square feet (0.08 acres) of marine habitat in the Inner Harbor Mitigation Bank, thus reducing the loss of this habitat to less than significant and less than cumulatively considerable, with mitigation.

There is potential for an accidental oil spill to have a cumulatively considerable contribution to a potentially significant cumulative alteration or reduction of natural habitats, special aquatic sites, or plant communities associated with vessels using the proposed project amenities during operation. No mitigation measures are available to reduce the potential for an accidental oil spill; therefore, the contribution of the proposed project would be cumulatively considerable.

4.2.3.4 Cumulative Impact BIO-3: Interference with Migration or Movement Corridors—No Cumulative Impact

Cumulative Impact BIO-3 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to interfere with wildlife migration or movement corridors.

4.2.3.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.3.4.2 Contribution of the Proposed Project

The proposed Project would have no impacts on migration or movement corridors, because there are no migration or movement corridors within the Port; therefore, it also would have no cumulatively considerable contribution to any cumulative impact. Since the proposed Project would have no impact, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.3.4.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.3.5 Cumulative Impact BIO-4: Disruption of Local Biological Communities—Cumulatively Considerable

Cumulative Impact BIO-4 represents the potential of the proposed Project when combined with past, present, and future projects, to cause a cumulatively substantial disruption of local biological communities (e.g., from the introduction of noise, light, or invasive species).

4.2.3.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Dredging and Wharf Work. Construction of past projects in the harbor has involved in-water disturbances such as dredging and wharf construction that removed surface layers of soft bottom habitat, and temporarily removed or permanently added hard substrate habitat (e.g., piles and rocky dikes). These disturbances altered the benthic habitats present at the location of the specific projects, but effects on benthic communities were localized and of short duration as invertebrates recolonized the habitats. Because these activities only affected a small portion of the harbor at any given time and recovery has occurred or is in progress, biological communities in the harbor have not been continually changing. Similar construction activities (e.g., wharf construction/reconstruction and dredging) would occur for these cumulative projects that are currently underway and for some that would begin in the future (see Table 4-1): Berths 136–147 Marine Terminal (#2), San Pedro Waterfront Project (#3), Channel Deepening (#4), Cabrillo Way Marine (#5), Evergreen Improvements (#8), Pier 400 Oil Marine Terminal (#12), Berths 97–109 (#16), Berths 212–214 (#29), Berths 121–131 (#30), Middle Harbor Terminal Redevelopment (#72), Piers G & J (#73), Pier T (#76), and Pier S (#77).

Because recolonization of dredged areas and new riprap and piles begins immediately and provides a food source for other species, such as fish, within a short time, multiple projects spread over time and space within the harbor would not substantially disrupt benthic communities in comparison to current conditions. Construction disturbances at specific locations in the water and at different times that are caused by the cumulative projects, which can result in fish and marine mammals avoiding the work area, are not expected to substantially alter the distribution and abundance of these organisms in the harbor and thus would not substantially disrupt biological communities. Turbidity that results from in-water construction activities occurs in the immediate vicinity of the work and lasts just during the activities that disturb bottom sediments. Effects on marine biota are thus localized to relatively small areas of the harbor and are of limited duration for each project. Those projects that are occurring at the same time but that are not in close proximity would thus not have additive effects.

Furthermore, based on biological baseline studies described in Section 3.3, "Biological Resources," the benthic marine resources of the harbor have not declined during Port development activities occurring since the late 1970s. The biological baseline conducted by MEC (2002) identified healthy benthic communities in the Outer Harbor despite major dredging and filling activities associated with the Port's Deep Draft Navigation Project (USACE and LAHD 1992). However, between 2002 and 2005, the USACE and the Port dredged most of the Inner Harbor channels and basins from -45 to -53 feet (Channel Deepening Project, #4). In addition, additional Channel Deepening dredging may be occurring in 2009 around selected berths in the West Basin.

Recolonization of disturbed marine environments begins rapidly and is characterized by high production rates of a few colonizing species. However, establishment of a climax biological community typical of the West Basin and Inner Harbor could take several years.

Landfilling. Landfilling has removed and would continue to remove marine habitat and disturb adjacent habitats in the harbor. The projects listed in Table 4-1 that involve landfill construction are: Pier 400 (#1), Channel Deepening (#4), Berths 97–109 (#16), Berths 302–305 APL (#24), Middle Harbor Terminal redevelopment (#72), and Piers G & J (#73). Numerous other projects in the past (prior to those listed in Table 4-1) also included landfill construction. These included Pier 300 and the remaining terminal land areas that were not built on land that existed prior to Port development. During the filling process, suspension of sediments would result in turbidity in the vicinity of the work with rapid dissipation upon completion of the fill to above the water level. Water column and soft bottom habitats are lost while riprap habitats are gained. Although the total amount of marine habitat in the harbor has decreased, a large amount remains, and the biological communities present in the remaining harbor habitats have not been substantially disrupted as a result of those habitat losses. All marine habitat loss impacts from landfill construction have been mitigated to insignificance through onsite (shallow water habitat construction) and offsite (Batiquitos and Bolsa Chica restorations) mitigation since implementation of the agreement with the regulatory agencies (see Cumulative Impact BIO-5). The landfill impacts of past projects on marine biological habitat, prior to the application of mitigation offsets or mitigation agreements, is unquantified; however, due to the level of development that has occurred, the past projects are assumed to have resulted in a significant cumulative impact that now constitutes the current baseline settings.

The landfill impacts of present and reasonably foreseeable future projects have been or would be mitigated by offsets of mitigation bank credits. As a result, present and reasonably foreseeable future projects would not result in additional significant cumulative impacts related to the loss of marine habitat.

Backland Construction and Operations. Runoff from construction activities on land has reached harbor waters at some locations during past project construction, particularly for projects implemented prior to the 1970s when environmental regulations were introduced. Past projects included Pier 300, Pier J, and the remaining terminal land areas within the Los Angeles–Long Beach Harbor. Runoff also has the potential to occur during present and future projects (all projects in Table 4-1 because all drainage in the area containing the cumulative projects is ultimately to the harbor). Construction runoff would only occur during construction activities so that projects that are not concurrent would not have cumulative effects. Construction runoff would add to ongoing runoff from operation of existing projects in the harbor at specific project locations and only during construction activities. For past, present, and future projects, the duration and location of such runoff would vary over time. Measures such as berms, silt curtains, and sedimentation basins are used to prevent or minimize runoff from construction, and this keeps the concentration of pollutants below thresholds that could measurably affect marine biota. Runoff from

past construction projects (e.g., turbidity and any pollutants) has either dissipated shortly after construction was completed or settled to the bottom sediments. For projects more than 20 years in the past, subsequent settling of suspended sediments has covered the pollutants, or the pollutants have been removed by dredging projects. Runoff from operation of these past projects continues but is regulated. Biological baseline surveys in the Harbor (MEC 1988; MEC and Associates 2002) have not shown any disruption of biological communities resulting from runoff. Effects of runoff from construction activities and operations would not substantially disrupt local biological communities in the harbor, and as a consequence past, present, and reasonably foreseeable future projects would not result in significant cumulative local biological community impacts related to runoff.

Much of the development in the harbor has occurred and continues to occur on landfills that were constructed for that purpose. As a result, those developments did not affect terrestrial biota. Redevelopment of existing landfills to upgrade or change backland operations temporarily affected the terrestrial biota (e.g., landscape plants, rodents, and common birds) that had come to inhabit or use these industrial areas. Future cumulative developments such as hotels and other commercial developments on lands adjacent to the harbor would be in areas that do not support natural terrestrial communities or are outside the region of analysis. Projects in Table 4-1 that are within the geographical region of analysis and could affect terrestrial biological resources are: Berths 136–147 Marine Terminal (#2), Channel Deepening (#4), Evergreen Improvements (#7), SSA Outer Harbor Fruit Facility Relocation (#9), Crescent Warehouse Company Relocation (#11), Ultramar (#13), Berths 97–109 (#16), Berths 171–181 (#17), Berths 206–209 (#18), South Wilmington Grade Separation (#25), Avalon Development District Project (#26), "C" Street/Figueroa Street Interchange (#27), Port Transportation Master Plan (#28), Berths 212–224 (#29), Berths 121–131 (#30), Banning Elementary School #1 (#60), East Wilmington Greenbelt Community Center (#61), Pier A West Remediation (#74), Pier A East (#75), and Schuyler Heim Bridge Replacement (#83). Construction and operation of these projects would not substantially disrupt terrestrial biological communities because no well-developed communities are present and no bird nesting is expected at any of the cumulative project sites. Based on this past, present, and reasonably foreseeable future projects would not result in significant cumulative local biological community impacts related to upland development within the geographic scope.

Vessel Traffic. Cumulative marine terminal projects (e.g., Berths 136-147 Marine Terminal [#2], San Pedro Waterfront Project [3], Channel Deepening [#4], Evergreen Improvements [#8], Pier 400 Oil Marine Terminal [#12], Ultramar [#13], China Shipping [#16], LAXT Crude Oil [#19], YTI [#29], Yang Ming [#30], Middle Harbor [#72], Piers G & J [#73], Pier T TTI [#76], and Pier S [#77]) that involve vessel transport of cargo and recreational boat traffic into and out of the harbor have increased vessel traffic in the past and would continue to do so in the future. Commercial and recreational vessels have introduced invasive exotic species into the harbor through ballast water discharges and via their hulls. Ballast water discharges are now regulated so that the potential for introduction of invasive exotic species by this route has been greatly reduced. The potential for introduction of exotic species

via vessel hulls has remained about the same, but use of antifouling paints and periodic cleaning of hulls to minimize frictional drag from growth of organisms keeps this source low. While exotic species are present in the harbor, there is no evidence that these species have disrupted its biological communities. Biological baseline studies conducted in the harbor continue to show the existence of diverse and abundant biological communities. However, absent the ability to eliminate the introduction of new species through ballast water or on commercial and recreational vessel hulls, it is possible that additional invasive exotic species could become established in the harbor over time, even with these control measures. As a consequence, past, present, and reasonably foreseeable future projects would result in significant cumulative local biological community impacts related to the introduction of invasive species.

The amount of chemicals released to harbor waters from leaching of antifouling paints on vessel hulls would increase in proportion to the increased number of vessels resulting from cumulative projects. As described below for Water Quality (Section 4.2.14), cumulative impacts would be significant because waters in parts of the harbor are impaired for some of these chemicals. However, the concentration of chemicals toxic to marine biota would not be increased to a level that would substantially disrupt local communities, and cumulative impacts on local biological communities would be less than significant.

A long-term increase in the transport of crude oil and/or petroleum products through the Los Angeles–Long Beach Harbor area would result from these cumulative projects: Ultramar (#13) and Chemoil (#81) (assuming that petroleum product throughput and number of vessels would increase) as well as the proposed Project. This would increase the potential for accidental spills of these products into harbor waters in proportion to the number of vessels and product transfers. A spill from the existing pipelines over Dominguez Channel is unlikely to occur but could release oil into Inner Harbor waters at that location. Accidents during tanker transit through the harbor to existing berths could also release oil into harbor waters. Small spills of less than 238 bbl are expected to have less-than-significant impacts on local biological communities because the area affected would be localized, no sensitive species are likely to be affected, and containment and cleanup procedures would reduce the severity of impacts. A moderate to large spill that affects large numbers of water-associated birds such as gulls or large amounts of intertidal invertebrate communities would have significant cumulative impacts.

Oil spills on land would likely be at tank farms within containment berms where few to no biological resources are present and would be cleaned up immediately. Spills from pipelines would likely be underground or in containment areas at oil facilities. Cumulative impacts on local terrestrial biological communities would be less than significant.

4.2.3.5.2 Contribution of the Proposed Project

Due to the developed existing condition of the terrestrial portion of the site, the proposed Project would not result in any significant alteration of terrestrial biological communities. For marine biological communities, potential alterations of biological communities would include an increase of shade on intertidal and harbor edges from construction of new overwater structures and the potential for an accidental oil spill. Changes associated with shading would not alter the general character of Inner Harbor intertidal or harbor edge habitat and associated communities from their existing conditions. There is a remote possibility of an accidental oil spill from vessels during the operation of the proposed Project, and if an accidental oil spill occurred, it would represent a cumulatively considerable contribution to a potentially significant cumulative impact on marine biological communities. Therefore, the incremental contribution of the proposed Project on Impact BIO-4 would be cumulatively considerable.

4.2.3.5.3 Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are available to reduce the potential for an accidental oil spill; therefore, the contribution of the proposed Project would be cumulatively considerable.

4.2.3.6 Cumulative Impact BIO-5: Loss of Marine Habitat—Cumulatively Considerable

Cumulative Impact BIO-5 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in a permanent loss of marine habitat.

4.2.3.6.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Numerous landfill projects have been implemented in the harbor since it was first developed, and these projects have resulted in an unquantified loss of marine habitat. For the cumulative projects listed in Table 4-1, approximately 570 acres of landfill have been completed in the harbor (Pier 400 [#1] and Channel Deepening [#4]), another 75 acres are in the process of being filled (Piers G & J [#73] and Pier T TTI [#76]), and future planned landfills (without the proposed Project) total about 65 acres (Channel Deepening [#4], Berths 97–109 [#16], and Middle Harbor Terminal Redevelopment [#72]). Berths 136–147 Marine Terminal [#2] would fill 9.5 acres. Thus, well over 700 acres of marine habitat have been or will be lost in the harbor. Losses of marine habitat prior to implementation of the agreements among the Ports and regulatory agencies (City of Los Angeles 1984, 1997) were not mitigated.

Losses since that time have been, and will be for future projects, mitigated by use of existing mitigation bank credits from marine habitat restoration off site and through creation of shallow water habitat within the Outer Harbor as established in the agreements with the regulatory agencies.

The loss of habitat impacts of past projects, prior to the application of mitigation offsets or mitigation agreements, is unquantified; however, due to the level of development that has occurred, the past projects are assumed to have resulted in a significant cumulative impact that now constitutes the current baseline settings.

The loss of habitat impacts of present and reasonably foreseeable future projects have been or would be mitigated by offsets of mitigation bank credits. As a result, present, and reasonably foreseeable future projects would not result in additional significant cumulative impacts related to the loss of marine habitat.

4.2.3.6.2 Contribution of the Proposed Project

Construction of the proposed Project would result in permanent changes to the proposed project area that would increase shading through the addition of 43,220 square feet of overwater structures. The change in ambient light associated with the addition of 43,220 square feet of overwater structures would not affect eelgrass, kelp, or other aquatic vegetation or macroalgae, as these currently do not exist in Slip 5, or exist in very small quantities.

The proposed Project would result in the loss of 2,200 square feet (0.05-acres) of Inner Harbor marine habitat. This habitat is of generally low quality, when compared to the habitat provided in other areas of the harbor; however, the loss of these 2,200 square feet (0.05-acres) of marine habitat would be a significant impact, and thus the proposed Project's contribution is cumulatively considerable.

4.2.3.6.3 Mitigation Measures and Residual Cumulative Impacts

The loss of 2,200 square feet of marine habitat as a result of the proposed Project will be mitigated at a ratio of 1.5 to 1. Thus 3,300 square feet (0.08 acres) of marine habitat at the Inner Harbor Mitigation Bank will be dedicated to the proposed Project. Although this will ensure that the proposed Project will have a less than significant impact after mitigation, it would still be considered a significant cumulative impact, and the proposed Project's contribution would be cumulatively considerable.

4.2.4 Cultural Resources

4.2.4.1 Scope of Analysis

The geographic region of analysis for cumulative effects on cultural and paleontological resources related to Port projects varies on the type of resource. In general, areas situated on natural landforms within and surrounding the Port need to be considered for prehistoric archaeological resources as well as paleontological resources. This also includes portions of the natural landscape located within harbor waters that may contain prehistoric and/or paleontological resources that have become submerged as a result of rising sea levels and/or dredging activities.

Historical archaeological resources and historic architectural resources may be found on both natural landforms and/or in fill/artificial soils. In addition, submerged cultural resources such as historic sailing vessels may be encountered within harbor waters. Impacts on prehistoric and historical archaeological resources as well as paleontological resources typically includes ground disturbance such as grading or dredging, while impacts on the historic built environment typically result from modification, relocation, and demolition. Impacts on submerged historical archaeological resources, such as sunken ships, may also result from dredging and modification of the harbor.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.4, "Cultural Resources."

4.2.4.2 Cumulative Impacts CR-1, CR-2, and CR-3: Adverse Effect on Known and Unknown Prehistoric or Historical Archaeological Resources including Buried Human Remains—Less than Cumulatively Considerable with Mitigation

Cumulative Impact CR-1, CR-2, and CR-3 represent the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to disturb, damage, or degrade listed, eligible, or otherwise unique or important known or unknown prehistoric and/or historical archaeological resources including buried human remains.

4.2.4.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Archaeologists estimate that past and present projects within urban areas including the proposed project vicinity have destroyed over 80% of all prehistoric sites without

proper assessment and systematic collection of information beforehand. As prehistoric sites are non-renewable resources, the cumulative direct and indirect impacts of these actions are significant. Such projects have eliminated our ability to study sites that may have been likely to yield information important in prehistory. In other words, the vast majority of the prehistoric record has been already lost.

There is a low potential to encounter buried prehistoric and/or historic period human remains within the proposed project area. According to the Phase I historical resources study (ICF Jones & Stokes 2008) no known prehistoric burials have been encountered within a one-mile radius of the proposed project area. In addition, no historic period cemeteries have been documented within the proposed project boundaries.

However, the cumulative total of Port and other development projects could potentially impact buried cultural resources and/or unanticipated human remains. Construction activities (i.e., excavation, dredging, and land filling) associated with present and future Port projects, including the Pier 400 Container Terminal Project (#1), San Pedro Waterfront Project (#3), Channel Deepening Project (#4), Cabrillo Way Marina (#5), Artificial Reef, San Pedro Breakwater (#6), Consolidated Slip Restoration (#15), Berths 97–109 Container Terminal Project (#16), Southern California International Gateway (#20), and Berths 212–224 Container Terminal Improvements (#29) would potentially require excavation should it be determined that there is a potential to impact significant prehistoric and/or historical archaeological resources and/or human remains.

Although much of the area has been previously disturbed, there is the potential for areas of the proposed Project on or adjacent to natural landforms, and other related upland Port projects on the periphery of the Port, including the San Pedro Waterfront Enhancements Project, (#22), South Wilmington Grade Separation (#25), Avalon Development District (#26), "C" Street/Figueroa Street Interchange (#27), and I-110/SR 47 Connector Improvement Program (#32), to disturb unknown, intact subsurface prehistoric or historic archaeological resources. Reasonably foreseeable future projects within upland areas, such as the Community of San Pedro (#46, #47, #49, #52, #53, #54, #55, #56, #57, #58), Community of Wilmington (#60, #62, #63), Harbor City, Lomita, and Torrance (#65, #67, #68, #69, #70, #71), and City of Long Beach (#87, #88, # 89), would also potentially contribute to this impact. Therefore, each of these projects would result in significant cumulative impacts.

4.2.4.2.2 Contribution of the Proposed Project

Prehistoric Archaeology

As documented in Section 3.4.4.3.1 (**Impacts CR-1 and CR-2**), no known prehistoric archaeological sites are located within the project area. However, two prehistoric archaeological sites, CA-LAn-150 and CA-LAn -283, have been identified adjacent to a portion of the proposed California Coastal Trail extension.

Construction and excavation activities associated with the proposed Project, at its peripheries, would impact intact natural landforms where prehistoric occupation occurred. Given previous disturbance, the potential for disturbing, damaging, or degrading unknown prehistoric archaeological resources is unlikely but possible.

There is a low potential to encounter buried prehistoric and/or historic period human remains within the proposed project area (**Impact CR-3)**. According to the Phase I historical resources study (ICF Jones & Stokes 2008), no known prehistoric burials have been encountered within a one-mile radius of the proposed project area. In addition, no historic period cemeteries have been documented within the proposed project boundaries. In the event human remains are discovered, the Port would be required to comply with state law which states that there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner is contacted and the appropriate steps taken pursuant to Health and Safety Code §7050.5 and Public Resource Code §5097.98. The proposed Project's contribution to a cumulatively significant impact would not be cumulatively considerable and therefore the project would not result in a significant cumulative impact on prehistoric resources.

Historical Archaeology

According to the records search, no known historical archaeological sites are located within either the program- or project-level portions of the proposed project area. However, the records search indicates that the proposed project area is sensitive for historical archaeological resources. CA-LAn-2135H is located approximately 0.04 of a mile from the Waterfront Red Car Line and California Coastal Trail. This site consists of the location of the 424-acre Los Angeles Union Oil Refinery, which was constructed in 1917. According to the records search, the site consists primarily of tanks, refinery and maintenance facilities, office structures, utilities, and roads. The site is located 0.04 of a mile from the proposed project area, and is separated from the proposed project area by extensive development, including the 110 Freeway, and would not be affected by the proposed project.

The Phase I historical resources study (ICF Jones & Stokes 2008) has resulted in the identification of six cultural resources within the project area: ICFJSA-NS-1/Pacific Electric Railway, ICFJSA-NS-2/Harbor Belt Line Railroad, ICFJSA-NS-3/Drainage Swale, ICFJSA-NS-4/Pacific Electric Railway "Channel Track", ICFJSA-NS-5 Water Street Wharf /Catalina Steamer Terminal, ICFJSA-NS-6/Stacked Stone Breakwater. Of these resources, only ICFJSA-NS-1 was determined eligible for listing on the CRHR. Implementation of **MM CR-2** would reduce the cumulative impacts of the proposed project by incorporating the resource into the proposed project design. Therefore, with implementation of **MM CR-2**, the proposed Project would not contribute to significant cumulative impacts to archaeological resources.

Furthermore, the Phase I historical resources study ICF Jones & Stokes 2008) has also indicated the potential for subsurface historical archaeological deposits associated a Civil War Government Depot at Banning's Landing within the Avalon

Waterfront District portion of the proposed project area. Likewise, the delineation of businesses on historic maps indicates the area has a very high potential for extant subsurface historical archaeological deposits within portions of the Avalon Development District, specifically the proposed Mercado. Implementation of proposed Project **MM CR-3** and **MM CR-4** would reduce the cumulative impacts of the proposed Project. Under **MM CR-3** a treatment plan would be developed by a qualified archaeologist and implemented in the event that subsurface historical archaeological deposits are encountered during ground-disturbing activities.

Under **MM CR-4** a program would be developed by a qualified archaeologist to monitor for non-renewable archaeologists resources during initial ground disturbance in sensitive areas. If archaeological sites were found, work would temporarily cease until a qualified archaeologist evaluates the significance of the find and, if determined to be a significant, implements the provisions for treatment as outlined in **MM CR-3**. These actions would eliminate the proposed Project's cumulatively considerable contribution to cumulative impacts. Therefore, with implementation of **MM CR-3** and **MM CR-4**, the proposed Project would not contribute to significant cumulative impacts to archaeological resources

4.2.4.2.3 Mitigation Measures and Residual Cumulative Impacts

Because there is always the potential to impact unknown buried cultural resources in historically inhabited areas, mitigation would be required for the proposed Project to minimize significant impacts (MM CR-1 through MM CR-5). Other cumulative projects would also potentially impact buried cultural resources. Implementation of this mitigation would help minimize cumulative effects on cultural resources from the proposed Project.

