4

CUMULATIVE ANALYSIS

4.1 Introduction

This chapter presents CEQA and NEPA 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 foreseeable projects in the area are organized by resource topic and analyzed in Section 4.2.

4.1.1 Requirements for Cumulative Impact Analysis

NEPA (40 CFR 1508.7 and 40 CFR 1508.25[a][2]) and the State CEQA Guidelines (14 CCR 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 which 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 (40 CFR 1508.7 and 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(i)(5):

> 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.

NEPA also requires analysis of cumulative impacts; 40 CFR Section 1508.7 states:

> Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The USACE, as part of its cumulative impacts analysis, is required to identify

- areas in which the effects of the proposed action would be felt;
- the effects that are expected in those areas from the proposed action;
- past, present, and reasonably foreseeable future actions that have or that are expected to have impacts in the same area;
- the impacts or expected impacts