The operation of the proposed Project, once completed, is not anticipated to impact cultural resources. There would be no ongoing ground-disturbance activities once construction is completed. The proposed Project would not produce any long-term indirect impacts on cultural resources. It would not increase access to sensitive cultural sites or impair the continued use of any known historic structures or sites. Therefore, the operation of the proposed Project would not make a cumulatively considerable contribution to cumulative impacts on cultural resources within the Port.

4.2.4.3 Cumulative Impact CR-4: Loss of or Loss of Access to Paleontological Resources—Less than Cumulatively Considerable with Mitigation

Cumulative Impact CR-4 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in the permanent loss of, or loss of access to, a paleontological resource of regional or statewide significance.

4.2.4.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The number of significant paleontological resources in the immediate project areas destroyed by past and present projects is likely to have been low, since near surface geologic deposits underlying the proposed Avalon Waterfront District, the Avalon Development District, and Avalon Triangle Park, as well as the eastern extent of the Waterfront Red Car Line/California Coastal Trail along Harry Bridges Boulevard consist of Holocene-age, near shore, marine and non-marine deposits, including beach, estuary, tidal flat, lagoon, shallow-water bay sediments, and shoreline terrace deposits, which have a low potential to encompass paleontological resources. These younger alluvial deposits are overlain in many places by artificial fill materials, as land has been built up during the historic development of the Port. However, any excavation operations within the proposed Project area or vicinity which reach underlying deposits of older Quaternary Alluvium or the San Pedro Sand have the potential to temporarily unearth and permanently destroy sensitive paleontological resources.

The western extent of the Waterfront Red Car Line/California Coastal Trail, west of Figueroa along John S. Gibson Boulevard, is underlain by Quaternary alluvium, Quaternary older alluvium, and Pleistocene-age offshore marine deposits of San Pedro Sand. The San Pedro Sand was deposited during the middle Pleistocene and dates to approximately 500,000 to 200,000 years ago (Kirby and Demere 2007). Pleistocene-age San Pedro Sand is mapped at the surface between the Northwest Slip and the Southwest Slip, and in patches near the Vincent Thomas Bridge. These deposits are of fossil bearing age, and are of scientific interest if intact.

Within the more extensive project vicinity, geological formations in which important terrestrial vertebrate fossils may be found, however, have been substantially disturbed by urban development without systematic analysis by a professional paleontologist. Many fossils encountered during past construction may have been in poor condition or have been redundant examples of species previously recognized and characterized. There is the potential, however, for unusual (i.e., because of their age, size, and/or condition) or previously unrecorded fossil species to be encountered within an urban project area. It is assumed that past excavation and construction projects undertaken without conditions of approval requiring expert assessment when fossils encountered have resulted in substantial number of significant resources being destroyed without analysis. Their destruction without proper assessment has reduced the ability to reconstruct the region's fossil record.

Construction activities (i.e., excavation, dredging, and land filling) associated with present and future Port projects, including the Pier 400 Container Terminal Project (#1), Channel Deepening Project (#4), Cabrillo Way Marina (#5), Artificial Reef, San Pedro Breakwater (#6), Consolidated Slip Restoration (#15), Berths 97–109 Container Terminal Project (#16), Southern California International Gateway (#20), and Berths 212–224 Container Terminal Improvements (#29) would potentially require excavation. Construction activities associated with these projects would be in

areas of historical estuary habitats containing sediments dating from recent geologic time (i.e., the last 20,000 years), well after the time periods when animals that have been fossilized were present, and recent built land that would not contain natural fossil deposits. Therefore, portions of these projects would not be located within areas with potentially significant vertebrate paleontological resources.

Although much of the area has been previously disturbed, there is the potential for areas on or adjacent to natural landforms and other related upland Port projects on the periphery of the Port, including the San Pedro Waterfront Enhancements Project, (#22), South Wilmington Grade Separation (#25), Avalon Development District (#26), "C" Street/Figueroa Street Interchange (#27), and I-110/SR 47 Connector Improvement Program (#32)) to disturb unknown paleontological resources. Reasonably foreseeable future projects within upland areas that may affect paleontological resources include those in the Community of San Pedro (#46, #47, #49, #52, #53, #54, #55, #56, #57, #58), Community of Wilmington (#60, #62, #63), Harbor City, Lomita, and Torrance (#65, #67, #68, #69, #70, #71), and City of Long Beach (#87, #88, #89). The County of Los Angeles (Los Angeles County 2007) and City of Long Beach (City of Long Beach 2007) do not have code requirements ensuring that paleontological resources encountered during construction are professionally assessed and preserved. Therefore, such past, present, and foreseeable future projects may result in the destruction of paleontological resources. The impacts of each of these projects would result in a significant cumulative impact.

4.2.4.3.2 Contribution of the Proposed Project

Except in the western reach of the Waterfront Red Car Line/California Coastal Trail, construction-related excavations would be confined to areas underlain by recent sediments or artificial fill materials, and the proposed Project would disturb ground within areas of low paleontological sensitivity. However, even in these areas the depths the thickness of fill materials is as yet unknown, as is the thickness of the Holocene-age younger alluvium; therefore, depth of cover to buried geologic deposits that may contain paleontological resources is not known. Therefore there is a potential disturbance to paleontological resources at depth by deep excavations for the proposed Project. Therefore, the incremental effect of the proposed Project on paleontological resources would be considered cumulatively considerable under CEQA when considered in conjunction with past projects and related present and future projects outside of the jurisdiction of the Port of Los Angeles.

4.2.4.3.3 Mitigation Measures and Residual Cumulative Impacts

Implementation of proposed Project **MM CR-6** would reduce the cumulative impacts of the proposed Project. Under **MM CR-6** a program would be developed by a qualified vertebrate paleontologist to monitor for non-renewable paleontological resources during initial ground disturbance in sensitive areas, that is, deep excavations in areas not made up of artificial fill materials. If fossils were found,

work would temporarily cease until a qualified vertebrate paleontologist evaluates the significance of the fossil and, if determined to be a significant, systematically removes and stabilizes the specimen in anticipation of its preservation, and curation in a qualified professional research facility. These actions would eliminate the proposed Project's cumulatively considerable contribution to cumulative impacts. Therefore, with implementation of **MM CR-6**, the proposed Project would not contribute to significant cumulative impacts to paleontological resources.

4.2.4.4 Cumulative Impact CR-5: Disturbance of Historic Architectural Resources—Less than Cumulatively Considerable

Cumulative Impact CR-1 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to disturb structures that have been determined eligible for the California Register of Historic Places or the National Register of Historic Places, or otherwise considered unique or important historic architectural resources under CEQA.

4.2.4.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects within urban settings including the proposed Project area have involved demolition of significant historic architectural structures, most often without the benefit of their recordation (photographs and professional drawings) beforehand. Though each structure over 50 years old is not necessarily unique, historic buildings are capable of contributing to understanding events that have made a significant contribution to the broad patterns of history and/or may have been associated with the lives of persons significant in the past and/or may have been architecturally distinctive. Their destruction without proper recordation has minimized the ability to reconstruct the region's heritage.

Proposed present and future Port projects requiring removal of significant or potentially significant historical architectural resources (i.e., demolition of structures over 45 years of age) include the following:

- Canner's Steam Demolition Project (#7). Demolition of two unused buildings and other small accessory structures at the former Canner's Steam Plant in the Fish Harbor area of the Port.
- Pan-Pacific Fisheries Cannery Buildings Demolition Project (#20). Demolition of two unused buildings and other small accessory structures at the former Pan-Pacific Cannery in the Fish Harbor area of the Port.

- Dana Strand Public Housing Redevelopment Project (#63) in the Community of Wilmington. The existing facility is being torn down and redeveloped to provide a 116-unit affordable housing, and public facilities.
- 1437 Lomita Boulevard Condominiums project (#65) within the City of Lomita. Demolition of existing closed hospital to construct 160 condominium units, 1437 Lomita Boulevard (at Senator Avenue), Harbor City.
- Port of Long Beach, the Administration Building Replacement Project (#78). Replacement of the existing Port Administration Building with a new facility on an adjacent site.
- Southwest Marine Demolition Project (#31). Demolition of buildings associated with the World War II emergency shipbuilding historic district. Demolition of all buildings and other small accessory structures at the Southwest Marine (Bethlehem Shipyard).

Cumulative impacts associated with past, present, and reasonably foreseeable future projects regarding historical architectural resources would be cumulatively significant since these projects would include the removal of significant or potentially significant historical architectural resources.

4.2.4.4.2 Contribution of the Proposed Project

As documented in Section 3.4.4.3 (Impact CR-5) there are five properties located within the proposed Project's Area of Potential Effects that are listed in or have been determined to be eligible for the NRHP, the California Register, and/or the Los Angeles Historic-Cultural Monument List. Impacts on these properties associated with the proposed Project would either not occur or be less than significant. There is one property that has been determined eligible for the California Register and/or the Local Register of Historical Resources by the lead agency. However, it was determined either no impact or less-than-significant impacts would occur on this property as a result of the proposed Project. There are eight properties that have either been determined significant by the lead agency, and/or have been determined to be significant in a historical resources survey. As discussed under Impact CR-5, the project would implement landscaping around historic resources and reuse the Bekins building for the Red Car Museum. Impacts associated with the proposed Project on these properties would either not occur or be less than significant.

The proposed Project would have no adverse effects on historic architectural resources, and impacts would be less than significant. Therefore, the contribution of the proposed Project would not be cumulatively considerable under Impact CR-5 when combined with past, present, and reasonably foreseeable future projects.

4.2.4.4.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.5 Geology

4.2.5.1 Scope of Analysis

The geographic scope for cumulative impacts varies for geological resources, depending on the geologic issue. The geographic scope with respect to seismicity includes the Wilmington Harbor community and extends to adjacent areas, including the community of San Pedro, and the greater Port of Los Angeles. An earthquake capable of creating substantial damage or injury at the proposed project site could cause substantial damage or injury throughout this area of man-made fill, which is prone to liquefaction and differential settlement. The geographic scope with respect to subsidence/settlement, expansive soils, and unstable soil conditions would be confined to the proposed project area, as these impacts are site-specific and relate primarily to construction techniques. There are no landslides, mudflows, and modification of topography or prominent geologic features, as the Port area is generally flat, not subject to slope instability, and contains no unique geologic features.

Past, present, and reasonably foreseeable future developments that could contribute to cumulative impacts associated with geologic resources are those that involve the addition of new land area, infrastructure, and personnel that would be subject to earthquakes and unstable soils.

All projects located in the proposed project area are subject to severe seismically induced ground shaking due to an earthquake on a local or regional fault. Structural damage and risk of injury as a result of such an earthquake are possible for most of the cumulative projects listed in Table 4-1, with the exception of, for example, the Channel Deepening Project and the Artificial Reef Project, as these projects do not involve existing or proposed structural engineering or onsite personnel.

For the purposes of this EIR, the timeframe of current or reasonably anticipated projects extends to the year 2020, and the vicinity is defined as the area over which effects of the proposed Project could contribute to cumulative effects. The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.5.4.2.

4.2.5.2 Cumulative Impact GEO-1: Damage or Risk due to Fault Rupture, Seismic Ground Shaking, Liquefaction, or other Seismically Induced Ground Failure—Cumulatively Considerable and Unavoidable

Cumulative Impact GEO-1 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would place structures and/or infrastructure in danger of substantial damage or expose people to substantial risk following a seismic event.

Southern California is recognized as one of the most seismically active areas in the United States. The region has been subjected to at least 52 major earthquakes (i.e., of M6 or greater) since 1796. Earthquakes of M7.8 or greater occur at the rate of about two or three per 1,000 years, corresponding to a 6 to 9% probability in 30 years. Therefore, it is reasonable to expect a strong ground motion seismic event during the lifetime of any proposed project in the region.

Ground motion in the region is generally the result of sudden movements of large blocks of the earth's crust along faults. Numerous active faults in the Los Angeles region are capable of generating earthquake-related hazards, particularly in the harbor area, where the Palos Verdes Fault is present and hydraulic and alluvial fill are pervasive. Also noteworthy, due to its proximity to the site, is the Newport-Inglewood Fault, which has generated earthquakes ranging from M4.7 to M6.3 (LAHD 1991a). Large events could occur on more distant faults in the general area, but the effects at the cumulative geographic scope would be reduced due to the greater distance.

Seismic groundshaking is capable of providing the mechanism for liquefaction, usually in fine-grained, loose to medium dense, saturated sands and silts. The effects of liquefaction may result in structural collapse if total and/or differential settlement of structures occurs on liquefiable soils

4.2.5.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects would not change the risk of seismic ground shaking. However, past projects have resulted in the backfilling of natural drainages at Port of Los Angeles berths with various undocumented fill materials. In addition, dredged materials from the harbor area were spread across lower Wilmington from 1905 until 1910 or 1911 (Ludwig 1927). In combination with natural soil and groundwater conditions in the area (i.e., unconsolidated, soft, and saturated natural alluvial deposits and naturally occurring shallow groundwater), backfilling of natural drainages and spreading of dredged materials associated with

past development at the Port has resulted in conditions with increased potential for liquefaction following seismic ground shaking.

In addition, past development has increased the amount of infrastructure, structural improvements, and the number of people working on site in the communities of Wilmington and San Pedro, as well as at the Port of Los Angeles (i.e., the cumulative geographic scope). This past development has placed commercial, industrial, and residential structures and their occupants in areas that are susceptible to seismic ground shaking. Thus, these developments have had the effect of increasing the potential for seismic ground shaking to result in damage to people and property. The proposed Project and many of the related projects share interconnected infrastructure (e.g., roads, utilities, pipelines, wharves, etc.) that would be impacted by seismically induced ground failure. The amount of overlapping infrastructure that is susceptible to failure is increased by the addition of each cumulative project. Infrastructure failure at multiple facilities is cumulatively greater than failure at individual facilities, as regional infrastructure becomes increasingly unusable with combined failure.

All of the present and reasonably foreseeable future projects listed in Table 4-1, with the exception of the Channel Deepening Project (#4) and the Artificial Reef Project (#6), as these do not involve existing or proposed structural engineering or onsite personnel, would also result in increased infrastructure, structure, and number of people working on site in the cumulative geographic scope. Therefore, the effects of past, present, and reasonably foreseeable future projects would result in significant cumulative impacts.

4.2.5.2.2 Contribution of the Proposed Project

As discussed in Sections 3.5.4.3.1 the proposed Project would result in significant impacts from both construction and operation of the proposed Project relative to Impact GEO-1, even with incorporation of modern construction engineering and safety standards. Segments of the active Palos Verdes Fault zone cross the Los Angeles Harbor in the vicinity of the westerly portion of the proposed project site. Current data suggest that segments of the fault may cross beneath the proposed multi-use CCT expansion along John S. Gibson Boulevard. Because the proposed project area is potentially underlain by strands of the active Palos Verdes Fault and liquefaction-prone soils, there is a substantial risk of seismic impacts. For example, part of the proposed Project includes the adaptive reuse of the Bekins Storage Property for a Waterfront Red Car Museum. Increased exposure of people and property during operations to seismic hazards from a major or great earthquake cannot be precluded even with the incorporation of modern construction engineering and safety standards. Therefore, potential impacts due to seismically induced ground failure would remain.

The proposed Project would not increase the risk of seismic ground shaking, but it would contribute to the potential for ground shaking to result in ground failure (e.g., liquefaction, differential settlement). It would also contribute to the potential for

seismically induced ground shaking to result in damage to people and structures, because it would increase the amount of structures and people working in the area. The incremental contribution of the proposed Project would be cumulatively considerable.

4.2.5.2.3 Mitigation Measures and Residual Cumulative Impacts

Project engineers use a combination of probabilistic and deterministic seismic hazard assessment for seismic design prior to any construction projects. Structures and infrastructure planned for areas with high liquefaction potential must have installation or improvements comply with regulations to ensure proper construction and consideration for associated hazards.

However, even with incorporation of modern construction engineering and safety standards, no mitigation is available that would reduce impacts to less than cumulatively considerable in the event of a major earthquake. Therefore, the proposed Project would result in a cumulatively considerable and unavoidable impact.

4.2.5.3 Cumulative Impact GEO-2: Damage or Risk due to Land Subsidence/Settlement—Less than Cumulatively Considerable

Cumulative Impact GEO-2 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would result in substantial damage to structures or infrastructure or expose people to substantial risk of injury as a result of subsidence or soil settlement. In the absence of proper engineering, new structures could be cracked and warped as a result of saturated, unconsolidated/compressible sediments.

4.2.5.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The cumulative geographic scope is the same as the proposed project site, because the effects of subsidence/settlement are site-specific and related primarily to construction techniques. Past projects on the site of the proposed Project have contributed to fill and therefore added to the risk of subsidence/settlement.

Regional subsidence due to historic oil withdrawal has been arrested through subsurface water injection; therefore, regional subsidence impacts are not anticipated. While localized settlement could occur as a result of improperly placed proposed project–related fill (e.g., pipeline trench backfill) or collapse of subsurface soils during HDD operations, this would not be cumulatively considerable such as to rise

to a cumulatively significant impact from past, present, and reasonably foreseeable future projects.

4.2.5.3.2 Contribution of the Proposed Project

Settlement impacts from construction and operation in proposed project areas would be less than significant because the proposed Project would be designed and constructed in compliance with the recommendations of the geotechnical engineer, consistent with Sections 91.000 through 91.7016 of the Los Angeles Municipal Code, and in conjunction with criteria established by LAHD and Caltrans, and would not result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury. Sections 91.000 through 91.7016 regulate construction in upland areas of the Port. These building codes and criteria provide requirements for construction, grading, excavations, use of fill, and foundation work, including type of materials, design, procedures, etc., and are intended to limit the probability of occurrence and the severity of consequences from geological hazards. Because the proposed Project would result in less than significant (individual) impacts for GEO-2**,** and no other past (other than those projects on the proposed project site), present, or reasonably foreseeable future projects contribute to cumulative impacts, the cumulative impact is less than significant, and the proposed Project would not result in a cumulatively considerable impact.

4.2.5.3.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.5.4 Cumulative Impact GEO-3: Damage or Risk due to Expansive Soils—Less than Cumulatively Considerable

Cumulative Impact GEO-3 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would result in substantial damage to structures or infrastructure or expose people to substantial risk of injury as a result of expansive soils. Expansive soil may be present in dredged or imported soils used for grading. Expansive soils beneath a structure could result in cracking, warping, and distress of the foundation.

4.2.5.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The cumulative geographic scope is the same as the proposed project site, because the effects of expansive soils are site-specific and related primarily to construction techniques. Past projects on the site of the proposed Project have contributed to fill and therefore risk of expansive soils. However, because only past, present, and reasonably foreseeable future projects on the proposed project site would contribute along with the proposed Project to a cumulative impact in this impact area, and no other such projects are identified, impacts would not be cumulatively significant.

4.2.5.4.2 Contribution of the Proposed Project

Expansive soil impacts from construction and operation in the proposed project area would be less than significant. The proposed Project would be designed and constructed in compliance with the recommendations of the geotechnical engineer, consistent with implementation of Sections 91.000 through 91.7016 of the Los Angeles Municipal Code, and in conjunction with criteria established by LAHD, and would not result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury. Sections 91.000 through 91.7016 regulate construction in upland areas of the Port. These building codes and criteria provide requirements for construction, grading, excavations, use of fill, and foundation work, including type of materials, design, procedures, etc., and are intended to limit the probability of occurrence and the severity of consequences from geological hazards. Because the proposed Project would result in less-than-significant (individual) impacts for GEO-3, and no other past (other than those projects on the proposed Project site), present, or reasonably foreseeable future projects contribute to cumulative impacts, the cumulative impact is less than significant. Therefore, the contribution of the proposed Project under Impact GEO-3 would not result in cumulatively considerable impacts when combined with past, present, and reasonably foreseeable future projects.

4.2.5.4.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.5.5 Cumulative Impact GEO-4: Damage or Risk due to Landslides or Mudflows—No Cumulative Impact

Cumulative Impact GEO-4 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would expose people or property to a substantial risk of landslides or mudslides.

4.2.5.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.5.5.2 Contribution of the Proposed Project

Because the topography in the cumulative geographic area and the proposed project area is flat and not subject to landslides or mudflows, the proposed project would not expose places, structures, or people to substantial damage or substantial risk of harm. As there would be no project-specific impact, there would also be no cumulatively considerable impacts.

4.2.5.5.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.5.6 Cumulative Impact GEO-5: Damage or Risk due to Unstable Soil Conditions from Excavation, Grading, or Fill—Less than Cumulatively Considerable

Cumulative Impact GEO-5 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would result in substantial damage to structures or infrastructure or expose people to substantial risk of injury as a result of collapsible or unstable soils.

Excavations that occur in natural alluvial and estuarine deposits, as well as artificial fill consisting of dredged deposits or imported soils, may encounter relatively fluid materials near and below the shallow groundwater table. Groundwater is locally present at depths as shallow as 10 feet (3 meters). In the absence of proper engineering, new structures could be cracked and warped as a result of saturated, unstable, or collapsible soils, exposing building personnel to a safety hazard.

4.2.5.6.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The cumulative geographic scope is the same as the proposed project site, because the effects of unstable soil conditions are site-specific and related primarily to

construction techniques. Past projects on the site of the proposed Project have contributed to fill and therefore added to the risk of unstable soil conditions. However, because only past, present, and reasonably foreseeable future projects on the proposed project site would contribute along with the proposed Project to a cumulative impact in this impact area, and no other such projects are identified, impacts would not be cumulatively significant.

4.2.5.6.2 Contribution of the Proposed Project

Due to the implementation of standard engineering practices regarding saturated, collapsible soils, people and structures on the proposed project site would not be exposed to substantial adverse effects from construction and operation of the proposed Project, and impacts would be less than significant. The proposed Project would result in less-than-significant (individual) impacts for Impact GEO-5**.** No other past (other than those projects on the proposed project site), present, or reasonably foreseeable future projects contribute to cumulative impacts; therefore, the cumulative impact is less than significant, and the proposed Project would not make a cumulatively considerable contribution.

4.2.5.6.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required

4.2.5.7 Cumulative Impact GEO-6: Destruction or Modification of One or More Prominent Geologic or Topographic Features—No Cumulative Impact

Cumulative Impact GEO-6 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would result in one or more distinct and prominent geologic or topographical features being destroyed, permanently covered, or materially and adversely modified. Such features include hilltops, ridges, hillslopes, canyons, ravines, rock outcrops, water bodies, streambeds, and wetlands.

4.2.5.7.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.5.7.2 Contribution of the Proposed Project

Since the proposed project area is relatively flat and paved, with no prominent geologic or topographic features except for Slip #5, proposed project operations would not result in any distinct and prominent geologic or topographic features being destroyed or permanently covered. The operation of the proposed Project includes the development of a waterfront promenade along Slip #5 and the development of two floating docks on Slip #5. Currently, Slip #5 is a working slip used to support Port operations. Therefore, operations of the proposed Project would not materially or adversely modify the existing operation of Slip #5. Rather, the proposed Project would enhance and improve operations within Slip #5.

4.2.5.7.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.6 Groundwater and Soils

4.2.6.1 Scope of Analysis

The geographic scope for cumulative impacts on groundwater quality and soil quality varies, depending on the impacted resource. The geographic scope with respect to contaminated soils would be confined to the proposed project area. Contaminated soil impacts are site-specific and relate primarily to potential exposure of contaminants to onsite personnel during construction, or to onsite personnel or recreational users subsequent to construction. However, the geographic extent with respect to contaminated groundwater would be thesemi-perched aquifer and underlying Gage Aquifer, which underlie much of the coastal area of southern Los Angeles and Long Beach. The term “semi-perched” serves to distinguish zones of shallow, elevated water that are underlain by saturated rocks from perched zones, which by definition are underlain by unsaturated rocks (USGS 2008).

Since the proposed Project would result in no impacts with respect to changes in potable water levels, reduction in potable groundwater capacity, and potential violation of regulatory water quality standards at an existing production well, there would be no cumulatively considerable impacts and no need to define the geographic scope. Because the groundwater beneath the proposed project area is highly saline non-potable groundwater, it is not used by any utility for public water purposes, such as storage of imported water; regardless of summer or winter peak water usage season, or whether it be a drought season or an emergency. The proposed project construction activities would not interfere with the potential yields of any adjacent groundwater wells or well fields (public or private) as all groundwater beneath the entire vicinity of the proposed project area is highly saline and non-potable. It is also

not expected that any construction activities would adversely alter the rate or direction of groundwater flow in the vicinity of the proposed Project.

The cumulative area of influence is predominantly underlain by deep, unconfined potable aquifers and highly saline non-potable groundwater, and is not a designated recharge area for potable groundwater. Spills of petroleum products and hazardous substances, due to long-term industrial land use in the area, have resulted in contamination of some onshore soils and shallow groundwater. Most of the cumulative area of influence has been disturbed in the past, may contain buried contaminated soils, and is covered in non-permeable surfaces.

The time frame for the cumulative analysis of contaminated soil and groundwater must include the historical time since the proposed project area was developed, and must extend for decades into the future. Hazardous substances can be retained in soil and groundwater for decades after the original spill occurred.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.6, "Groundwater and Soils."

4.2.6.2 Cumulative Impact GW-1: Exposure of Soils Containing Toxic Substances and Petroleum Hydrocarbons—Less than Cumulatively Considerable

Cumulative Impact GW-1 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would result in exposing soils containing toxic substances and petroleum hydrocarbons, associated with prior operations, which would be deleterious to humans. Exposure to contaminants associated with historical uses of the proposed project area could result in short-term effects (duration of construction) to onsite personnel and/or long-term impacts to future site occupants.

4.2.6.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The cumulative geographic scope for contaminated soils is the same as the proposed project site, because the effects of soil contamination are site-specific, in that they relate primarily to potential exposure of contaminants to onsite personnel during construction, or to onsite personnel or recreational users subsequent to construction. Past and present projects on the site of the proposed Project, including those discussed in Section 3.6, have contributed to soil contamination. Therefore, past and present projects within the proposed project vicinity contribute to a cumulatively considerable impact regarding soil.

4.2.6.2.2 Contribution of the Proposed Project

As discussed in Section 3.6, portions of the proposed Project have been impacted by hazardous substances and petroleum products as a result of spills during historic industrial land uses. These areas are in various stages of contaminant site characterization and remediation.

Grading and construction (e.g., excavations for utilities and foundations) required for the proposed Project would potentially expose construction personnel and existing operations personnel to contaminated soil. Human health and safety impacts would be significant pursuant to exposure levels established by Cal/EPA's OEHHA for soil contamination. However, the proposed Project would be required to remediate and remove existing soil contamination prior to the full operation of the proposed Project. Therefore, the construction of the proposed Project would expose humans to soil contamination and would be cumulatively considerable.

Although, the proposed Project may expose construction workers to existing soil contamination caused by past and present land uses during construction activities, the operation of the proposed Project would not actually result in an increase of exposure to soil contamination and would overall reduce the existing amount of soil contamination, and therefore exposure to those contaminates, caused by other past and present projects. Therefore, the operation of the proposed Project would not expose humans to soil contamination and the operation of the proposed Project would not be cumulatively considerable.

4.2.6.2.3 Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures **MM GW-1** (Preparation of a Soil Management Plan or Phase II Environmental Site Assessment); **MM GW-2a** (Remediate Former Oil Wells in the Avalon Development District [Area A], Avalon Waterfront District [Area B], and within the Immediate Vicinity of the Waterfront Red Car Line/CCT [Area C]); **MM GW-2b** (Remediate Soil along Existing and Former Rail Lines); **MM GW-2c** (Health Based Risk Assessment for the Marine Tank Farm); and **MM GW-3** (Contamination Contingency Plan for Non-Specific Facilities and Unidentified Sources of Hazardous Materials) would reduce the proposed project impacts to less than significant cumulative levels (Section 3.6, "Groundwater and Soils"). Therefore, proposed project impacts would not remain at cumulatively considerable levels.

4.2.6.3 Cumulative Impact GW-2: Movement of, Expansion of, or Increase in Existing Contaminants—Less than Cumulatively Considerable

Cumulative Impact GW-2 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would change the rate or direction of movement of existing contaminants, expand the area affected by contaminants, or increase the level of groundwater contamination, which would increase the risk of harm to humans (see Table 3.6-1 in Section 3.6, "Groundwater and Soils"). Excavation and grading activities in contaminated soils would potentially result in inadvertent spreading of such contamination to areas that were previously unaffected by spills of petroleum products or hazardous substances, thus potentially exposing construction and existing operations personnel, future occupants of the site, and future recreational users to contaminants.

4.2.6.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The cumulative geographic scope with respect to cross-contamination related to soil and groundwater contamination would be the aerial extent of the semi-perched aquifer and underlying Gage Aquifer, which underlie much of the coastal area of southern Los Angeles and Long Beach, as groundwater contamination can spread over relatively large areas subsequent to construction. Past projects on the site of the proposed Project, as discussed in Section 3.6, "Groundwater and Soils," have contributed to soil and groundwater contamination. Present and reasonably foreseeable future projects would have no impact on soil or groundwater contamination on site. However, the effects of past projects are cumulatively considerable.

4.2.6.3.2 Contribution of the Proposed Project

As discussed for Cumulative Impact GW-1, soil in limited and isolated portions throughout the proposed Project have been impacted by hazardous substances and petroleum products as a result of spills during historic industrial land uses (See Table 3.6-2). In addition, groundwater has been impacted by hazardous substances and petroleum products within the proposed project area and potentially within the larger perched aquifer. Areas within the proposed Project are in various stages of contaminant site characterization and remediation. If during proposed project construction, contaminated soils and groundwater are encountered during grading or excavations, contamination could be spread to other areas. Health and safety impacts would be significant pursuant to exposure levels established by OEHHA and the Port's adopted significance criteria for various groundwater and soil contaminants. Therefore, excavation and grading activities during construction in the existing contaminated soils would potentially result in inadvertent spreading of such

contamination to areas that were previously unaffected by spills of petroleum products or hazardous substances, thus potentially exposing construction and existing operations personnel, future occupants of the site, and future recreational users to contaminants. Construction impacts would be cumulatively considerable.

Contamination currently exists and was generated by past and present projects prior to the design of the proposed Project. The proposed Project would be required to remediate and remove existing groundwater and soil contamination during construction activities and prior to the full operation of the proposed Project. The proposed Project may cause the existing contamination (and expand the area affected by contaminants) caused by other past projects to spread to other areas, but the proposed Project would not result in an increase in soil and groundwater contamination. The proposed Project would ultimately reduce the existing amount of soil and groundwater contamination caused by other past projects. Regardless, the potential for the proposed Project or alternatives to spread existing contamination constitutes a cumulatively considerable impact on groundwater and soils.

4.2.6.3.3 Mitigation Measures and Residual Cumulative Impacts

Mitigation Measures **MM GW-1, MM GW-2a, MM GW-2b, MM GW-2c,** and **MM GW-3** would serve to reduce the cumulatively considerable impacts generated by the proposed project construction activities (Section 3.6, "Groundwater and Soils"). Impacts would be reduced to less than significant cumulative levels, and impacts would not remain cumulatively considerable.

4.2.6.4 Cumulative Impact GW-3: Change in Potable Groundwater Recharge Capacity or Change in Potable Water Levels—No Cumulative Impact

Cumulative Impact GW-3 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would result in a demonstrable and sustained reduction in potable groundwater recharge capacity or change in potable water levels sufficient to:

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

4.2.6.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.6.4.2 Contribution of the Proposed Project

As described in Section 3.6, "Groundwater and Soils," most of the proposed project area is paved and impermeable to groundwater recharge. Most of the proposed project site would be converted to park space with a smaller amount being paved, resulting in a greater amount of recharge at the majority of the site. However, the proposed project site is not a designated recharge area for potable groundwater. Also, drinking water is provided to the proposed project area by the LADWP and not through onsite groundwater sources. It is also not expected that any construction activities would adversely alter the rate or direction of groundwater flow in the vicinity of the proposed Project. Therefore, cumulative impacts would not occur, and the proposed Project would not make a cumulatively considerable contribution.

4.2.6.4.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.6.5 Cumulative Impact GW-4: Violation of Regulatory Water Quality Standards at an Existing Production Well—No Cumulative Impact

Cumulative Impact GW-4 addresses the degree to which the proposed Project when combined with past, present, and reasonably foreseeable future projects would result in violation of regulatory water quality standards at an existing production well, as defined in 22 CCR 4, Chapter 15 and in the Safe Drinking Water Act.

4.2.6.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.6.5.2 Contribution of the Proposed Project

Because no existing production wells are located in the vicinity of the proposed project site, the proposed Project would not contribute to any cumulative potential to violate regulatory water quality standards at existing production wells, cumulative impacts would not occur, and the proposed Project would not make a considerable contribution.

4.2.6.5.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.7 Hazards and Hazardous Materials

4.2.7.1 Scope of Analysis

The geographic scope for cumulative impacts associated with accidental spills, releases, or explosions of hazardous materials encompasses the entire Port of Los Angeles and Port of Long Beach, and includes the proposed project area. The importance of a regional project diminishes in magnitude with distance from the Port as potential adverse impacts associated with a hazardous material release, spill, or explosion diminish in magnitude with distance. Thus, past, present, and reasonably foreseeable future projects that would contribute to these cumulative impacts include those projects that transport hazardous materials in the vicinity of the proposed Project.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.7, "Hazards and Hazardous Materials."

4.2.7.2 Cumulative Impact RISK-1: Failure to Comply with Applicable Federal, State, Regional, and/or Local Security and Safety Regulations and/or Port Policies Guiding Port Development—No Cumulative Impact

Cumulative Impact RISK-1 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to fail to comply with applicable regulations and policies guiding development within the Port.

4.2.7.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

All projects within the Port area are required to comply with applicable development regulations and policies. All projects are also required to be consistent with the PMP, or be subject to approved amendments to the PMP in order to accommodate the project. Therefore, the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than significant and not cumulatively considerable.

4.2.7.2.2 Contribution of the proposed Project

As discussed in Section 3.7, the proposed Project is subject to numerous security and safety regulations for operation of the proposed facilities. LAHD has implemented various plans and programs to ensure compliance with these regulations, which must be adhered to during the operation of the proposed Project.

Additionally, construction and operation of the proposed Project would be required to comply with all existing hazardous waste and materials laws and regulations, including, but not limited to, RCRA, CERCLA, and Cal. Code Regs. Titles 22 and 26. The proposed Project would comply with these laws and regulations, which would ensure that potential hazardous materials handling would occur in an acceptable matter during the construction and operation of the proposed Project.

LAHD maintains compliance with these state and federal laws through a variety of methods, including internal compliance review, reparation of regulatory plans, and agency oversight. The RMP implements development guidelines in an effort to minimize the danger of accidents to vulnerable resources. This would be achieved mainly through physical separation as well as through project design features, fire protection, and other risk management methods.

Proposed project plans and specifications would be reviewed by the LAFD for conformance to the Los Angeles Municipal Fire Code, as a standard practice. Buildings would be equipped with fire protection equipment as required by the Los Angeles Municipal Fire Code. Access to all buildings and adequate access and firefighting features would be provided. Proposed project plans would include an internal circulation system, code-required features, and other firefighting design elements, as approved by LAFD.

A risk analysis was conducted pursuant to the Port's Risk Management Plan using CANARY and the EPA RMP Offsite Consequence Analysis Guidance for toxic releases and explosions due to the close proximity of the HGS and peaker units to the proposed Project and the diesel and aqueous ammonia that the HGS stores on site. The analysis determined the hazardous footprint of the two liquid bulk storage diesel tanks and the footprint of the toxic endpoint of aqueous ammonia (200 ppm) do not overlap with the proposed project site. Therefore, the location of the proposed

project site and the HGS is consistent with provision of the Port's Risk Management Plan.

The proposed Project would comply with applicable federal, state, regional, and/or local security and safety regulations and/or Port policies guiding Port development, including the Port RMP as discussed in Section 3.7. Impacts would be less than significant. Therefore, the incremental contribution of the proposed Project would not be cumulatively considerable under Cumulative Impact RISK-1 when combined with past, present, and reasonably foreseeable future projects.

4.2.7.2.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would not be cumulatively considerable. No mitigation measures are required.

4.2.7.3 Cumulative Impact RISK-2: Interference with an Existing Emergency Response or Evacuation Plan or Requiring a New Emergency or Evacuation Plan—Less than Cumulatively Considerable

Cumulative Impact RISK-2 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to substantially interfere with an existing emergency response or evacuation plan or require a new emergency or evacuation plan, thereby increasing the risk of injury or death.

4.2.7.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Virtually all of the proposed cumulative projects that would have an impact on emergency response or evacuation plans would be subject to approval by LAHD and the City of Los Angeles and would be subject to the conditional approval of these agencies. Therefore, projects that would impact applicable emergency response or evacuation plans would not be approved. Thus, past, present and reasonably foreseeable future projects are not cumulatively considerable.

4.2.7.3.2 Contribution of the Proposed Project

The proposed Project would generally increase the number of visitors and increase the square footage of available tenant space in the proposed project area.

Proposed project operations would be subject to emergency response and evacuation systems implemented by the LAHD, LAFD, and Port Police and enforced by these agencies, as well as the USCG. The proposed project construction and demolition activities would be subject to emergency response and evacuation systems implemented by the Port Police and LAFD. During construction and/or demolition activities, LAFD would require that adequate vehicular access to the proposed project area be provided and maintained. This would be ensured and enforced via the construction traffic control plan required for the proposed Project. Additionally, LAFD would be responsible for waterside first response in the event of an emergency, deploying their fireboats if need be. The USCG and Port Police would also support LAFD in the event of a waterside emergency.

The operation of the proposed Project would be subject to emergency response and evacuation systems implemented by the LAHD, LAFD, LAPD, and Port Police and would be enforced by these agencies, as well as the USCG. Existing emergency response and tsunami evacuation plans developed by the City of Los Angeles, in conjunction with LAHD, provide general emergency response guidance to all City departments including LAHD. LAHD is required to follow this broad guidance in the event of an emergency. The general Port evacuation plans are maintained and managed by AMSEC and cover all areas encompassed by the Ports of Los Angeles and Long Beach, which include the proposed Project area. These plans are being revised and are updated on an as-needed basis by the committee. The tenants of the Port and proposed project area are required to have their own emergency management plans. Therefore, any new tenants under the proposed Project would be required to have their own emergency response plan. These requirements and the adequacy of the tenant emergency plans would be enforced by LAFD, the Port Police, and the Homeland Security Division of LAHD. Therefore, the proposed Project would not substantially interfere with existing emergency response plans for existing tenants but would require new emergency responses plans for some new tenants. Furthermore, proposed Project operations would not interfere with any existing emergency response or evacuation plan.

The proposed Project would not interfere with existing emergency response plans and would not require any new plans; therefore, impacts would be less than significant. The contribution of the proposed Project would not be cumulatively considerable under Cumulative Impact RISK-2 when combined with past, present, and reasonably foreseeable future projects.

4.2.7.3.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.7.4 Cumulative Impact RISK-3: Substantial Increase in the Likelihood of a Spill, Release, or Explosion of Hazardous Material(s) due to a Terrorist Action—Less than Cumulatively Considerable

Cumulative impact RISK-3 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to increase the risk of a terrorist attack resulting in adverse consequences to areas at or near the proposed project site, including the spill, release, or explosion of hazardous materials.

4.2.7.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The proposed Project would incorporate a variety of land uses that are historically very different from traditional Port land uses (i.e., terminal facilities, liquid bulk fuel facilities, cargo vessels, etc.). Most of the past, present, and reasonably foreseeable future projects include typical Port land uses; therefore, when analyzing the cumulative impacts associated with RISK-3, it is logical to explore terrorism within the context of typical Port land uses. Historical experience provides little guidance in estimating the probability of a terrorist attack on a container vessel or onshore terminal facility. For a container terminal importing large numbers of containers from countries that may be considered unfriendly, the perceived threat of a terrorist attack is a primary concern of the local population. Sinking a cargo ship in order to block a strategic lane of commerce actually presents a relatively low risk, in large part because the targeting of such attacks is inconsistent with the primary motivation for most terrorist groups (i.e., achieving maximum public attention through inflicted loss of life). Sinking a ship would likely cause greater environmental damage due to spilled fuel, but this is generally not a goal of terrorist groups.

However, at the national level, potential terrorist targets are plentiful, including those having national significance, those with a large concentration of people (e.g., major sporting events, mass transit, skyscrapers, etc.), or critical infrastructure facilities. Currently, the United States has over 500 chemical facilities operating near large populations. U.S. waterways also transport over 100,000 annual shipments of hazardous marine cargo, including LPG, ammonia, and other volatile chemicals. All of these substances pose hazards that far exceed those associated with a container terminal.

Currently, San Pedro Bay handles approximately 37% of the national cargo container throughput. Nationally, cargo throughput is expected to double by 2020 (USDOT 2005), while San Pedro Bay throughput is expected to more than triple during the same period (Parsons 2006). As a result, under current growth projections, San Pedro Bay would be expected to handle 63% of the national cargo throughput volume by 2020 and then decline to 56% by 2030. While cumulative container throughput would continue to grow in importance on a national level, the San Pedro Bay Ports already represent a substantial fraction of national container terminal throughput, and

by default, an attractive economic terrorist target. Given the relative importance of the San Pedro Bay Ports under baseline conditions, cumulative growth would not be expected to materially change the relative importance as a potential terrorist target. Therefore, past, present, and reasonably foreseeable future projects are not cumulatively considerable.

4.2.7.4.2 Contribution of the Proposed Project

The risk of a terrorist attack is considered part of the baseline for the proposed Project. The proposed Project would construct a 10-acre park, waterfront promenade, 43,220 square feet of new viewing piers, an Observation Tower, and 12,000 square feet of restaurant uses; and would allow the future development of up to 150,000 square feet of industrial buildings, 58,000 square feet of retail/commercial use, and the extension of the Waterfront Red Car Line. Large-scale projects that use hazardous materials or fuels are not part of the proposed Project.

Elements that may pose a potential terrorist target would be the visitor-serving facilities such as park uses or the Observation Tower. However, given the relatively low number of park and recreational users anticipated when compared with other recreational facilities located in the region and throughout Southern California, the potential of the proposed Project to significantly increase the threat of a terrorist action is negligible. Therefore, the proposed Project would not substantially increase the likelihood of a terrorist action over existing conditions at the Port. The likelihood of a terrorist action would remain a possibility for the proposed Project, just as it does under existing conditions at the Port, but the operation of the proposed Project would not substantially increase the potential threat.

The proposed Project would comply with all existing applicable security and safety regulations, which are fully enforceable by the Port and the USCG, thereby reducing the potential vulnerability of the proposed Project to a terrorist action. The proposed Project would not substantially increase or contribute to the vulnerability of a terrorist action on the proposed project site or at adjacent land uses.

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 proposed Project when compared to the existing conditions. It is highly unlikely that any terrorism scenario would result in substantially more damage to property or harm to people as a result of hazardous materials spills, releases, or explosions when compared to existing conditions. The proposed Project would reduce the vulnerability of an attack by implementing the security measures discussed above, which would reduce the consequences of a release, spill, or explosion of hazardous materials. Furthermore, any hazardous materials at the proposed project site would be stored subject to the applicable state and federal laws and in accordance with the LAFD; these laws are designed to, first, prevent hazardous materials spills, releases, and explosions; and, second, reduce the consequences of a hazardous material spill, release, or explosion. The proposed

Project would not result in a substantial increase in the likelihood of a spill, release, or explosion of hazardous material(s) due to a terrorist action; therefore, impacts would be less than significant. The contribution of the proposed Project would not be cumulatively considerable under RISK-3 when combined with past, present, and reasonably foreseeable future projects.

4.2.7.4.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.7.5 Cumulative Impact RISK-4: Substantial Increase in the Likelihood of an Accidental Spill, Release, or Explosion of Hazardous Material(s) as a Result of Project-Related Modifications—Less than Cumulatively Considerable

Cumulative Impact Risk-4 represents the risk associated with the proposed Project when combined with past, present, and reasonably foreseeable future project to substantially increase the likelihood of an accidental spill, release, or explosion of hazardous materials.

4.2.7.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects in the Port would result in an increase in hazardous materials and petroleum products that would potentially spill during construction and operational activities. Such spills would potentially result in soil contamination, groundwater contamination, marine water quality contamination, and health and safety impacts to onsite personnel and the public. However, past, present, and reasonably foreseeable projects must comply with all existing hazardous material regulations in place through the local, state, and federal governments. These regulations are in place to reduce the potential of accidental releases, spills, or explosions of hazardous materials and to minimize the environmental and public health impacts should such occur. Although projects cannot completely eliminate the probability associated with an accidental release, explosion, or spill, the existing regulations reduce the overall probability and minimize the impacts during a release. Therefore, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts.

4.2.7.5.2 Contribution of the Proposed Project

The construction and operation of the proposed Project and each related project in the Port would be subject to applicable federal, state, and local laws and regulations governing the spill prevention, storage, use, and transport of hazardous materials, as well as emergency response to hazardous material spills, thus minimizing the potential for adverse health and safety impacts. Furthermore, the operation of the proposed Project would include the removal of a number of industrial uses currently present in the proposed project area. The decommissioning and removal of the LADWP Marine Tank Farm, the enhancements within the Avalon Development District, and the as-required remediation of the soil and groundwater in the LADWP Marine Tank Farm are all positive benefits that would overall reduce the amount of hazardous materials available for release in the proposed project area. Additionally, the removal of these industrial uses would allow for the development of uses that would benefit the public.

The decommissioning of the LADWP Marine Tank Farm would require the adherence to all applicable regulations described in Section 3.7.3, including LACFD regulations, which would provide oversight and prevention techniques for the decommissioning. Additionally, decommissioning would include remediation efforts to remove the known or suspected hazardous groundwater and soil contamination at the site. For a full discussion of the existing hazardous groundwater and soil contamination at these sites, please refer to Section 3.6, "Groundwater and Soils." However, any spill or release during the decommissioning of the sites would be relatively minor, fully contained, and highly unlikely given the regulatory oversight and the strict following of a clean up action plan.

The LADWP Marine Tank Farm would be decommissioned under the proposed Project. However, the decommissioning would begin in 2012. Between 2009 and 2012 construction of the Phase I portion of the land bridge and the improvements to allow for the 58,000-square-foot retail/commercial center would occur. The Phase I land bridge would be in operation prior to the demolition of the Marine Tank Farm, as could the retail/commercial.

The risk and possibility of an upset event at the LADWP Marine Tank Farm is low. As discussed in greater detail in Chapter 3.7, materials contained within the liquid bulk storage tanks are not considered hazardous pursuant to the Port RMP. Furthermore, in 2012, demolition activities at the Marine Tank Farm would be initiated with the remediation effort concluding in 2015.

The operation of the Avalon Development District under the proposed Project would not include handling, transporting, or storing hazardous materials or hazardous wastes as analyzed at the program level. Individual development proposals would be evaluated under CEQA, and state and federal hazardous material laws would apply at the project level.

Therefore, because the potential impacts from accidental spill, release, or explosion are limited to the proposed project boundary, the proposed Project's incremental contribution to cumulative impacts from construction and operation would be less than significant and would not be cumulatively considerable.

4.2.7.5.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.7.6 Cumulative Impact RISK-5: Expose the general public to hazards defined by the EPA and Port Risk Management Plan associated with offsite facilities—Less than Cumulatively Considerable

Cumulative Impact Risk-5 represents the risk associated with the proposed Project when combined with past, present, and reasonably foreseeable future project to expose the general public to hazards defined by the EPA and Port Risk Management Plan associated with offsite facilities.

4.2.7.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects in the Port would result not in an increase in hazardous materials that could expose the general public to hazards defined by the EPA and Port Risk Management Plan associated with offsite facilities. Past, present, and reasonably foreseeable projects must comply with all existing hazardous material and facility regulations and safeguards in place through the local, state, and federal laws. Moreover, facilities that contain hazardous materials or have operational hazards have restricted access to prevent general members of the public from exposure to hazards as defined by the EPA and Port Risk Management Plan. Although projects cannot completely eliminate the possibility of exposing the general public to such hazards, the existing regulations and restricted access reduce the overall probability and minimize the impacts if exposure were to occur. Therefore, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts.

4.2.7.5.2 Contribution of the Proposed Project

As discussed above under Cumulative Impact RISK-5, the construction and operation of the proposed Project and each related project in the Port would be subject to

applicable federal, state, and local laws and regulations governing the storage, use, and transport of hazardous materials, as well as emergency response to hazardous material spills, thus minimizing the potential for adverse health and safety impacts. Furthermore, the operation of the proposed Project would include the removal of a number of industrial uses currently present in the proposed project area. The decommissioning and removal of the LADWP Marine Tank Farm, the enhancements within the Avalon Development District, and the as-needed remediation of the soil and groundwater in the LADWP Marine Tank Farm are all positive benefits that would overall reduce the amount of hazardous materials available for release in the proposed project area, which could expose members of the general public. Additionally, the removal of these industrial uses would allow for the development of uses that would benefit the public.

The operation of the Avalon Development District under the proposed Project would not include handling, transporting, or storing hazardous materials or hazardous wastes as analyzed at the program level. Individual development proposals would be evaluated under CEQA, and state and federal hazardous material laws would apply at the project level.

Since the hazard footprints generated by the analysis of the liquid bulk diesel storage tanks do not overlap with any portion of the proposed project area the liquid bulk diesel storage tanks would not introduce the general public to hazard(s) defined by the Port's Risk Management Plan. Furthermore, the hazardous footprint of the ammonia storage tanks analyzed under two postulated cases, which defined the area of impact with a toxic endpoint for aqueous ammonia at or below 200 ppm, does not include the proposed project site. Therefore, the proposed Project would not introduce the general public to hazard(s) defined by the EPA. Therefore, the project's contribution to existing and future cumulative impacts related to the exposure of the general public to hazards, as defined by the EPA and the RMP, would be less than significant and would not be cumulatively considerable.

4.2.7.5.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.8 Land Use and Planning

4.2.8.1 Scope of Analysis

Because the proposed Project has the capacity to affect the environment within Wilmington and the surrounding communities, the region of analysis for cumulative land use impacts includes those projects within the Port Master Plan Boundaries and included on the cumulative project list as "Port of Los Angeles Projects"; projects

within the Wilmington Community, as identified by the Wilmington-Harbor City Community Plan boundaries and included on the cumulative project list as "Wilmington Community Projects"; and those projects within the Harbor City area as included on the cumulative project list as "Projects in Harbor City, Lomita, and Torrance Projects." The proposed Waterfront Red Car Line and California Coastal Trail that follow John S. Gibson Boulevard, Pacific Avenue, and Front Street run adjacent to the San Pedro community. Therefore, projects within the San Pedro community are also included in the geographic scope of the analysis. These projects are assessed in terms of their compatibility with the existing Port, San Pedro, Wilmington, and Harbor City land uses (e.g., commercial, industrial, and recreational).

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.8, "Land Use and Planning."

4.2.8.2 Cumulative Impact LU-1: Inconsistency with the Adopted Land Use/Density Designation in the Community Plan, Redevelopment Plan, or Specific Plan for the Site—Less than Cumulatively Considerable

Cumulative Impact LU-1 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in development that would be inconsistent with land use/density designations in land use plans that govern buildout within the proposed project area.

4.2.8.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past and present actions within the proposed project vicinity have been subject to the land use/density designations stipulated in the PMP, the Port Plan, and the existing Wilmington-Harbor City CP. The Port's PMP has been certified by the Coastal Commission and all past development projects within Port boundaries have been approved pursuant to the adopted PMP, ensuring compliance with the coastal zone management program. The City approved Port Plan is the City's governing document that regulates the continued development and operation of the Port. The Wilmington-Harbor City CP is part of the General Plan of the City of Los Angeles. The CP states the objectives, policies, and programs of the Wilmington–Harbor City CPA and outlines the arrangement and intensities of land uses, the street system, and the location and characteristics of public service facilities. Over the years, the community of Wilmington has developed consistently with the Wilmington–Harbor City CP, PMP, and the Port Plan, ensuring consistency with land use/density designations to minimize impacts on surrounding areas. Similarly, existing facilities

within the proposed project vicinity, and construction and operation associated with past and current projects have been modified as necessary to ensure proposed land use/density designations are consistent with the Port Plan designation and local CPs; the same is expected of reasonably foreseeable future projects. Therefore, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts related to land use designations and inconsistencies.

4.2.8.2.2 Contribution of the Proposed Project

As stated in Section 3.8.4.3, Impact LU-1, the proposed Project is located within the Port Plan, which is the Port's equivalent to a Community Plan, and is therefore subject to the City's zoning code. The proposed Project is also located within and under the jurisdiction of the PMP, and also in the existing Wilmington–Harbor City CP. The proposed Project would include a General Plan Amendment to the Port Plan and the Wilmington–Harbor City CP to amend both the existing jurisdictional boundaries and some of the land uses within these two plans. Additionally, rezoning would be required for some of the existing zoning currently designated under the jurisdiction of the Wilmington–Harbor City CP. The proposed Project would also include a PMP Amendment to extend the existing jurisdictional boundary of the PMP. Finally, a zone change would be required to revise some of the existing zoning within the current PMP jurisdictional boundaries. Although, the proposed Project includes several land use inconsistencies, it would ultimately be consistent with all applicable land use/zoning designations because approval of the amendments is included in the approval of the proposed Project. Therefore, the proposed Project, along with past, present, and future projects, would not contribute to a cumulatively considerable impact.

4.2.8.2.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable under CEQA. No mitigation measures are required.

4.2.8.3 Cumulative Impact LU-2: Inconsistency with the General Plan or Adopted Environmental Goals and Policies Contained in other Applicable Plans—Less than Cumulatively Considerable

Cumulative Impact LU-2 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in development that would be inconsistent with environmental objectives and policies delineated in land use plans that govern the proposed Project area.

4.2.8.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past and present actions within the proposed project vicinity have been subject to the objectives and policies delineated in the Wilmington-Harbor City CP, Port Plan and PMP, SCAG RCPG, the San Pedro CP, CAAP, POLA Strategic Plan, and the Los Angeles Sustainability Plan and Green Building Plan. Over the years, the Port has developed consistent with the Port Plan objectives that give priority to water-dependent developments to ensure the Port is maintained as an important local, regional, and national resource. Similarly, present projects within the PMP area have been developed to ensure proposed developments are consistent with the Port Plan and PMP objectives and policies. Additionally, past, present, and future projects within the geographical scope have, and would have to, reach consistency with the regional plans of the SCAG RCPG, the CAAP, the POLA Strategic Plan, the LA Sustainability and Green Building Plans, and the San Pedro CP. Construction and operation associated with present and future projects would be modified during the project review process to ensure consistency with the Wilmington-Harbor City CP, Port Plan and PMP, SCAG RCPG, the San Pedro CP, CAAP, POLA Strategic Plan, and the Los Angeles Sustainability Plan and Green Building Plan objectives and policies. Therefore, these projects are not cumulatively considerable, and the cumulative impacts of past, present, and reasonably foreseeable future projects would be less than significant.

4.2.8.3.2 Contribution of the Proposed Project

As stated in Section 3.8.4.3, Impact LU-2, under the proposed Project the Port Plan and PMP would be amended to expand their respective jurisdictional boundaries and would ultimately be the land use documents that would control approximately ¾ of the proposed project area currently under the jurisdiction of the Wilmington-Harbor City CP. Additionally, the proposed Project would be fully consistent with all adopted objectives and policies identified in the various regional plans, including the SCAG RCPG, the San Pedro CP, the CAAP, the POLA Strategic Plan, and the Los Angeles Sustainability Plan and Green Building Plan. Although this area would be ultimately under the control of the Port Plan and the PMP, the analysis includes the Wilmington–Harbor City CP under the General Plan of the City of Los Angeles and its consistency with the proposed Project. Even without the jurisdictional boundary change, the proposed Project is consistent with the Wilmington–Harbor City CP. According to the CP the Wilmington community has had a long-standing desire to have a marine-oriented commercial area develop on this site, which adjoins Slip No. 5 of the Los Angeles Harbor, and is the community's most convenient and direct access to the Waterfront. Furthermore, the proposed Project is consistent with CP Goal 19, which states that the Coastal Zone is to be maintained in an environmentally sensitive manner, to allow maximum use for public access and recreational activities, as well as by other coastal-dependent activities, in accordance with the policies of the California Coastal Act.

Additionally the proposed Project would be consistent with the adopted objectives and policies identified in the Port Plan and the PMP. Proposed redevelopment is consistent with General Plan Objective 1 to maintain the Port as an important local, regional, and natural resource that continues to meet the needs of foreign and domestic commerce. Further, per Objective 4, the proposed Project assures priority for water- and coastal-dependent development within the Port while maintaining and enhancing the coastal zone environment and public views of and access to coastal resources. Specifically, a component of the proposed Project is a promenade that allows visitors to better enjoy the harbor and its recreational facilities.

Because the cumulative impact is less than significant, and the proposed Project would have a less-than-significant impact on land use plan consistency, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA.

4.2.8.3.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.9 Noise

4.2.9.1 Scope of Analysis

The geographic scope for cumulative noise impacts includes an area roughly defined as follows: east of the I-110, north of the Vincent Thomas Bridge, north of Swinford Street, west of Quay Avenue, and south of E Street. These boundaries generally incorporate the area potentially affected by noise from construction, operation, and traffic generated by the proposed Project. This analysis assesses the potential of the proposed Project, along with related projects, to cause a substantial increase in noise as a result of project construction and operational activities (including increased traffic noise, noise from the Waterfront Red Car Line extension, and noise from the existing rail lines).

The significance criteria used for the cumulative analysis are generally the same as those used for the proposed Project in Section 3.9, “Noise”; however, some of the significance criteria have been consolidated to more concisely and clearly analyze cumulative impacts.

4.2.9.2 Cumulative Impact NOI-1: Increase in Ambient Noise Levels due to Construction—Cumulatively Considerable and Unavoidable

Cumulative Impact NOI-1 represents the potential of proposed project construction activities when combined with past, present, and reasonably foreseeable future projects to cause a substantial increase in ambient noise levels at sensitive receptors within the cumulative geographic scope.

Cumulative noise impacts would potentially occur from the construction of other projects within the area. Noise from the construction of these projects would tend to be localized, thus potentially affecting the areas immediately surrounding each prospective project site. Of these projects, those within 0.25 mile could result in construction noise that exceeds significance thresholds depending upon the timing of construction. A substantial increase would occur if existing ambient exterior noise levels increased by 5 dBA (L_{eq}) or more at a noise sensitive use. Community noise levels are measured in decibels. For a project to make a cumulatively considerable contribution to the cumulative effect, noise from the project's construction activities must increase the cumulative level by at least 5 dBA L_{eq}.

4.2.9.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The list of related and cumulative projects was reviewed to determine if construction activities associated with any of these projects could, in combination with the proposed Project, cause a cumulative construction noise impact.

The Berths 136–147 Marine Terminal (#2) would be located south of Harry Bridges Boulevard, and involves expansion and redevelopment of the TraPac Terminal, as well as the reconfiguration of wharves and backlands, and would likely overlap with the beginning stages of Phase I of the proposed Project. Where construction schedules overlap, periodically elevated noise levels due to construction activity would be extended. The Channel Deepening Project (#4) would be located throughout the channel immediately south of the proposed Project. It is likely that dredging operations associated with the Channel Deepening Project would either be concurrent with construction activities necessary for some elements of the proposed Project, or would occur in about the same timeframe (either shortly before or after), extending the period of elevated noise levels. While detailed assessments of construction noise levels that could result from related projects #2 and #4 have not been completed, it is likely that construction activities and associated noise levels would be similar to those expected from the equipment necessary to construct the proposed project elements.

There are other projects in the related and cumulative projects list that could also affect sensitive receptors within the cumulative geographic scope. The San Pedro Waterfront (#3) project is scheduled for construction from 2010 to 2015 and is located along the

Vincent Thomas Bridge down to Berths 49 and 50. The China Shipping Development Project (#16) is scheduled for construction from 2009 to 2015 and is located east of the I-110 and north of the Vincent Thomas Bridge, adjacent to sensitive receptors. Other development projects near residential areas that have the potential to create a cumulative impact include the South Wilmington Grade Separation (#25), "C" Street/Figueroa Street Interchange (#27), Port Transportation Master Plan (#28), I-110/SR47 Connector Improvement Program (#32), Single Family Homes on Gaffey Street (#54), Target on Gaffey Street (#56), and the Dana Strand Public Housing Redevelopment Project (#63). Therefore, the construction of past, present, and reasonably foreseeable future projects would have significant cumulative noise impacts on sensitive receptors (residential land uses).

4.2.9.2.2 Contribution of the Proposed Project

In the construction phase of the proposed Project, construction of the various elements would cause a significant noise impact to sensitive receptors in the vicinity. This would affect two residential neighborhoods: the residential area north of Harry Bridges Boulevard to C Street, bounded on the east by Broad Avenue and on the west by Lagoon Avenue; and the pocket residential neighborhood east of I-110, bounded on the north and east by Pacific Avenue. There would be a substantial increase in noise, as identified in Section 3.9.4.3.1.

A variety of development projects are planned (as discussed above) that would potentially be under construction concurrently. There would be significant construction noise impacts in the residential neighborhoods identified above due to the combination and concurrent construction of the development of present and reasonably foreseeable future projects and elements of the proposed Project. Therefore, the contribution of the proposed Project would be cumulatively considerable under Impact NOI-1 when combined with past, present, and reasonably foreseeable future projects.

4.2.9.2.3 Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures **MM NOI-1a** (Temporary Noise Barriers), **MM NOI-1b** (Construction Hours), **MM NOI-1c** (Construction Days), **MM NOI-1d** (Construction Equipment), **MM NOI-1e** (Idling Prohibitions), **MM NOI-1f** (Equipment Location), **MM NOI-1g** (Quiet Equipment Selection), and **MM NOI-1h (**Notification) would reduce impacts during construction (Section 3.9, "Noise"). However, the standard controls and temporary noise barriers would not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a cumulatively significant impact during construction. The impacts to the residential neighborhoods during construction of the proposed Project will remain cumulatively considerable with mitigation.

4.2.9.3 Cumulative Impact NOI-2: Increase in Nighttime Construction Noise—No Cumulative Impact

Cumulative Impact NOI-2 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to cause a substantial increase in construction noise at night.

4.2.9.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Because the proposed Project would have no impact under this criterion, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects.

4.2.9.3.2 Contribution of the Proposed Project

No construction activities are planned to occur between the hours of 9:00 p.m. and 7:00 a.m., Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday. There would be no construction-related noise impacts during prohibited hours as described above; consequently, no impacts would occur and impacts would not be cumulatively considerable.

4.2.9.3.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.9.4 Cumulative Impact NOI-3: Exposure of Persons to or Generation of Excessive Groundborne Vibration or Groundborne Noise Levels—Less than Cumulatively Considerable

Cumulative Impact NOI-3 represents the potential for the proposed Project when combined with past, present, and reasonably foreseeable future projects to cause a substantial temporary increase in groundborne noise vibration levels at sensitive receptors within the geographic scope of the project.

4.2.9.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Due to the nature of groundborne vibration and noise, construction projects would have to occur at the same time and in very close proximity to each other to be considered cumulatively considerable. Vibration is calculated based on the Peak Particle Velocity (PPV) at a reference distance multiplied by 25 feet (the reference distance) divided by the actual distance to determine PPV for construction equipment. As distance increases a very steep rate of drop off for PPV is noticed; therefore, for groundborne vibration to be cumulatively considerable, projects would have to be in very close proximity (within a matter of feet). No projects would occur this close together.

4.2.9.4.2 Contribution of the Proposed Project

Because project construction would not occur close enough together, vibration from the proposed Project would not be cumulatively considerable.

4.2.9.4.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.9.5 Cumulative Impact NOI-4: Creation of Operational Noise that would Substantially Exceed Existing Ambient Noise Levels at Sensitive Receptors—No Cumulative Impact.

Cumulative Impact NOI-4 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to cause a substantial permanent increase in ambient noise levels at sensitive receptors within the geographic scope of the project.

4.2.9.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Onsite operations at the Port of Los Angeles and roadway traffic on the roadway network along major roadways in the proposed project area including Harry Bridges Boulevard, the I-110 freeway, and local streets in the Wilmington community are the dominant sources of community noise and noise sensitive receptors within the geographic scope of the proposed Project. Virtually all of the cumulative projects in

Table 4-1, with the exception of, for instance, some of the Port-wide operational plans and programs, would contribute to existing noise sources (such as traffic, terminal operations, and neighborhood sources including parks and schools). Therefore, past, present, and reasonably foreseeable future projects would result in significant cumulative operational noise at the Port.

4.2.9.5.2 Contribution of the Proposed Project

Onsite Operations

Noise from operation activities associated with the proposed Project is discussed in detail in Section 3.9.4. Based on the nature of the proposed Project and the analysis presented Section 3.9.4, onsite operational noise resulting from activities within the proposed project area is expected to be below ambient baseline noise levels at sensitive receptors or would only marginally increase.

Roadway Traffic Noise

Noise levels in a given area are primarily determined by nearby sound generators, such as local roadways or industrial uses. Ambient noise levels at affected residential neighborhoods would be primarily determined by noise sources other those of the proposed operations. The ambient noise levels at the residences nearest to the proposed Project in the neighborhood north of Harry Bridges Boulevard will be caused mostly by motor vehicle traffic on the local roadways near the residences, including the traffic traveling along C Street, Harry Bridges Boulevard, and other streets in the area. The traffic analysis presented in the Section 3.9, "Noise," examined the cumulative contribution of past, present, and future projects with and without the proposed Project. The proposed Project was found to result in a less-than-significant increase in traffic noise volumes for surrounding sensitive receptors. Onsite sensitive receptors would see a decrease in traffic noise levels due to the vacation of Avalon Boulevard. Therefore, the proposed projects would not have a cumulatively considerable contribution associated with traffic noise volumes to surrounding sensitive receptors or future sensitive receptors.

Other project components such as the Waterfront Red Car Line would affect the local noise environment and surrounding noise sensitive receptors, including the pocket residential neighborhood bound by the I-110 Freeway and Pacific Avenue. Ambient noise levels in this neighborhood would be dominated by traffic noise from I-110, and any additional noise generated by operation of the Waterfront Red Car Line would not violate any City threshold as noted in Section 3.9.

Because the noise levels resulting from onsite activities would not contribute significantly to the CNEL noise levels, noise from operation of the proposed Project will not make a cumulatively considerable contribution to cumulative noise levels. Therefore, the proposed Project would not result in cumulatively considerable onsite noise impacts.

Railway Corridor Noise

The major railroad corridors transporting cargo into and out of the ports will not be affected by the proposed Project. However the proposed Project would introduce new noise sensitive uses that would be affected by the railway corridor. This however would not be considered a cumulative impact as the railway corridor is considered the baseline and will not be affected by the proposed Project or any other past, present, or future project in the area.

Summary

Overall, the operation of the proposed Project would cause a small increase in traffic; however, this increase would not increase ambient noise levels by more than 1 dBA. Therefore, the contribution of the proposed Project would not be cumulatively considerable under Impact NOI-4 when combined with past, present, and reasonably foreseeable future projects.

4.2.9.5.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would not contribute to a cumulatively considerable impact. No mitigation is required

4.2.9.6 Cumulative Impact NOI-5: Noise Level Generation at Existing Land Uses Surrounding the Proposed Project in Excess of a Land Use Compatibility Standard, which Would Substantially Inhibit the Usability of the Proposed Project Site—Less than Cumulatively Considerable.

Cumulative Impact NOI-5 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to generate noise levels in excess of an established land use compatibility standard resulting in a reduction in usability of the proposed project uses.

4.2.9.6.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Nearby operations and roadway traffic on the adjacent roadway network including Harry Bridges Boulevard and industrial operations are the dominant sources of community noise within the immediate proximity of the proposed Project. Existing noises sources producing noise which would be perceptible on the proposed project

site include the HGS, Pacific Harbor Rail Line, and nearby industrial businesses. As discussed in Section 3.9, noise from these nearby sources would not substantially affect the usability of the proposed project site. However, none of the cumulative projects in Table 4-1 would contribute to existing noise levels in excess of a land use compatibility standard which would substantially inhibit the usability of the proposed project site. Therefore, past, present, and reasonably foreseeable future projects would not result in significant cumulative noise on the project site.

4.2.9.6.2 Contribution of the Proposed Project

Onsite Operations

Noise from operation activities associated with the proposed Project is discussed in detail in Section 3.9.4. Based on the nature of the proposed Project and the analysis presented Section 3.9.4, onsite noise resulting from activities within the proposed project area is expected to be below ambient baseline noise levels or would only marginally increase.

4.2.9.6.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would not contribute to a cumulatively considerable impact. No mitigation measures are required

4.2.10 Population and Housing

4.2.10.1 Scope of Analysis

The Initial Study (Appendix A) found that there would be no impacts for the proposed Project on population and housing *displacement;* therefore, that impact criterion is not addressed in Section 3.10, "Population and Housing," or in this section. The scope of analysis in Section 3.10 and the associated cumulative analysis below is therefore limited to topics related to population and housing *growth*. The geographic region of analysis for cumulative effects on Population and Housing related to the proposed Project includes the Port of Los Angeles and the community of Wilmington.

For the purposes of this EIR, the timeframe of current or reasonably anticipated projects extends from 2008 to 2020, and the vicinity is defined as the area over which effects of the proposed Project could contribute to cumulative effects.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.10.4.2.

4.2.10.2 Cumulative Impact POP-1: Substantial Population Growth in an Area, either Directly or Indirectly—Less than Cumulatively Considerable

Cumulative Impact POP-1 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in development that would induce population growth, either directly or indirectly. Examples of a project inducing direct population growth would be one that developed new housing or removed an obstacle to growth by expanded existing infrastructure, such as roads or utilities, which would make it possible to develop housing in a previously unpopulated area. A project inducing indirect population growth would be one that fosters economic or population-expanding activities that would lead to further development, taxing existing facilities and eventually requiring construction of new facilities.

4.2.10.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects within the Port and the community of Wilmington have induced substantial population growth through the development of single- and multiple-family dwelling units as well as through the creation of a large employment base, particularly dependent upon and related to operations at the Port. Although this growth has been accommodated through careful planning by local and regional authorities, environmental impacts have resulted.

Although there are no present or future housing development projects in the Port, nearly all of the proposed present and future Port projects listed in Table 4-1 would enhance the employment opportunities at the Port and possibly within the greater Los Angeles area. Within the community of Wilmington, there is one large commercial development project that is still in the planning stage (Distribution Center and Warehouse, #62). In Wilmington, the Dana Strand Public Housing Redevelopment Project (#63) is the only present or future housing development project; however, because this project will replace an existing public housing complex, it will not substantially contribute to population growth.

Cumulative impacts associated with past, present and reasonably foreseeable future projects regarding population and housing resources would be cumulatively significant. Within the Port and the community of Wilmington, there has been a large amount of commercial and housing development in the past, and there are many present and future commercial projects planned for the Port that will significantly contribute to employment growth in the region.

4.2.10.2.2 Contribution of the Proposed Project

As discussed in Section 3.10.4.3, the proposed Project would not directly or indirectly induce substantial population growth. The proposed Project would provide additional recreation opportunities as well as a relatively small amount of light industrial space that is intended to provide employment for residents in the immediate area. However, the proposed Project would not provide any new housing, and would not directly induce development of new housing in the region by providing new infrastructure. Similarly, the amount of additional employment opportunities created by the proposed Project, when compared to the existing size of the regional economy, would not be significant, and therefore would not indirectly induce population growth through labor migration. The proposed Project would not directly or indirectly induce substantial population growth, and the cumulative impact of the proposed Project would be less than significant. Therefore, the contribution of the proposed Project would not be cumulatively considerable under Impact POP-1 when combined with past, present, and reasonably foreseeable future projects.

4.2.10.2.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project to population growth would be less than cumulatively considerable. No mitigation measures are required.

4.2.11 Transportation and Circulation—Ground and Marine

4.2.11.1 Scope of Analysis

4.2.11.1.1 Ground Transportation

The transportation environmental setting for the cumulative surface transportation analysis includes those streets and intersections that would be used by both automobile and truck traffic to gain access to and from the Wilmington Waterfront. The streets most likely to be impacted by cumulative proposed project–related automobile and truck traffic are listed in Table 3.11-1. The 14 analysis intersections, identified in consultation with LADOT on the basis of their location in relation to the proposed Project and the potential for proposed project–related traffic to travel through them, are presented in Table 3.11-4. These roadways and intersections would also be used by construction traffic (e.g., equipment and commuting workers).

The analysis of roadway impacts presented in Section 3.11, “Transportation and Circulation,” reflects cumulative conditions; that is, future 2015 and 2020 conditions projected with the proposed Project in place include traffic from other regional development that is expected to occur whether the proposed Project is implemented

or not. This assumption provides a more realistic projection of traffic under future conditions because if land use under the proposed Project were analyzed without taking into account the cumulative effect of other regional traffic growth, the overall traffic projected under future conditions would be underestimated. In addition, future analysis takes into account several key roadway improvements in or near the study area that are expected to be completed by 2015 (described in Section 3.11.4.1.1).

4.2.11.1.2 Marine

The proposed Project would allow a slightly greater number of recreational vessels to call at the Port. Like all vessels, these ships will follow designated traffic channels when approaching and leaving the harbor. Similarly, in-water construction activities associated with the proposed Project would occur within the Port's existing federal channel limits. Since the proposed Project has the capacity to affect vessel transportation only within these channels or the berths the vessels are accessing, the region of analysis for cumulative marine transportation impacts includes the vessel traffic channels that ships use to access berths within the Main Channel, West Basin, East Basin, and precautionary areas.

The cumulative impacts include those impacts from past, present, and reasonably foreseeable future projects that will also increase the number and size of vessels using these shipping lanes, as well as increased use of the Port areas.

Under CEQA, potential cumulative impacts are identified by comparing conditions under the proposed Project to traffic growth without proposed Project conditions. Impacts are identified if marine vessels generated by the proposed Project would interfere with the operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, West Basin area, or precautionary areas.

The following sections summarize the construction and operational roadway impacts that were identified in the surface transportation analyses presented in Section 3.11, "Transportation and Circulation."

4.2.11.2 Cumulative Impact TC-1: Significant Increase in Construction-Related Truck and Auto Traffic, Decrease in Roadway Capacity, and Disruption of Vehicular and Non-Motorized Travel—Less than Cumulatively Considerable

Cumulative Impact TC-1 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in impacts on roadways and intersections from a short-term temporary increase in

construction truck and automobile traffic, associated with construction worker commutes, transport and staging of construction equipment, transport of construction materials to construction sites, and hauling excavated and demolished materials away from construction sites.

4.2.11.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction of cumulative projects would result in a temporary increase in traffic volumes and a decrease in roadway capacity due to temporary lane closures. The following impacts could result:

- Reduced roadway capacity and an increase in construction-related congestion could result in temporary localized increases in traffic congestion that exceed applicable LOS standards.
- Construction activities could disrupt existing transit service in the proposed project vicinity. Impacts may include temporary route detours, reduced or no service to certain destinations, or service delays.
- Construction activities would increase parking demand in the proposed project vicinity and could result in parking demand exceeding the available supply.
- Construction activities would disrupt pedestrian and bicycle travel. Impacts include temporary sidewalk or roadway closures that would create gaps in pedestrian or bicycle routes and interfere with safe travel.
- Construction activities would increase the mix of heavy construction vehicles with general purpose traffic. Impacts include an increase in safety hazards due to a higher proportion of heavy trucks.

Without mitigation, the impact of cumulative construction-generated traffic on transportation operations and safety would be considered significant.

4.2.11.2.2 Contribution of the Proposed Project

Construction-related traffic due to the proposed Project would add to overall traffic congestion in the area, with most project construction occurring between 2009 and 2020.

Potential cumulative construction effects include the following:

- Temporary increases in traffic associated with construction worker commutes, delivery of construction materials, hauling of demolished and/or excavated materials, and general deliveries would increase travel demand on roadways.

- Temporary roadway lanes closures or narrowings in areas directly abutting construction activities would reduce capacity of roadways.
- Temporary roadway closures associated with the construction of transportation infrastructure would reduce the capacity of the roadway system, and/or require detours that increase travel times.
- Temporary lane or road closures could require route detours or reduced service for transit routes that run adjacent to construction activities.
- During proposed project construction, parking demand would increase from construction workers and from construction equipment that is not in use. In addition, parking spaces located adjacent to construction activities could be temporarily closed.
- Temporary sidewalk, lane, or road closures could occur adjacent to proposed project elements that are under construction, which could interfere with bicycle or pedestrian circulation.
- Heavy and slow-moving construction vehicles would mix with general-purpose vehicular and non-motorized traffic in the area.

The exact trip generation expected from construction will be determined as part of the detailed construction phasing plans that are prepared for the proposed Project. At that time, traffic and/or road closures or narrowing that are expected from other concurrent construction activities will be taken into account, as a Traffic Control Plan is developed to mitigate the construction-related contribution of the proposed Project to the overall surface transportation operations. The proposed Project would result in similar construction impacts identified for past, present, and reasonably foreseeable future projects. When combined with cumulative projects, the cumulative effects would be significant.

4.2.11.2.3 Mitigation Measures and Residual Cumulative Impacts

Implementation of mitigation measure MM TC-1 (Develop and implement a Traffic Control Plan throughout project construction) would reduce the contribution of the proposed Project to cumulative construction impacts to less-than-significant levels. This measure, described in detail in Section 3.11.4.3.1 of this EIR, would address potential impacts during construction by maintaining adequate access to adjacent roadways, maintaining access to transit and to pedestrian and bicycle facilities where safe to do so, providing parking for construction-related vehicles, and providing construction traffic control to minimize effects on roadway operations. With this measure in place, residual cumulative impacts would be less than significant.

4.2.11.3 Cumulative Impact TC-2a: Degradation of LOS at Intersections—Less than Cumulatively Considerable

Cumulative Impact TC-2 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in significant increases in traffic volumes or degradation of LOS at intersections within the proposed project vicinity.

4.2.11.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Increases in traffic volumes on the surrounding roadways, due to cumulative new development, would in turn degrade intersection operations. Cumulative base traffic forecasts include the effects of specific cumulative development projects expected to be built in the vicinity of the proposed project site prior to the buildout date, plus ambient growth rates. The list of related projects was based on data from LADOT and from the Community Redevelopment Agency of the City of Los Angeles, as well as a review of other recent traffic studies conducted for projects in the vicinity.

Table 3.11-7 summarizes the trip generation projections that were completed for the proposed Project. Traffic estimated under the Without Project scenario reflects trips generated by other planned regional development. Projections under the proposed Project reflect the net increase in trips over the Without Project scenario. One location under Without Project conditions, the intersection of Avalon Boulevard and Anaheim Street is projected to operate at LOS E in 2020. Thus, without mitigation, the impact of cumulative traffic on intersection LOS is considered significant.

4.2.11.3.2 Contribution of the Proposed Project

The proposed Project would increase traffic volumes and degrade LOS at intersections within the proposed project vicinity. Because the impacts from the proposed Project are compared to the baseline that includes cumulative projects, the contribution from the proposed Project would be cumulatively considerable for one intersection in 2020. At the intersection of Avalon Boulevard and Anaheim Street, the projected V/C increase due to the proposed project is 0.024 in the PM peak hour. This exceeds the threshold of 0.02 that is defined when an intersection is operating at LOS E or worse. Thus, when combined with cumulative projects, the cumulative effects of the proposed Project would be significant .

4.2.11.3.3 Mitigation Measures and Residual Cumulative Impacts

Mitigation Measure MM-2 would be implemented to address the intersection impact identified in year 2020. This measure would fully mitigate the impact at this location

to less-than-cumulatively considerable levels through 2020. Thus, with mitigation in place, the cumulative LOS impacts at this intersection would be less than significant under CEQA.

4.2.11.4 Cumulative Impact TC-2b: Significant Increase in Traffic Volumes and Degradation of Operations along CMP Facilities—Less than Cumulatively Considerable

Cumulative Impact TC-2b represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in significant increases in traffic volumes or degradation of LOS on CMP facilities within the proposed project vicinity.

4.2.11.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Increases in traffic volumes on the surrounding roadways, due to cumulative future development, would in turn degrade operations along CMP facilities. Cumulative base traffic forecasts include the effects of specific cumulative development projects expected to be built in the vicinity of the proposed project site prior to the buildout date, plus ambient growth rates.

Table 3.11-7 summarizes the trip generation projections that were completed for the proposed Project. Traffic estimated under the Without Project scenario reflects trips generated by other planned regional development. Projections under the proposed Project reflect the net increase in trips over the No Project scenario. The impact of cumulative traffic on intersection LOS would be less than significant.

4.2.11.4.2 Contribution of the Proposed Project

The proposed Project would increase traffic volumes and degrade LOS along CMP facilities within the proposed project vicinity. However, cumulative increases in traffic would not degrade LOS to a level that exceeds adopted standards. Thus, the cumulative impacts of the proposed Project on CMP facilities are less than significant.

4.2.11.4.3 Mitigation Measures and Residual Cumulative Impacts

Because no cumulatively significant impacts on CMP facilities would occur, no mitigation is required. Residual cumulative impacts would be less than significant.

4.2.11.5 Cumulative Impact TC-3: Increased Demand for Transit Service beyond the Supply of Such Services—Less than Cumulatively Considerable

Cumulative Impact TC-3 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in significant increases in transit demand within the proposed project vicinity.

4.2.11.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Increases in project-generated trips, due to cumulative new development, would increase transit demand. Cumulative base traffic forecasts include the effects of specific cumulative development projects expected to be built in the vicinity of the proposed project site prior to the buildout date, plus ambient growth rates.

Table 3.11-7 summarizes the trip generation projections that were completed for the proposed Project. Traffic estimated under the Without Project scenario reflects trips generated by other planned regional development. Projections under the proposed Project reflect the net increase in trips over the Without Project scenario. The impact of cumulative transit demand would be less than significant.

4.2.11.5.2 Contribution of the Proposed Project

The proposed Project would increase transit demand within the proposed project vicinity, as a result of the commercial, recreational, cultural, and business-oriented proposed project elements.

As discussed in the Section 3.11.2, "Environmental Setting," there are five bus lines that provide service in the vicinity of the proposed project site. Based on the existing operating schedules for these transit lines, 16 buses in the AM peak hour and 16 buses in the PM peak hour are estimated to serve the vicinity.

Cumulative increases in transit demand would likely be accommodated with existing transit service. Additionally, if cumulative demand on regional bus routes approaches or exceeds capacity by the long-range planning years of 2015 or 2020, the transit providers have the option of adding routes or increasing the frequency of existing service as a matter of standard operating procedure. Thus, the cumulative impacts of the proposed Project on transit are less than significant.

4.2.11.5.3 Mitigation Measures and Residual Cumulative Impacts

As no cumulatively significant impacts on transit would occur, no mitigation is required. Residual cumulative impacts would be less than significant.

4.2.11.6 Cumulative Impact TC-4: Violation of the City's Adopted Parking Supply, and Parking Demand Exceeding Supply—Less than Cumulatively Considerable

Cumulative Impact TC-4 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in significant increases in parking demand in the proposed project vicinity that would exceed supply.

4.2.11.6.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Completion of future cumulative development projects would increase future parking demand, and local development regulations govern the level of parking supply required for each new development. For the proposed Project, the required parking supply reflects the level needed for the development that would occur, over the cumulative parking supply that would be required to accommodate other regional development. Because parking supply for cumulative development is regulated by development regulations, the impact of cumulative parking demand is less than significant.

4.2.11.6.2 Contribution of the Proposed Project

The proposed Project would increase parking demand within the proposed project vicinity. Under the requirements of the Harbor Enterprise Zone, 440 additional parking spaces would be required over parking required by other cumulative development. An additional 506 parking spaces are proposed, which exceeds this requirement. Thus, cumulative impacts to parking would be less than significant.

4.2.11.6.3 Mitigation Measures and Residual Cumulative Impacts

As no cumulative significant impacts on parking would occur under the proposed Project, no mitigation is required. Residual cumulative impacts would be less than significant.

4.2.11.7 Cumulative Impact TC-5: Significant Increase in Safety Hazards—Less than Cumulatively Considerable

Cumulative Impact TC-5 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in significant conflict with vehicles and pedestrians at cross streets.

4.2.11.7.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects must conform to local development standards, and thus are not expected to include elements that result in poor sight distance, sharp curves, or other factors that would increase safety hazards for vehicular or non-motorized travelers. Thus, their cumulative impacts on safety are less than significant.

4.2.11.7.2 Contribution of the Proposed Project

The proposed Project does not include elements that result in poor sight distance, sharp curves, or other factors that would increase safety hazards for vehicular or non-motorized travelers. Thus, the cumulative impacts of the proposed Project on safety are less than significant.

4.2.11.7.3 Mitigation Measures and Residual Cumulative Impacts

As no cumulative significant impacts on safety would occur under the proposed Project, no mitigation is required. Residual cumulative impacts would be less than significant.

4.2.11.8 Cumulative Impact VT-1a: Interference with Operation of Designated Vessel Traffic Lanes and/or Impairment to the Level of Safety for Vessels Navigating the Main Channel, West Basin Area, East Basin Area, or Precautionary Areas due to Construction—Less than Cumulatively Considerable

Cumulative Impact VT-1a represents the potential of construction of the proposed Project when combined with past, present, and reasonably foreseeable future projects

to increase vessel traffic congestion or reduce the existing level of safety for vessels navigating the harbor, Main Channel, and/or precautionary areas.

As reported in Section 3.11.2, vessel traffic levels are highly regulated by the USCG Captain of the Port (COTP) and the Marine Exchange of Southern California via the Vessel Transportation Service (VTS) to ensure the total number of vessels transiting the Port does not exceed the design capacity of the federal channel limits. Mariners are required to report their position to the COTP and the VTS prior to transiting through the Port; the VTS monitors the positions of all inbound/outbound vessels within the precautionary area and the approach corridor traffic lanes. In the event that scheduling conflicts occur and/or vessel occupancy within the Port is operating at capacity, vessels are required to anchor at the anchorages outside the breakwater until mariners receive COTP authorization to initiate transit into the Port.

4.2.11.8.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past actions within the proposed project vicinity have resulted in deepening navigation channels and upgrading existing wharf infrastructure to accommodate modern container ships. Incremental Port development has resulted in water-dependent developments that have been necessary to accommodate the needs of foreign and domestic waterborne commerce. In response to past actions, several measures have been implemented to ensure the safety of vessel navigation in the harbor area. Restricted navigation areas and routes have been designated to ensure safe vessel navigation, and are regulated by various agencies and organizations to ensure navigational safety.

Present and reasonably foreseeable Port projects, including the proposed Project, could result in marine vessel safety impacts if they introduce construction equipment to the harbor, Main Channel, and/or precautionary areas; and/or interfere with USCG-designated vessel traffic lanes. In-water construction activities are associated with many of the Port projects listed in Table 4-1; including the Pier 400 Container Terminal and Transportation Corridor (#1), Berths 136-147 Terminal (#2), Channel Deepening (#4), Cabrillo Way Marina (#5), San Pedro Breakwater Artificial Reef (#6), Berth 226-236 (Evergreen) Container Terminal Improvements (#8), SSA Outer Harbor Fruit Facility Relocation (#10), Pacific LA Marine Terminal, Westway Decommissioning, Consolidated Slip Restoration (#14), Berths 97-109 China Shipping Development (#16), Berths 171-181 Pasha Marine Terminal Improvements (#17), San Pedro Waterfront (#22), Berth 302-305 (APL) Container Terminal Improvements (#24), Berths 212-224 (YTI) Container Terminal Improvements (#29), and the Berths 121-131 (Yang Ming) Container Terminal Improvements (#30). Construction activities would introduce construction equipment into the Main Channel. The Port utilizes standard safety precautions in piloting these vessels through harbor waters and standard measures including compliance with LAHD standards for construction and dredging safety. USACE permit requirements would also apply.

Proposed improvements associated with other projects would improve the overall conditions in the Los Angeles Harbor by creating berth depths sized to accommodate the modern, deeper-draft class of vessels. The deeper draft berths would improve the efficiencies of shipping and Port operations by reducing the relative number of vessels and vessel trips required to accommodate projected container throughput at the Port.

Therefore, the past, present, and foreseeable future projects would not create significant cumulative construction impacts related to navigation hazards.

4.2.11.8.2 Contribution of the Proposed Project

The construction phase of the proposed Project would involve the use of construction vessels and equipment to conduct limited fill, dredge, and construction within the harbor, Main Channel, and precautionary areas. These types of activities are routinely conducted in the Port, and contractors performing in-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts. The Port would utilize standard safety precautions in piloting these vessels through harbor waters, and standard measures including compliance with LAHD standards for construction and dredging safety. Thus, the short-term presence of supply barges/support boats in the harbor, Main Channel, and precautionary areas would not reduce the existing level of safety for vessel navigation in the Port.

These practices and procedures ensure safe transit of vessels operating within, as well as to and from, the proposed project area. Given the continued use of standard practices and implementation of COTP uniform procedures, the projected cumulative increase in construction-related vessel calls would not significantly decrease the margin of safety for marine vessels within the cumulative area impacted by the proposed Project.

Therefore, construction of the proposed Project, considered together with other present and reasonably foreseeable future projects, would result in less-than-significant impacts.

4.2.11.8.3 Mitigation Measures and Residual Cumulative Impacts

As construction of the proposed Project would have less-than-significant impacts on marine transportation, no mitigation measures would be required. Impacts would remain less than significant.

4.2.11.9 Cumulative Impact VT-1b: Interference with Operation of Designated Vessel Traffic Lanes and/or Impairment to the Level of Safety for Vessels Navigating the Main Channel, West Basin Area, East Basin Area, or Precautionary Areas due to Operations—Less than Cumulatively Considerable

Cumulative Impact VT-1b represents the potential for operation of the proposed Project when combined with past, present, and reasonably foreseeable future projects to increase vessel traffic congestion or reduce the existing level of safety for vessels navigating the harbor, Main Channel, and/or precautionary areas.

As reported in Section 3.11.2, vessel traffic levels are highly regulated by the USCG COTP and the Marine Exchange of Southern California via the VTS to ensure that the total number of vessels transiting the Port does not exceed the design capacity of the federal channel limits. Mariners are required to report their position to the COTP and the VTS prior to transiting through the Port; the VTS monitors the positions of all inbound/outbound vessels within the precautionary area and the approach corridor traffic lanes. In the event that scheduling conflicts occur and/or vessel occupancy within the Port is operating at capacity, vessels are required to anchor at the anchorages outside the breakwater until mariners receive COTP authorization to initiate transit into the Port.

4.2.11.9.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past actions within the proposed project vicinity have resulted in deepening navigation channels and upgrading existing wharf infrastructure to accommodate modern container ships. Incremental Port development has resulted in water-dependent developments that have been necessary to accommodate the needs of foreign and domestic waterborne commerce. In response to past actions, several measures have been implemented to ensure the safety of vessel navigation in the harbor area. Restricted navigation areas and routes have been designated to ensure safe vessel navigation, and are regulated by various agencies and organizations to ensure navigational safety.

Present and reasonably foreseeable future projects, including the proposed Project, could result in marine vessel safety impacts if they introduce construction equipment to the harbor, Main Channel, and/or precautionary areas; and/or interfere with USCG designated vessel traffic lanes. Operational activities are associated with many of the Port projects listed in Table 4-1; including the Pier 400 Container Terminal and Transportation Corridor (#1), Berths 136-147 Terminal (#2), Channel Deepening (#4), Cabrillo Way Marina (#5), San Pedro Breakwater Artificial Reef (#6), Berth 226-236 (Evergreen) Container Terminal Improvements (#8), SSA Outer Harbor

Fruit Facility Relocation (#10), Pacific LA Marine Terminal, Westway Decommissioning, Consolidated Slip Restoration (#14), Berths 97-109 China Shipping Development (#16), Berths 171-181 Pasha Marine Terminal Improvements (#17), San Pedro Waterfront (#22), Berth 302-305 (APL) Container Terminal Improvements (#24), Berths 212-224 (YTI) Container Terminal Improvements (#29), and the Berths 121-131 (Yang Ming) Container Terminal Improvements (#30). Construction activities would introduce construction equipment into the Main Channel. The Port utilizes standard safety precautions in piloting these vessels through harbor waters, and standard measures including compliance with LAHD standards for construction and dredging safety.

Proposed improvements associated with other projects would improve the overall conditions in the Los Angeles Harbor by creating berth depths sized to accommodate the modern, deeper-draft class of vessels. The deeper draft berths would improve the efficiencies of shipping and Port operations by reducing the relative number of vessels and vessel trips required to accommodate projected container throughput at the Port.

Therefore, the past, present, and foreseeable future projects would not create significant cumulative operational impacts related to navigation hazards.

4.2.11.9.2 Contribution of the Proposed Project

During operations, the proposed Project is expected to attract slightly increased levels of recreational vessel traffic (fewer than 48 vessels per day) to the harbor, Main Channel, and precautionary areas.

The cumulative increase in Port recreational vessel volume, in combination with increased recreational and cargo volume (i.e., containers and TEUs) from other reasonably foreseeable future Port projects, would result in additional vessel traffic within the harbor, Main Channel, and precautionary areas. The increased vessel volumes would in turn increase the risk of in-water vessel traffic hazards. However, the rate of vessel accidents (i.e., collisions, collisions with stationary objects or structures, and groundings) in the Port is relatively low (0.0038% probability; see Section 3.11.2.2.2 for additional information) compared to vessel traffic volumes within the Port.

Standard practices and procedures ensure safe transit of vessels operating within, as well as to and from, the proposed project area. Given the continued use of standard practices and implementation of COTP uniform procedures, the projected cumulative increase in vessel calls would not significantly decrease the margin of safety for marine vessels within the cumulative area impacted by the proposed Project.

Therefore, operations of the proposed Project, considered together with other present and reasonably foreseeable future projects, would result in less-than-significant impacts.

4.2.11.9.3 Mitigation Measures and Residual Cumulative Impacts

Because operations of the proposed Project would have less-than-significant impacts on marine transportation, no mitigation measures would be required. Impacts would remain less than significant.

4.2.12 Utilities

4.2.12.1 Scope of Analysis

Cumulative impacts on utilities can result from the combined demand of the proposed Project with past, present, and future related projects on any of the utilities for which the proposed Project may have impacts (i.e., water supply, landfill and wastewater treatment capacities, and energy). For the purposes of the cumulative effect analysis of utilities, the timeframe of current or reasonably anticipated projects extends from 2008 to 2020.

The geographic scope of the cumulative effect analysis of utilities depends on the service area of the individual utility provider and the jurisdiction over which increased demand for utility services from the proposed Project could reduce the availability of such utility services. Since the proposed Project has the capacity to affect the environment within the Port and surrounding communities, the region of analysis for cumulative impacts includes the Port of Los Angeles and extends to adjacent areas, including the communities of Wilmington and San Pedro. Cumulative impacts are, therefore, assessed in terms of their compatibility with existing Port industrial uses. For stormwater, the geographic scope includes the Wilmington Waterfront and immediately adjacent lands within the Harbor's subwatershed because this represents the drainage area that would be influenced by the proposed Project. The service areas of the Bureau of Sanitation (wastewater), Los Angeles County Sanitation Districts (solid waste), and LADWP (water and electricity) encompass the City of Los Angeles. The Southern California Gas Company (Gas Company) (natural gas) serves most of central and Southern California. However, the geographic region for cumulative utilities impacts is the Port and Harbor District because the infrastructure immediately serving the proposed Project is located within this service area. Service subareas of utility providers are sufficiently separated such that increased service demands from the proposed Project would not threaten such provisions in other areas (i.e., central and Southern California in the case of the Gas Company). Direct impacts of the proposed Project would be localized to the Port area, and indirect impacts could extend further within the communities of San Pedro and Wilmington.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.12, "Utilities."

4.2.12.2 Cumulative Impact UT-1: Construction or Expansion of Utilities—Less than Cumulatively Considerable

Cumulative Impact UT-1 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to require substantial demand for utilities and therefore require the substantial construction or expansion of utility lines to meet that demand.

4.2.12.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and operation of past projects has created a demand for storm drain, water, and wastewater line infrastructure that is currently accommodated by existing utility lines. Storm drains within the area are maintained by the LAHD and have sufficient capacity to accommodate demands (Zambrano 2007).

Many of the projects identified in Table 4-1 involve relocation of existing facilities within the Port and vicinity, and generally do not require any expansion of facilities. Therefore, it is expected that stormwater runoff, water consumption, and wastewater generation would remain similar to current levels. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional demands on utilities and service systems. These projects include the Pier 400 Container Terminal and Transportation Corridor Project, Evergreen Improvements Project (#8), Pacific L.A. Marine Terminal LLC Crude Oil Terminal (#12), Berths 97–109 China Shipping Terminal Development Project (#16), Berths 171–181 Pasha Marine Terminal Improvements (#17), Berths 302–305 APL Container Terminal Expansion (#24), Berths 121–131 Yang Ming Container Terminal (#30), Dana Strand (#63), Ponte Vista (#69), and Middle Harbor Terminal Redevelopment, Port of Long Beach (#72). The related projects would likely require construction and/or expansion of water, wastewater, and storm drains utility systems on their respective sites, and may have to connect with nearby supply utility lines (usually in streets and other public rights-of-way).

The sewer mainlines in the Wilmington area are flowing near capacity. Based on the estimated wastewater flows and the current flow capacity of the existing sewer lines in the Wilmington Community, the existing sewer system would not be able to accommodate the total flow from the future projects. The demand from past and the present projects would be accommodated in the existing sewer system (as has been analyzed in Berths 136–147 Marine Terminal, West Basin ,and Dana Strand Housing projects' environmental impact documents). However, the wastewater flow from future projects like Banning Elementary School #1 would potentially have a cumulatively considerable impact on wastewater utility lines. The future projects would be required to construct secondary sewer lines of adequate capacity to support the main sewer lines. The construction of various utility lines would be carried out as part of the individual projects. A Public Services Relocation Plan would be prepared as

part of the individual projects to address impacts from construction and/or expansion of utilities. The Public Services Relocation Plan would be reviewed by the service providers and City departments prior to implementation. Because the sewer lines are flowing at capacity in the Wilmington community area, past, present, and reasonably foreseeable future projects would result in significant cumulative impacts on utilities.

4.2.12.2.2 Contribution of the Proposed Project

The proposed Project would retain, relocate, or rebuild and protect electrical utilities as appropriate as part of the proposed Project. Additionally, the proposed Project would require an expansion of the existing wastewater lines to accommodate proposed project wastewater flows. Furthermore, the proposed Project would include adding several mainlines off of the existing 24-inch recycled water mainline so that all landscaping and water features would be supplied with recycled water.

The proposed Project would also require relocation of electrical lines and potable water lines for construction. The relocation of existing electrical lines and potable water lines would not be associated with an increase in demand for electricity under the proposed Project or inadequate existing infrastructure capacity (see Cumulative Impact UT-3 for further discussion regarding electricity and UT-2 for further discussion regarding water demand); therefore, the proposed Project would not have a cumulatively considerable impact on electrical utilities, when combined with past, present, and reasonably foreseeable future projects.

The sewer mainlines in the Wilmington area are flowing near capacity. Based on the estimates of wastewater flows and the current flow capacity of the existing sewer lines, the system would not be able to accommodate the total flow from the proposed Project without wastewater infrastructure upgrades and expansions. All wastewater infrastructure improvements and connections would occur within City streets, comply with the City's municipal code, and be performed under permit by the City Bureau of Engineering and/or LADWP. The existing sewer infrastructure would not be able to accommodate the proposed project demand, as well as cumulative wastewater flows from the related projects, without wastewater infrastructure upgrades and expansions. Therefore, without mitigation the proposed Project would have a cumulative considerable impact on wastewater utilities, when combined with past, present and reasonably foreseeable future projects.

The proposed Project would result in the expansion of the 24-inch recycled water line along Harry Bridges Boulevard to provide the four proposed water features and landscaping with recycled water. Recycled water can be provided through the TITP with the extension of several mainlines off of the existing 24-inch recycled water line. The construction of these new mainlines would be a beneficial cumulative impact, as they would ultimately reduce the amount of potable water the proposed Project would use and reduce the overall demand for water of the proposed Project. Therefore, when combined with past, present, and reasonably foreseeable future projects the expansion of the recycled waterline would be cumulatively considerable.

4.2.12.2.3 Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure **MM UT-4** (Section 3.12, "Utilities") requiring construction of secondary lines to main sewer lines of adequate capacity for the proposed Project by the project proponent would reduce the cumulatively considerable residual impacts to less-than-significant levels.

4.2.12.3 Cumulative Impact UT-2: Exceeding Existing Water Supply, Wastewater, or Landfill Capacities—Less than Cumulatively Considerable

Cumulative Impact UT-2 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to generate substantial solid waste, and/or require substantial water and/or wastewater demands that would exceed the capacity of existing facilities.

4.2.12.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Operation of past projects has resulted in existing demands for water and generation of wastewater and solid waste. These demands are currently accommodated by existing facilities. In order to properly plan for water supply, the LADWP determines water demands using factors such as demographics, weather, economy, and trends in development. In the 2005 Urban Water Management Plan, LADWP forecasted the City of Los Angeles to grow 0.4% annually over the next 25 years, for an increase of approximately 368,000 persons over the next 25 years. It is projected that LADWP, along with MWD, will have adequate water supply capabilities to meet anticipated growth and increased demands until the year 2035 under wet, dry, and multiple-dry years (LADWP 2005)[1]. In terms of the City's overall water supply condition, the water requirement for any project that is consistent with the City's General Plan has been taken into account in the planned growth of water demand. LADWP's forecast specifically includes anticipated demand from projects that are included in the Port's Community Plan or the PMP, including all past, present, and 21 reasonably foreseeable future Port projects (LADWP 2005). The California Urban Water Management Planning Act requires water suppliers to develop water management plans every 5 years. Because of this, the LADWP would continue to project future water demands and supply through new UWMPs every 5 years.

[1] The 2005 MWD UWMP is also incorporated by reference and is available at LAHD Environmental Management Division, 425 South Palos Verdes Street, San Pedro, CA and at http://www.mwdh2o.com/. Section A.3 of the 2005 MWD UWMP provides justifications for its supply projections including existing supplies, historical supplies, and contracts for future supplies.

Together with local groundwater sources, the Los Angeles–Owens River Aqueduct, purchases from the MWD, and recycled water, LADWP estimates that it will have adequate supply for future projects (LADWP 2007).

The TITP wastewater treatment plant is currently operating at 56% of its daily capacity of 30 mgd, treating about 17.5 mgd (City of Los Angeles Bureau of Sanitation 2008a). The City projects that by 2020, wastewater flows in the TITP service area will grow to 19.9 mgd (City of Los Angeles 2006); therefore, approximately 10 mgd in daily capacity at TITP would remain unused and available for future years (beyond 2020). Wastewater from the related projects would not significantly affect existing or future capacity at TITP due to its substantial remaining capacity beyond 2020. Consequently, the past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts to wastewater treatment capacity.

The landfill that serves the Port area is the Sunshine Canyon SLF. Sunshine Canyon SLF has a daily throughput capacity of 12,100 tons allotted for City use and is expected to accommodate demands until 2037 (CIWMB 2008a). In addition there are several other landfills identified in Section 3.12, "Utilities" for secondary uses. However, the City of Los Angeles, as well as Southern California in general, is currently faced with reduced landfill space due to increases in population. To comply with AB 939, recycling studies for the City of Los Angeles have been conducted and currently there is a citywide diversion rate of 62%, and a goal of 70% by 2015, 90% by 2025, with an ultimate goal of zero waste by 2030 (Pereira pers. comm. 2008).

Additionally, the City of Industry is considering an Environmental Impact Report on the Puente Hills Intermodal Facility, in summer 2008. This waste-by-rail project's goal is to accommodate the solid waste removal needs for Los Angeles County by transporting solid non-hazardous waste to Mesquite Landfill in Imperial County. The proposed facility would eventually have the capacity of two trains per day, handling a total of 8,000 tons of municipal solid waste per day. It is expected to be operational by 2011 (Puente Hills Intermodal Facility DEIR 2008).

Many of the projects identified in Table 4-1 are Port redevelopment projects within the proposed project vicinity, and generally do not require any expansion of facilities. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional utility demands and generations for water, wastewater, and solid waste. These projects include the Pier 400 Container Terminal and Transportation Corridor Project, (#1), Evergreen Improvements Project (#8), Pacific L.A. Marine Terminal LLC Crude Oil Terminal (#12), Berths 97–109 China Shipping Terminal Development Project (#16),Berths 171–181 Pasha Marine Terminal Improvements (#17), Berths 302–305 APL Container Terminal Expansion (#24), Berths 121–131 Yang Ming Container Terminal (#30), Dana Strand (#63), Ponte Vista (#69), and Middle Harbor Terminal Redevelopment (Port of Long Beach) (#72). While the number of related projects would increase the demands for water as well as generation of wastewater and solid waste, existing and planned

capacity would be able to accommodate and process wastewater and solid waste, and provide adequate water supply for future projects. Based on the above, the past, present, and reasonably foreseeable future projects would not result in a significant cumulative impacts on the provision of water nor result in a significant cumulative impact on wastewater treatment or landfill capacity .

4.2.12.3.2 Contribution of the Proposed Project

Operation of the proposed project would demand about 44,180 gpd or 50 acre-feet per year (afy) of water in 2015 and about 85,312.5 gpd or 96.5 afy in 2020. The proposed Project would utilize 20.7 afy and 56.5 afy of recycled water in 2015 and 2020, respectively. The 2015 water demand of the proposed Project after use of recycled water would represent 0.004% of the estimated water demand of 705,000 afy for the LADWP service area in 2015. The 2020 water demand of the proposed Project after use of recycled water would represent 0.005% of the estimated water demand of 731,000 afy for the LADWP service area in 2020. The Water Supply Assessment prepared for the proposed Project found that LADWP would be able to accommodate the proposed Project's water demand. Because the proposed Project's water demand is low, and because ongoing water supply planning would continue to occur via new or updated UWMPs in the future, the proposed Project would not result in significant impacts, nor would the cumulative impact be significant. Thus, the incremental contribution of the proposed Project would not result in a cumulatively considerable impact.

Wastewater generation from the proposed Project would contribute 1.1% of the TITP daily capacity. Because the TITP currently operates at 56% capacity, these increases would be considered negligible. The amount of wastewater generated by the proposed Project would not significantly affect existing or future capacity at TITP due to the limited operational proposed project flows and the adequate remaining capacity at TITP beyond 2020 (to 2045), as described above. Therefore, the proposed Project's incremental contribution would not result in a cumulatively considerable impact on wastewater treatment capacity.

The proposed project operations would generate about 3,600 pounds of solid waste per day in 2020 at full buildout. With the current recycle diversion rate of 62%, the amount of solid waste that would go the Sunshine Canyon landfill represents 0.006% of the permitted daily throughput of 12,100 tons. If the goal of 70% diversion is achieved by 2015, that amount would be reduced to 0.005%. Finally, if the goal of 100% diversion is achieved by 2030, the amount of solid waste sent to Sunshine Canyon SLF Landfill would be 0% for the project horizon date of 2037. It is important to note that these goals are optimistic. The increases in solid waste demands would be less than cumulatively considerable due to compliance with AB 939 and the proposed waste-by-rail system. Since the cumulative impact of past present, and future projects is less than significant, and the proposed Project's contribution is less than significant, the proposed Project would not result in a cumulatively considerable contribution to a significant cumulative impact.

4.2.12.3.3 Mitigation Measures and Residual Cumulative Impacts

To further reduce impacts to water demand and wastewater capacities, LADWP has supplied water conservation mitigation measures that would be implemented for the proposed Project. Implementation of Mitigation Measure **MM UT-5 (Water Conservation and Wastewater Reduction)** would reduce impacts from the proposed Project (Section 3.12, "Utilities"). The proposed Project's incremental impacts would be less than cumulative considerable and a significant cumulative impact would not occur.

4.2.12.4 Cumulative Impact UT-3: Increased Energy Demands, Supply Facilities, and Distribution Infrastructure—Less than Cumulatively Considerable

Cumulative Impact UT-3 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to generate increases in energy demands such that the construction of new energy supply facilities and distribution infrastructure would be required.

4.2.12.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and operation of past and present projects has resulted in existing demands for energy and natural gas. These demands and generations are currently accommodated by existing facilities as provided by the LADWP and the Gas Company. Many of the projects identified in Table 4-1 involve relocation of existing facilities within the Port and vicinity, and generally do not require any expansion of facilities. Therefore, it is expected that electricity and natural gas consumption would remain similar to current levels. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional demand on electricity and natural gas. These projects include the Pier 400 Container Terminal and Transportation Corridor Project (#1), Evergreen Improvements Project (#8), Pacific L.A. Marine Terminal LLC Crude Oil Terminal (#12), Berths 97–109 China Shipping Terminal Development Project (#16), Berths 171–181 Pasha Marine Terminal Improvements (#17), Berths 302–305 APL Container Terminal Expansion (#24), Berths 121–131 Yang Ming Container Terminal (#30), and Middle Harbor Terminal Redevelopment (#72). These related projects would place an additional demand on electricity and natural gas.

LADWP has a total generating capacity of approximately 8,129 megawatts available in 2015 and 7,721 megawatts available in 2020 to serve a peak Los Angeles demand of about 6,540 megawatts per day in 2015 and 6,876 in 2020. Under the Los Angeles

City Charter (Sections 220 and 673), LADWP has the power and duty to construct, operate, maintain, extend, manage, and control water and electric works and property for the benefit of the City and its inhabitants. LADWP's Integrated Resource Plan (IRP) anticipates load growth and plans new generating capacity or demand side management programs to meet load requirements for future customers. The LADWP prepared IRPs in 2000 and 2007 to provide a framework to assure that future energy needs of LADWP customers are reliably met at the least cost and are consistent with the City commitment to environmental excellence (City of Los Angeles 2007). In 2002, SB 1078 implemented a Renewable Portfolio Standard, which established a goal that 20% of the energy sold to customers be generated by renewable resources by 2017. The IRP provides objectives and recommendations to reliably supply LADWP customers with power and to meet the 20% renewable energy goal by 2010. As of the 2007 IRP, LADWP prepared a Load Forecast that predicts that LADWP customers' electricity consumption will increase at an average rate of 1.1% per year and that peak demand will increase an average of 70 megawatts per year for the foreseeable future. For 2025, LADWP predicts that peak demand will reach 7,370 megawatts and that total resources will amount to 8,516 megawatts (including a reserve margin). Based on the LADWP IRP, and the LADWP's current generating capacity, electrical resources, and reserves LADWP will adequately provide electricity for the Port; they will have adequate generation to serve the current customer load and reasonably foreseeable future projects (Gupta pers. comm. 2007). The IRP does not provide load demand forecasts or supply resources beyond 2025 because its planning horizon extends only to 2025. However, because LADWP is required by the Charter to provide a reliable supply of electricity for its customers and because LADWP is moving toward increasing renewable energy supplies in its resource portfolio, the electricity demand of the past, present, and reasonably foreseeable future projects would not result in the need to construct a new unplanned off-site power station or facility.

Natural gas service to the project site would be supplied by the Gas Company. As a public utility, Gas Company is under the jurisdiction of the state PUC and can be affected by actions of federal regulatory agencies. While regulatory actions may affect the regional and local supply and pricing of natural gas, substantial changes in this utility supply are not anticipated based on current supply and demand projections (Gas Company 2007). Therefore, past, present, and reasonably foreseeable future projects would not contribute to a cumulatively considerable impact on natural gas service.

4.2.12.4.2 Contribution of the Proposed Project

The proposed Project would result in minimal increased demands for electricity and natural gas. Energy expenditures during construction would be short term in duration, occurring periodically during each of the proposed project construction phases. Construction would not result in substantial waste or inefficient use of energy because programs such as the Green Terminal Program and the Construction

Recycling Program implement policies that make construction and development projects more energy efficient. (Port of Los Angeles 2008)

All new buildings constructed under the proposed Project would adhere to the Port's Green Building Policy of implementation of LEED-certified ratings wherever applicable. It is the Port's desire to be the most energy efficient port to date. Energy efficiency standards would be incorporated on various buildings to decrease energy demands. The increase in electricity demands associated with the proposed Project would not exceed existing supplies or result in the need for major new facilities. Additionally, the LADWP IRP anticipates load growth and plans new generating capacity or demand side management programs to meet load requirements for future customers. Furthermore, the proposed Project would incorporate energy conservation measures in compliance with California's Building Code CCR Title 24 that requires building energy efficient standards for new construction (including requirements for new buildings, additions, alterations, and, in nonresidential buildings, repairs). Incorporation of these design standards, as required by state law, would reduce wasteful energy consumption.

The proposed project natural gas demand represents 0.001 and 0.002% of the total daily capacity of the Gas Company in 2015 and 2020, respectively (4,675 MMcf per day available in 2015 and 2020). Project-related natural gas demands (space and water heating) would not be substantial.

Therefore, the proposed Project would not result in a significant increase in demands on electricity and natural gas. Since the cumulative impact is less than significant, the increased demands for electricity and natural gas by the Project beyond 2020 would not result in a cumulatively considerable contribution to a significant cumulative impact.

4.2.12.4.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.13 Public Services

4.2.13.1 Scope of Analysis

Cumulative impacts on public services can result from the combined demand of the proposed Project along with past, present, and future related projects on any of the public services for which the proposed Project may have impacts (i.e., police and fire protection, and parks and recreation). The geographic scope depends on the service area of the individual public service and the jurisdiction over which increased demand for services from the proposed Project could reduce the availability of such services. Since the proposed Project has the capacity to affect the environment

within the Port and surrounding communities, the region of analysis for cumulative impacts includes the Port of Los Angeles and extends to adjacent areas, including the community of Wilmington, and are assessed in terms of their compatibility with existing Port industrial uses. For the Port Police, this area is localized to the Ports of Los Angeles and Long Beach and neighboring harbor area communities, such as Wilmington. The service area of the LAPD and LAFD encompasses the City of Los Angeles; however, the police and fire stations identified as serving the proposed Project serve only the Port and harbor area. The geographic scope for parks and recreation would be limited to the neighboring Wilmington and San Pedro communities. Direct impacts from the proposed Project would be localized to the Port area, and indirect impacts could extend further within the City.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.13, "Public Services."

4.2.13.2 Cumulative Impact PS-1: Inadequate Level of Law Enforcement and Emergency Services during Construction—Less than Cumulatively Considerable

Cumulative Impact PS-1 represents the potential for proposed project construction activities, when combined with past, present, and reasonably foreseeable future projects, to affect the law enforcement and emergency services such that public service agencies would not be able to maintain an adequate level of service during construction.

4.2.13.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects would not disrupt law enforcement or emergency response times during construction because these projects have been completed and are operational. Construction of present and reasonably foreseeable future projects may lead to traffic disruption through lane closures, road closures etc. These disruptions would potentially impact the emergency response times of the law enforcement and emergency services providers. Present and future cumulative projects within the Port would be required, as would the proposed Project, pursuant to the WATCH Manual, to coordinate with law enforcement agencies and emergency services during construction of all roadway improvements to establish emergency vehicular access, ensuring continuous law enforcement access to surrounding areas. The WATCH Manual would include temporary traffic controls such as alternate response routes and maintain emergency vehicular access through tapers, diversions, and detours, hand signaling controls, barricades, lighting devices, and sign placement to ensure minimum response times during construction of the related projects. Therefore impacts of past, present, and reasonably foreseeable future projects would not be cumulatively considerable.

4.2.13.2.2 Contribution of the Proposed Project

At no time would construction of the proposed Project impact response times for LAFD, LAPD, or the Port Police. Proposed project construction would require the use of one or more sites for construction staging of equipment and materials, which would be vulnerable to unauthorized trespassing or theft; however, private security provided by the Port and LAPD, as needed, would protect against such risk. LAHD would be required, pursuant to the WATCH Manual, to coordinate with law enforcement agencies and emergency services during construction of all roadway improvements to establish emergency vehicular access, ensuring continuous law enforcement access to surrounding areas. Coordination with various agencies and various traffic control measures proposed as a part of the WATCH manual would ensure that impacts on law enforcement and emergency services, including response times, due to the proposed Project would remain less than cumulatively significant. Therefore, the contribution of the proposed Project would not be cumulatively considerable under Impact PS-1 when combined with past, present, and reasonably foreseeable future projects.

4.2.13.2.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.13.3 Cumulative Impact PS-2: Inadequate Level of Police Protection Services and Infrastructure during Operations—Less than Cumulatively Considerable

Cumulative Impact PS-2 represents the potential for the operation of the proposed Project when combined with past, present, and reasonably foreseeable future projects to increase the demand for additional law enforcement officers and/or facilities such that the LAPD or Port Police would not be able to maintain an adequate level of service without additional facilities.

4.2.13.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The LAPD is not the primary police service provider in the Port area and primarily provides support to the Port Police under special circumstances (as described in Section 3.13, “Public Services”); therefore, cumulative Port development would only mainly impact the Port Police. Operation of past projects has created an existing demand for police protection that is adequately accommodated by the Port Police and LAPD. LAPD’s level of service and response times are considered adequate

(Roupoli pers. comm. 2008); however, the department is continuing to work on ways to further reduce response times. Scheduled improvements to LAPD facilities in the Harbor Community include upgrades to and replacement of the Harbor Station to increase efficiency. Additionally, the Port Police has increased staffing levels in conjunction with the Port in order to maintain adequate service levels for present and future projects (Provinchain pers. comm. 2008).

Many of the present and reasonably foreseeable future cumulative projects described in Table 4-1 involve the relocation of existing facilities within the Port and vicinity or do not otherwise involve expansion of facilities; therefore, these would not result in an increase in public resources. However, several of the projects would utilize or increase the demand for local police services by increasing the amount of Port land used for operations. Specifically, the Pier 400 Container Terminal and Transportation Corridor Project (#1), Evergreen Improvements Project (#8), Pacific L.A. Marine Terminal LLC Crude Oil Terminal (#12), Berths 97–109 China Shipping Terminal Development Project (#16), Berths 171–181 Pasha Marine Terminal Improvements (#17), Berths 302–305 APL Container Terminal(#24), Berths 121–131 Yang Ming Container Terminal (#30), and Middle Harbor Terminal Redevelopment, Port of Long Beach (#70), would generate increased on-land terminal operations.

Development of present and reasonably foreseeable future projects could substantially increase the residential and employee populations in the area, increasing the demand for police protection services. Depending upon the demand generated from the present and reasonably foreseeable future projects, the Port Police and LAPD would continue to increase staffing in conjunction with future development in order to ensure that adequate service would be provided to all future project sites. Also, most of these projects would include mandated security features, including terminal security personnel, gated entrances, perimeter fencing, terminal and backlands lighting, and camera systems under the Maritime Transportation Security Act that would reduce the demand for law enforcement personnel.

Furthermore, to provide for future development and projects, scheduled improvements for the Port Police include construction of a Wilmington Substation at 300 Water Street near Berth 195, which will be occupied as a temporary substation sometime in 2008. The Port Police are also in the process of building a new station at 330 S. Centre Street (between 3rd and 5th Streets). The new station is projected to be completed in 2010. Other improvements include expanding existing Port Police facilities to house mobile incident command vehicles, bicycle unit equipment, security officer equipment and vehicles, hazardous material response vehicles, an expanded marine unit facility, a marine mammal facility, K-9 kennel and K-9 training centers, and a Port Police dive and in-water training center. (Provinchain pers. comm. 2008.). Law enforcement services have developed over time in concert with surrounding development needs, and because of this, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts related to the demand for law enforcement.

4.2.13.3.2 Contribution of the Proposed Project

The proposed Project would not substantially increase the demand for police protection services. LAPD is not the primary police service provider in the Port area; the primary service provider is the Port Police. However, LAPD does have jurisdiction over the proposed project area north of Harry Bridges Boulevard, which is located in the Wilmington Harbor City CP. The proposed Project would result in increased daytime population in the area, including new employees, visitors, and recreators. Furthermore, the proposed Project could support a variety of public events within the open space areas that would increase the daytime population over a certain period of time (e.g., weekends). The increased daytime population would not burden LAPD such that they would not be able to maintain an adequate level of service (Plows pers. comm. 2008). The proposed Project and the individual elements on privately owned land parcels (e.g., industrial and commercial development) would support crime prevention through environmental design approaches such as adequate security lighting and highly visible open space areas. This would reduce the demand for law enforcement personnel. Currently, Port Police are adequately staffed with sworn personnel to provide for the activities of the Port, and the proposed project elements are not estimated to change the ability of Port Police to provide security for the Port (Plows pers. comm. 2008).. The Port Police are estimated to have 223 positions authorized for fiscal year 2007–2008, which includes 142 total sworn officers (recently approved to grow to 212); the Port Police can adequately provide for the proposed Project and would be able to accommodate Port growth and development as it proceeds (Provinchain pers. comm. 2008). The proposed Project does not involve any development that would directly increase the local population.

The proposed Project would require police services to be present at occasional public gatherings and events. However, these would occur only a few times a year over weekend hours, and the level of police service would not be substantially affected.

Consequently, no new or expanded police protection services would be required to serve the project; the proposed Project would have no adverse effects and the cumulative impact of the proposed Project would be less than significant. Therefore, the contribution of the proposed Project would not be cumulatively considerable under Impact PS-2 when combined with past, present, and reasonably foreseeable future projects.

4.2.13.3.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.13.4 Cumulative Impact PS-3: Inadequate Level of Fire Protection and Emergency Services and Infrastructure—Less than Cumulatively Considerable

Cumulative Impact PS-3 represents the potential of the operation of the proposed Project when combined with past, present, and reasonably foreseeable future projects to require the addition of a new fire station, or the expansion, consolidation, or relocation of an existing facility, to maintain service.

4.2.13.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Operation of past projects has created an existing demand for fire protection that can be accommodated by the LAFD; emergency response times to the area are considered adequate. The citywide average response time is approximately 6 to 8 minutes. LAFD response time is 5 minutes or less by land and up to 10 minutes by water. As required response times are 9 minutes by land and 14 minutes by water, these response times are considered adequate. (Roupoli pers. comm. 2008)

Many of the present and reasonably foreseeable future cumulative projects described in Table 4-1 involve the relocation of existing facilities within the Port and vicinity or do not otherwise involve expansion of facilities. Therefore, these would not result in an increased demand on fire protection. However, several of the projects would utilize or increase the demand for firefighting by increasing the amount of Port land used for operations. Specifically, the Pier 400 Container Terminal and Transportation Corridor Project (#1), Evergreen Improvements Project (#8), Pacific L.A. Marine Terminal LLC Crude Oil Terminal (#12), Berths 97–109 China Shipping Terminal Development Project (#16), Berths 171–181 Pasha Marine Terminal Improvements (#17), Berths 302–305 APL Container Terminal(#24), Berths 121–131 Yang Ming Container Terminal (#30), and Middle Harbor Terminal Redevelopment, Port of Long Beach (#70), would generate increased on-land terminal operations. These projects would be designed and constructed to meet all applicable state and local codes and ordinances to ensure adequate fire protection, and would be subject to LAFD review and approval. These codes and ordinances would include measures such as requiring fire protection infrastructure (i.e., fire hydrants and sprinklers) and ensuring that the LAFD is given the opportunity to review and approve any changes in site access. Additionally, present and reasonably foreseeable future cumulative projects would be required to follow the Watch Manual and to coordinate with the law enforcement agencies during construction of all roadway improvements to establish emergency vehicular access, ensuring continuous law enforcement access to surrounding areas. Furthermore, fire stations in the area are generally distributed to facilitate quick emergency response throughout the proposed project area. Also, as future cumulative development occurs and land uses are intensified, future projects would be subject to stricter fire codes that would

further reduce the need for LAFD services. Consequently, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts to fire protection services.

4.2.13.4.2 Contribution of the Proposed Project

The proposed Project would not substantially increase the demand for fire protection services. The proposed Project would be designed and constructed to meet all applicable state and local codes and ordinances to ensure adequate fire protection, which would be subject to LAFD review and approval. In addition, emergency response times would not increase because existing fire lanes and hydrants would not be removed. The proposed Project would be required to update and resize the water mains, including the locations of fire hydrants to conform to Los Angeles City's Fire Codes (Roupoli pers. comm. 2008). Any site access alterations would be reviewed and approved by the LAFD. The proposed Project would require firefighting services to be present at occasional public gatherings and events. However, these would occur only a few times a year over weekend hours, and the level of police service would not be substantially affected. The proposed Project would have no adverse effects on fire protection and emergency services, and the cumulative impact of the proposed Project would be less than significant. Therefore, the contribution of the proposed Project would not be cumulatively considerable under Impact PS-3 when combined with past, present, and reasonably foreseeable future projects.

4.2.13.4.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.13.5 Cumulative Impact PS-4: Reduction in Level of Service for Recreation and Parks—Less than Cumulatively Considerable

Cumulative Impact PS-4 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to require the addition of recreation and park facilities to maintain service levels.

4.2.13.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Some of the projects in the related projects list in Table 4-1 are growth-inducing, and their cumulative effect will likely result in an intensification of use of existing

recreational resources in the proposed project vicinity. However, these residential projects would be evaluated under a separate environmental process and would be required to comply with existing local and state regulations mandating recreational facilities that would specifically support these new projects. The present and reasonably foreseeable future projects in the vicinity of the proposed Project also include some projects that would provide new open space and recreation resources for the public, including: TraPac Terminal project (#2), San Pedro Waterfront Enhancements Project (#3), Cabrillo Marine Aquarium Expansion (#48), East Wilmington Greenbelt Community Center (#61), and Queensway Bay Master Plan (#90). The addition of these projects in conjunction with the proposed Project would result in a significant increase in recreational opportunities and may even benefit existing recreational resources in the proposed project vicinity by reducing the existing impact on those recreational resources.

4.2.13.5.2 Contribution of the Proposed Project

The proposed Project includes development of recreational facilities and open spaces such as parks, promenades, bike and pedestrian trails, and plazas. These new recreational amenities would relieve the burden on existing recreation facilities and open spaces. LAHD would be responsible for ongoing maintenance and operations of the open spaces and recreational facilities for the proposed Project. The operations would include active maintenance, security, marketing and event master planning, and administration. Financing of the operations and ongoing maintenance activities would be funded by LAHD investment and publicly available resources such as the Port Harbor Revenue Fund; state, local, and federal grants; State Bond Financing; Infrastructure Facilities District; and Tax Increment Districts (Wilmington Waterfront Master Program 2007). LAHD would adequately provide resources for the maintenance and operation of the proposed Project. The proposed Project would have no adverse effects on parks and recreation, and the cumulative impact of the proposed Project would be less than significant. Therefore, the contribution of the proposed Project would not be cumulatively considerable under Impact PS-4 when combined with past, present, and reasonably foreseeable future projects.

4.2.13.5.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.14 Water Quality, Sediments, and Oceanography

4.2.14.1 Scope of Analysis

The geographic scope for cumulative impacts on water quality, sediments, and oceanography varies depending on the impact. The geographic scope with respect to

water and sediment quality and changes to the surface area of a water body would be confined to the inner Los Angeles Harbor and lands draining to that harbor, because this water body represents receiving waters for the cumulative projects related to construction activities and long-term operations. The geographic scope for surface water hydrology and flooding is the proposed Project backlands and immediately adjacent lands within the Dominguez Channel subwatershed, because it represents the drainage area that would be influenced by the proposed Project and other cumulative projects. The geographic scope for surface water movement includes a broader area consisting of the Los Angeles–Long Beach Harbor because the Federal Breakwater shelters the two harbors as a unit and water circulates within the harbor complex.

The temporal scope to identify past, present, and future projects that contribute to the cumulative effects analysis on water quality, sediments, and oceanography spans historic Port activities dating back to the early 1900s through to future projects and conditions in 2038. The CEQA Baseline for determining the significance of potential impacts is March 2008 and this year has been used to distinguish between past projects and present activities.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.14.4.2.

4.2.14.2 Cumulative Impact WQ-1: Increased Risk of Flooding—Less than Cumulatively Considerable

Cumulative Impact WQ-1 addresses the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources.

4.2.14.2.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The waterfront portion of the proposed Project is within the 100-year flood zone. Past development has increased the amount of impervious surface area within the watershed and has also included installation of a storm drain system to collect and convey storm runoff. This system has mitigated the impacts of past development with respect to flooding potential. Cumulative projects would affect the flooding potential only if the increased runoff volumes or altered drainage patterns exceeded the capacity of the storm drainage system to convey runoff of excess water volumes off site. Cumulative projects with the potential to affect drainage patterns and runoff volumes include the following identified in Table 4-1: San Pedro Waterfront Project (#3), Berth 226–236 (Evergreen #8), Charter School and Port Police Headquarters (#9), SCIG (#20), San Pedro Waterfront Enhancements Project (#22), Joint Container

inspection Facility (#23), Port Transportation Master Plan (#28), Southwest Marine Demolition (#31), I-110/SR-47 Connector (#32), Inner Cabrillo Beach Water Quality Improvement (#33), 15th Street Elementary School (#46), Pacific Corridor Redevelopment (#47), Cabrillo Marine Aquarium (#48), Gas Station/Mini Mart (#49), Fast Food Restaurant (#50), Mixed use development (#51), Condominiums (#52), Pacific Trade Center (#53), Single Family Homes (#54), Mixed use development (#55), Target (#56), Palos Verdes Urban Village (#57), Temporary Little League Park (#58), Condominiums (#59), Distribution Center and Warehouse (#62), Dana Strand Public Housing (#63), Private School (#64), Kaiser Permanente South Bay Master Plan (#67), Drive through restaurant (#68), Ponte Vista (#69), Warehouse (#70), Sepulveda Industrial Park (#71), Pier A West redevelopment (#74), Pier A East (#75), San Pedro Bay Rail Study (#79), Gerald Desmond Bridge Replacement (#80), Chemoil Marine Terminal (#82), Schuyler Heim Bridge Replacement (#83), I-710 Major Corridor Study (#84), Renaissance Hotel (#86), D'Orsy Hotel (#87), City Place Development (#88), The Pike at Rainbow Harbor (#89), and Queensway Bay Master Plan (#90).

All of these projects would have a "negligible" potential to contribute to increased flooding, with the exception of two, the I-710 Major Corridor Study (#84) and Queensway Bay Master Plan (#90), which would have a "minor" potential to contribute to increased flooding. Those projects involve the potential to increase impervious surface area, an impact that can generally be addressed by providing stormwater detention and infiltration facilities. Similar to the proposed Project, these cumulative projects are located on flat terrain, such that minor grading and paving associated with project construction and post-construction operations would not alter runoff patterns, velocities, or volumes sufficiently to increase risks of local flooding or harm to people, property, or biological resources. Therefore, past, present, and reasonably foreseeable future projects are not cumulatively considerable.

4.2.14.2.2 Contribution of the Proposed Project

As discussed in Section 3.14, any new onsite storm drains installed for the proposed Project would be designed for a 10-year storm event, which is consistent with the capacity of the existing facilities. Site elevations would remain generally the same as a result of proposed Project. There would be a slight decrease in impervious surface in the proposed project area due to the creation of parks. Site grading and the storm drain system would be adequate to convey runoff to the harbor, without the risk of flooding, under most conditions. Runoff associated with a 50- or 100-year storm event would exceed the design capacity of the storm drain system, resulting in temporary ponding of water on site. However, because the terrain of the proposed project site and adjacent properties is flat and runoff velocity would not be increased, the proposed Project would not substantially increase the risk of harmful flooding, and impacts, including cumulative impacts, of the proposed Project would be less than significant. Therefore, the contribution of the proposed Project would not be cumulatively considerable under Impact WQ-1 when combined with past, present, and reasonably foreseeable future projects.

4.2.14.2.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.14.3 Cumulative Impact WQ-2: Change in the Amount of Surface Water in a Water Body—Less than Cumulatively Considerable

Cumulative Impact WQ-2 represents the potential for the proposed Project when combined with past, present, and reasonably foreseeable future projects to substantially reduce or increase the amount of surface water in a water body.

4.2.14.3.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The proposed Project site is within a commercial harbor environment that has been highly modified by past dredging, filling, and shoreline development in support of maritime operations. Over time wharves have been built, harbors dredged, and channels deepened; and to the extent these structures are still present and sediments have not filled back into the dredged areas, changes to surface area and volume persist to the present day.

Cumulative past, present, and future projects identified on Table 4-1 which would have a negligible potential to increase or decrease the surface area or volume of the Los Angeles–Long Beach Harbor include: Cabrillo Way Marina, Phase II (#5), Berths 226–236 (Evergreen #8), Berths 121–131 (Yang Ming #30), Inner Cabrillo Beach Water Quality Improvement Program (#33), Middle Harbor Terminal Redevelopment (#72), Piers G & J Terminal Redevelopment Project (#73), and Pier A East (#75). These projects have a negligible impact potential because they represent redevelopment projects that do not propose to alter the surface area or volume of the Los Angeles-Long Beach Harbor.

Cumulative past, present, and future projects identified on Table 4-1 that could have a minor increase or decrease in the surface area or volume of the Los Angeles–Long Beach Harbor include: Pier 400 Container Terminal (#1), Berths 136–147 Marine Terminal (TraPac #2), San Pedro Waterfront Project (#3), Berths 97–109, China Shipping (#16), Berths 302–305 (APL) Container (#24), Cabrillo Marine Aquarium Expansion (#48), San Pedro Bay Rail Study (#79), Chemoil Marine Terminal (#81), Schuyler Heim Bridge Replacement (#83), I-710 (Long Beach Freeway) Major Corridor Study (#84), and Pike Property Development (#89). These projects have a minor impact potential because although they do propose placing material into or removing material from the harbor, they propose only localized and small changes in harbor surface area or volume. Some of these projects propose to increase, and

others to decrease harbor surface area or volume. Thus the net potential change in harbor surface area or volume, resulting from implementation of all the listed projects, is approximately zero.

Cumulative past, present, and future projects that could considerably increase or decrease the surface area or volume of the Los Angeles–Long Beach Harbor include: Gerald Desmond Bridge Replacement (#80) and Queensway Bay Master Plan (#90). These projects have a considerable potential to affect harbor surface area or volume because they represent potentially large areas of fill and/or excavation. However, mitigation or design change could substantially diminish the impact potential associated with these two projects.

Many of the projects listed above would place fill in the harbor, totaling over 700 acres (283 hectares), of which about 600 acres (243 hectares) are completed or under construction. Other cumulative projects with a dredging component, such as Channel Deepening (#4), have removed watershed-derived sediments that accumulated within navigational channels and new project areas. The largest such project, channel deepening, has removed up to 8 million cubic yards of fill and thereby increased the volume of water in the harbor.

These cumulative projects have caused a cumulatively significant reduction in the surface area of the inner Los Angeles–Long Beach Harbor. It is not clear if the projects have cumulatively increased or decreased the volume of water in the harbor.

4.2.14.3.2 Contribution of the Proposed Project

Construction of the proposed Project would result in a minimal change in the surface area and volume of the inner Los Angeles Harbor. Although the proposed Project would result in a small reduction in the surface area and volume of the inner Los Angeles Harbor from placement of piling, and the placement of a new bulkhead using cut and fill, the resulting surface area net decrease represents much less than a 1% change in the surface area and volume of Slip 5, and a much smaller change in the inner Los Angeles–Long Beach Harbor. The proposed Project would have no adverse effect on changing the amount of surface water, and the cumulative impact of the proposed Project would be less than significant. The contribution of the proposed Project would not be cumulatively considerable under Impact WQ-2 when combined with past, present, and reasonably foreseeable future projects.

4.2.14.3.3 Mitigation Measures and Residual Cumulative Impacts

The contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.14.4 Cumulative Impact WQ-3: Adverse Changes in Surface Water Movement—Less than Cumulatively Considerable

Cumulative Impact WQ-3 addresses the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to permanently alter surface water movements sufficient to produce a substantial change in the velocity or direction of water flow.

4.2.14.4.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past dredging, filling, and shoreline development operations have altered surface water movement in the harbor. For example, water circulation patterns have been altered by the past, present, and future cumulative projects.

Cumulative past, present, and future projects (Table 4-1) that could cause a negligible or minor adverse change in the surface water movement of the Los Angeles–Long Beach Harbor include: Pier 400 Container Terminal (#1), Berths 136–147 Marine Terminal (#2), San Pedro Waterfront Project (#3), Channel Deepening Project (#4), Cabrillo Way Marina, Phase II (#5), Artificial Reef, San Pedro Breakwater (#6), Consolidated Slip Restoration (#15), Berths 97–109 China Shipping (#16), Berths 171–181 (#17), Berths 206–209 Interim Container Terminal Reuse (#18), Berths 302–305 (APL) Container Terminal Improvements (#24), Inner Cabrillo Beach Water Quality (#33), Middle Harbor Terminal Redevelopment (#72), Piers G & J Terminal Redevelopment Project (#73), Pier A East (#75), San Pedro Bay Rail Study (#79), I-710 (Long Beach Freeway) Major Corridor Study (#84), and Pike Property Development (#89). These projects have a negligible impact potential because they propose very small or localized placement of materials into the Los Angeles-Long Beach Harbor.

Cumulative past, present, and future projects (Table 4-1) that could cause a considerable adverse change in the surface water movement of the Los Angeles-Long Beach Harbor include: Cabrillo Marine Aquarium Expansion (#48), Gerald Desmond Bridge Replacement Project (#80), Chemoil Marine Terminal (#81), Schuyler Heim Bridge Replacement (#83), and Queensway Bay Master Plan (#90). These projects have a considerable impact potential because they can substantially alter harbor hydraulics by either placing a large volume of material into the water or by placing material at a hydraulically sensitive point, such as an existing constriction or junction in the harbor.

These cumulative past, present, and future projects include dredging and/or placement of fill, and placement of piling-supported overwater structures. Changes to the hydro-morphology of the harbor could affect water quality by inhibiting the exchange of waters between different portions of the harbor, which, in turn, could

limit mixing and dilution of runoff. However, baseline studies and other routine monitoring efforts (e.g., Port of Los Angeles 2008), discussed in Section 3.14, "Water Quality, Sediments, and Oceanography," have not reported hypoxic (low oxygen concentrations) conditions or other anomalous spatial patterns in water quality indicators that could reflect stagnation or limited water exchange between areas within the harbor complex. This is reasonable because fill would not be placed for any project in an area that disrupts vessel navigation. The channels and waterways that are maintained for vessel navigation provide water exchanges between different areas of the harbor complex that are adequate to avoid stagnation. Therefore, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts.

4.2.14.4.2 Contribution of the Proposed Project

Blind slip areas, such as Slip 5, tend to be areas of lower circulation due to their morphology. However, dissolved oxygen data collected since 2000 (Port of Los Angeles 2008) indicate that any associated circulation reduction is not sufficient to result in a material decrease in water quality. This evidence supports the conclusion that tidal circulation is sufficient to keep the waters of Slip 5 well-mixed, with water quality comparable to that measured in the principal navigation channels of the Inner Harbor. The proposed Project would place round pilings and, potentially, sheet pile at locations around the north perimeter of Slip 5. This would reduce water movement near the piling, but due to the continual tidal action in Slip 5 and the distance between pilings this would not result in stagnation or cause adverse impacts on marine water quality. Thus, cumulative impacts on surface water movement from piling placement would not be significant, and the proposed Project without mitigation would not make a cumulatively considerable contribution to water quality effects relative to the CEQA baseline.

4.2.14.4.3 Mitigation Measures and Residual Cumulative Impacts

The incremental contribution of the proposed Project would be less than cumulatively considerable. No mitigation measures are required.

4.2.14.5 Cumulative Impact WQ-4: Discharge Effects to Water and Sediment Quality—Cumulatively Significant and Unavoidable; Project Contribution Cumulatively Considerable

Cumulative Impact WQ-4 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to create pollution, cause nuisances, or violate applicable standards as defined in Section

13050 of the California Water Code (see definitions below) or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body.

4.2.14.5.1 Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Water and sediment quality within the geographic scope are affected by activities within the harbor, inputs from the watershed including aerial deposition of particulate pollutants, and effects from historical (legacy) inputs to the harbor. As discussed in Section 3.14, "Water Quality, Sediments, and Oceanography," portions of the Los Angeles and Long Beach Harbors are identified on the current 303(d) list as impaired for a variety of chemical and bacteriological stressors and effects to biological communities. For those stressors causing water quality impairments, TMDLs will be developed that will specify load allocations from the individual input sources, such that the cumulative loadings to the harbor would be below levels expected to adversely affect water quality and beneficial uses of the water body. Bacteria TMDLs have been completed for Inner Cabrillo Beach and the Los Angeles Harbor Main Channel. In addition, a framework has been developed and analysis is underway to develop Toxic and Metal TMDLs for waterbodies within the Los Angeles and Long Beach Harbors (Anchor et al. 2005:123). In the absence of restricted load allocations, the impairments would be expected to persist.

Present and reasonably foreseeable future projects with in-water construction components, such as dredging and pier upgrades, would result in temporary and localized effects on water quality that would be individually comparable to those associated with the proposed Project. Such changes to water quality associated with in-water construction for the other related projects would be temporary in nature, with a duration less than or equal to the time during which in-water work was performed. Therefore, cumulative impacts would occur only if both the temporal and spatial influences of concurrent projects overlapped. Of the cumulative projects listed in Table 4.1, none are proposing in-water work within Slip 5, the area that would be affected by in-water work for the proposed Project. Thus, there is no potential for overlapping construction impacts between the proposed Project and other projects identified in Table 4-1.

The Dominguez watershed is characterized primarily by urban and industrial land uses with a high proportion of paved surface. Therefore, soil loadings to the harbor are not excessive and waters are not impaired by sedimentation. Cumulative projects involving demolition or construction are expected to disturb soils and make them subject to erosion by wind or runoff, with potentials for subsequent transport into, and accumulation in, the harbor. Soils exposed by construction activities would be subject to erosion, transport off site, and deposition in the harbor. The sedimentation effects associated with each of these projects would be temporary in nature and thus would be cumulative only if the projects were to overlap in both the spatial and temporal extent of their impacts on water quality. Given the size of the affected area

and the number of projects, it is likely that several projects would overlap in temporal extent, but these projects are distributed over a large area. In addition, these projects would be subject to sediment and erosion control requirements and would be required to prevent and control sediment in runoff. None of the projects identified in Table 4-1 is known to have been individually shown to have a significant impact attributable to sedimentation. Thus the cumulative impacts of concurrent backland construction projects would not have a significant impact on sedimentation.

Many projects, once operational, would result in wastewater and/or stormwater discharges that could contain a variety of constituents such as dissolved metals and organic compounds. However, given that wastewater and stormwater discharges would be regulated by NPDES permits, impacts from these discharges would be minimized to a level consistent with existing regulation and approved TMDLs for the constituents of concern. The permits would specify constituent limits and/or mass emission rates that are intended to protect water quality and beneficial uses of receiving waters.

Cumulative projects associated with the development of Port facilities are expected to contribute to a greater number of ship visits to the Ports of Los Angeles and Long Beach. Increases in vessel traffic would be expected to result in higher mass loadings of contaminants such as copper that are released from vessel hull anti-fouling paints. Portions of the Los Angeles Harbor are impaired with respect to copper; thus increased loadings associated with increases in vessel traffic relative to baseline conditions would likely exacerbate water and sediment quality conditions for copper. In addition, with the increase in vessel traffic, the risk of accidental or illegal discharges could reasonably be expected to increase in proportion to the increased ship traffic. Waste loadings to the harbor would also be expected to increase. The significance of this increased loading related to these discharges would depend on the volumes and composition of the releases and the timing and effectiveness of spill response actions. The combined effect of these projected increases in vessel traffic is a cumulatively significant impact because which would result in asubstantial increase in contaminant loading in the Ports of Los Angeles and Long Beach.

4.2.14.5.2 Contribution of the Proposed Project

In-water construction activities, primarily piling placement, would disturb bottom sediments. Disturbances of bottom sediments would alter some water quality parameters such as DO, nutrients, and turbidity. These changes would be of short duration and localized to the mixing zone associated with the construction activity. As discussed in Section 3.14, changes to water quality from in-water construction are not expected to exceed applicable standards outside of any approved mixing zone. Because the effects are not expected to overlap in time and space with those from other projects, the impacts of such disturbances would not be cumulatively considerable relative to the CEQA baseline. Once the construction phase of the proposed Project was completed, operations would not be expected to cause further disturbances to bottom sediments or contribute to cumulative impacts.

The proposed Project would not result in any direct discharge of wastewater to the harbor. However, stormwater runoff from the onshore portions of the proposed project area would flow into the harbor, along with runoff from adjacent areas of the large, primarily urbanized, watershed. Stormwater runoff from backland areas within the proposed project site would be governed by a stormwater permit, similar to those required for the other cumulative projects, that specifies constituent limits and/or mass emission rates that are intended to protect water quality and beneficial uses of receiving waters. Relative to the CEQA baseline, the proposed project operations would contribute similar or lower volumes of runoff (due to the decreased surface area associated with reduced impervious area due to park development) and no substantial differences in the chemical composition of the runoff because the land uses would be similar or less industrial. While the inputs from the proposed Project would be negligible compared with those from the entire watershed, the runoff could contain contaminants (e.g., metals) that have been identified as stressors for portions of the Los Angeles and Long Beach Harbors. Thus, the proposed Project's contribution would be cumulatively considerable without mitigation.

The proposed Project would not alter the levels of vessel traffic visiting the Ports of Los Angeles and Long Beach, and thus would not contribute to higher mass loadings of contaminants such as copper that are released from vessel hull anti-fouling paints, and would not contribute to accidental spills and illegal vessel discharges within the harbor. Thus the proposed Project's contribution to contaminant loading due to anti-fouling paints, accidental spills, and illegal vessel discharges would be less than cumulatively considerable.

4.2.14.5.3 Mitigation Measures and Residual Cumulative Impacts

Best management practices to prevent or minimize contaminant loadings to the harbor from stormwater runoff from past, present, and future projects, including the proposed Project, are required by the SUSMP, which is incorporated into the Los Angeles County Urban Runoff and Stormwater NPDES Permit issued by the RWQCB. SUSMP requirements must be incorporated into the proposed project plan and approved prior to issuance of building and grading permits. Specifically, the SUSMP requires that each project incorporate BMPs specifically designed to minimize stormwater pollutant discharges. While adopted BMPs will vary by project, all BMPs must meet specific design standards to mitigate stormwater runoff and control peak flow discharges. The SUSMP also requires implementation of a monitoring and reporting program to ensure compliance with the constituent limitations in the permit. These BMPs and compliance monitoring would reduce the residual cumulative impacts from runoff to less than cumulatively considerable.

4.2.15 Summary of Impact Determinations

Table 4-2 summarizes the cumulative impact determinations of the proposed Project. Identified potential impacts may be based on federal, state, and City of Los Angeles significance criteria, LAHD criteria, and the conclusions of the technical reports.

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

Table 4-2. Summary Matrix of Potential Cumulative Impacts and Mitigation Measures Associated with the Proposed Project

Cumulative Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
Aesthetics			
AES-1: Adverse Effect on a Scenic Vista from a Designated Scenic Resource due to Obstruction of Views	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
AES-2: Damage to Scenic Resources (Including, but not Limited to, Trees, Rock Outcroppings, and Historic Buildings) within View of a State Scenic Highway	No Cumulative Impact	Mitigation not required	No Cumulative Impact
AES-3: Degradation of Existing Visual Character or Quality of a Site and its Surroundings	No Cumulative Impact	Mitigation not required	No Cumulative Impact
AES-4: Negative Shading on the Existing Visual Character or Quality of the Site or its Surroundings	No Cumulative Impact	Mitigation not required	No Cumulative Impact
AES-5: New Source of Substantial Light or Glare that would Adversely Affect Day or Nighttime Views of the Area	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
Air Quality			
AQ-1: Construction-Related Increase of a Criteria Pollutant for which the Proposed Project Region is in Nonattainment under a National or State Ambient Air Quality Standard	Cumulatively Considerable and Unavoidable	Implement Mitigation Measures MM AQ-1 through MM AQ-9	Cumulatively Considerable and Unavoidable

Cumulative Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
AQ-2: Construction-Related Emissions that Exceed an Ambient Air Quality Standard or Substantially Contribute to an Existing or Projected Air Quality Standard Violation	Cumulatively Considerable and Unavoidable	Implement Mitigation Measures MM AQ-1 through MM AQ-9	Cumulatively Considerable and Unavoidable
AQ-3: Operations-Related Increase of a Criteria Pollutant for which the Project Region is in Nonattainment under a National or State Ambient Air Quality Standard	Cumulatively Considerable and Unavoidable	Implement Mitigation Measures MM AQ-1 through MM AQ-9	Cumulatively Considerable and Unavoidable
AQ-4: Operations-Related Emissions that Exceed an Ambient Air Quality Standard or Substantially Contribute to an Existing or Projected Air Quality Standard Violation	Cumulatively Considerable and Unavoidable	Mitigation not required	Cumulatively Considerable and Unavoidable
AQ-5: Operations-Related Onroad Traffic Contribution to an Exceedance of the 1-hour or 8-hour CO Standards	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
AQ-6: Objectionable Odors at the Nearest Sensitive Receptor	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
AQ-7: Exposure of Receptors to Significant Levels of Toxic Air Contaminants	Cumulatively Considerable and Unavoidable	Mitigation not required	Cumulatively Considerable and Unavoidable
AQ-8: Conflict with or Obstruction of Implementation of an Applicable AQMP	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
AQ-9: Contribution to Global Climate Change—Cumulatively Considerable and Unavoidable	Cumulatively Considerable and Unavoidable	Implement Mitigation Measures MM AQ-1 through MM AQ-15	Cumulatively Considerable and Unavoidable
Biological Resources			
BIO-1: Adverse Impact on Sensitive Species	Cumulatively Considerable	Mitigation not available	Cumulatively Considerable
BIO-2: Alteration or Reduction of Natural Habitats, Special Aquatic Sites, or Plant Communities	Cumulatively Considerable	Mitigation not available	Cumulatively Considerable
BIO-3: Interference with Migration or Movement Corridors	No Cumulative Impact	Mitigation not required	No Cumulative Impact
BIO-4: Disruption of Local Biological Communities	Cumulatively Considerable	Mitigation not available	Cumulatively Considerable

Cumulative Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
BIO-5: Loss of Marine Habitat	Cumulatively Considerable	The loss of 2,200 square feet of marine habitat as a result of the proposed Project will be mitigated at a ratio of 1.5 to 1. Thus 3,300 square feet (0.08 acres) of marine habitat at the Inner Harbor Mitigation Bank will be dedicated to the proposed Project. Although this will ensure that the proposed Project will have a less than significant impact after mitigation, it would still be considered a significant cumulative impact, and the proposed Project's contribution would be cumulatively considerable.	Cumulatively Considerable
Cultural Resources			
CR-1, CR-2, CR-3: Adverse Effect on Known and Unknown Prehistoric or Historical Archaeological Resources including Buried Human Remains	Less than Cumulatively Considerable with Mitigation	Implement Mitigation Measures MM CR-1 through MM CR-5	Less than Cumulatively Considerable
CR-4: Loss of or Loss of Access to Paleontological Resources	Less than Cumulatively Considerable with Mitigation	Implement Mitigation Measure MM CR-6	Less than Cumulatively Considerable
CR-5: Disturbance of Historic Architectural Resources	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
Geology			
GEO-1: Damage or Risk due to Fault Rupture, Seismic Ground Shaking, Liquefaction, or other Seismically Induced Ground Failure s	Cumulatively Considerable and Unavoidable	No Mitigation Available	Cumulatively Considerable and Unavoidable
GEO-2: Damage or Risk due to Land Subsidence/Settlement	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
GEO-3: Damage or Risk due to Expansive Soils	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
GEO-4: Damage or Risk due to Landslides or Mudflows	No Cumulative Impact	Mitigation not required	No Cumulative Impact
GEO-5: Damage or Risk due to	Less than Cumulatively	Mitigation not required	Less than Cumulatively

Cumulative Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
Unstable Soil Conditions from Excavation, Grading, or Fill	Considerable		Considerable
GEO-6: Destruction or Modification of One or More Prominent Geologic or Topographic Features	No Cumulative Impact	Mitigation not required	No Cumulative Impact
Groundwater and Soils			
GW-1: Exposure of Soils Containing Toxic Substances and Petroleum Hydrocarbons	Less than Cumulatively Considerable, but Mitigation Recommended	Implement Mitigation Measures MM GW-1, MM GW-2a, MM GW-2b, MM GW-2c, and MM GW-3	Less than Cumulatively Considerable
GW-2: Movement of, Expansion of, or Increase in Existing Contaminants	Less than Cumulatively Considerable, but Mitigation Recommended	Implement Mitigation Measures MM GW-1, MM GW-2a, MM GW-2b, MM GW-2c, and MM GW-3"	Less than Cumulatively Considerable
GW-3: Change in Potable Groundwater Recharge Capacity or Change in Potable Water Levels	No Cumulative Impact	Mitigation not required	No Cumulative Impact
GW-4: Violation of Regulatory Water Quality Standards at an Existing Production Well	No Cumulative Impact	Mitigation not required	No Cumulative Impact
Hazards and Hazardous Materials			
RISK-1: Failure to Comply with Applicable Federal, State, Regional, and/or Local Security and Safety Regulations and/or Port Policies Guiding Port Development	No Cumulative Impact	Mitigation not required	No Cumulative Impact
RISK-2: Interference with an Existing Emergency Response or Evacuation Plan or Requiring a New Emergency or Evacuation Plan	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
RISK-3: Substantial Increase in the Likelihood of a Spill, Release, or Explosion of Hazardous Material(s) due to a Terrorist Action	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
RISK-4: Substantial Increase in the Likelihood of an Accidental Spill, Release, or Explosion of Hazardous Material(s) as a Result	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable

Cumulative Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
of Project-Related Modifications			
RISK-5: Expose the general public to hazards defined by the EPA and Port Risk Management Plan associated with offsite facilities	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
Land Use and Planning			
LU-1: Inconsistency with the Adopted Land Use/Density Designation in the Community Plan, Redevelopment Plan, or Specific Plan for the Site	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
LU-2: Inconsistency with the General Plan or Adopted Environmental Goals and Policies Contained in other Applicable Plans	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
Noise			
NOI-1: Increase in Ambient Noise Levels due to Construction	Cumulatively Considerable and Unavoidable	Implement Mitigation Measures MM NOI-1a, MM NOI-1b, MM NOI-1c, MM NOI-1d, MM NOI-1e, MM NOI-1f, MM NOI-1g, and MM NOI-1h	Cumulatively Considerable and Unavoidable
NOI-2: Increase in Nighttime Construction Noise	No Cumulative Impact	Mitigation not required	No Cumulative Impact
NOI-3: Exposure of Persons to or Generation of Excessive Groundborne Vibration or Groundborne Noise Levels	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
NOI-4: Creation of Operational Noise that would Substantially Exceed Existing Ambient Noise Levels at Sensitive Receptors	No Cumulative Impact	Mitigation not required	No Cumulative Impact
NOI-5: Noise Level Generation at Existing Land Uses Surrounding the Proposed Project in Excess of a Land Use Compatibility Standard, which Would Substantially Inhibit the Usability of the Proposed Project Site	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable

Cumulative Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
Population and Housing			
POP-1: Substantial Population Growth in an Area, Either Directly or Indirectly	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
Transportation and Circulation—Ground and Marine			
TC-1: Significant Increase in Construction-Related Truck and Auto Traffic, Decrease in Roadway Capacity, and Disruption of Vehicular and Non-Motorized Travel	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
TC-2a: Degradation of LOS at Intersections	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
TC-2b: Significant Increase in Traffic Volumes and Degradation of Operations along CMP Facilities	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
TC-3: Increased Demand for Transit Service beyond the Supply of Such Services	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
TC-4: Violation of the City's Adopted Parking Supply, and Parking Demand Exceeding Supply	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
TC-5: Significant Increase in Safety Hazards	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
VT-1a: Interference with Operation of Designated Vessel Traffic Lanes and/or Impairment to the Level of Safety for Vessels Navigating the Main Channel, West Basin Area, East Basin Area, or Precautionary Areas due to Construction	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
VT-1b: Interference with Operation of Designated Vessel Traffic Lanes and/or Impairment to the Level of Safety for Vessels Navigating the Main Channel, West Basin Area, East Basin Area, or Precautionary Areas due to Operations	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable

Cumulative Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
Utilities			
UT-1: Construction or Expansion of Utilities	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
UT-2: Exceeding Existing Water Supply, Wastewater, or Landfill Capacities	Less than Cumulatively Considerable	Implement Mitigation Measure MM UT-5	Less than Cumulatively Considerable
UT-3: Increased Energy Demands, Supply Facilities, and Distribution Infrastructure	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
Public Services			
PS-1: Inadequate Level of Law Enforcement and Emergency Services during Construction	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
PS-2: Inadequate Level of Police Protection Services and Infrastructure during Operations	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
PS-3: Inadequate Level of Fire Protection and Emergency Services and Infrastructure	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
PS-4: Reduction in Level of Service for Recreation and Parks	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
Water Quality, Sediments, and Oceanography			
WQ-1: Increased Risk of Flooding	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
WQ-2: Change in the Amount of Surface Water in a Water Body	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
WQ-3: Adverse Changes in Surface Water Movement	Less than Cumulatively Considerable	Mitigation not required	Less than Cumulatively Considerable
WQ-4: Discharge Effects to Water and Sediment Quality	Cumulatively Significant and Unavoidable; Project Contribution Cumulatively Considerable	Best management practices to prevent or minimize contaminant loadings to the harbor from stormwater runoff from past, present, and future projects, including the proposed Project, are required by the SUSMP, which is incorporated into the Los Angeles County Urban Runoff and Stormwater NPDES Permit issued by the RWQCB. SUSMP requirements must be	Cumulatively Significant and Unavoidable; Project Contribution Cumulatively Considerable

Cumulative Impacts	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
		incorporated into the proposed project plan and approved prior to issuance of building and grading permits. Specifically, the SUSMP requires that each project incorporate BMPs specifically designed to minimize stormwater pollutant discharges. While adopted BMPs will vary by project, all BMPs must meet specific design standards to mitigate stormwater runoff and control peak flow discharges. The SUSMP also requires implementation of a monitoring and reporting program to ensure compliance with the constituent limitations in the permit. These BMPs and compliance monitoring would reduce the residual cumulative impacts from runoff to less than cumulatively considerable.	

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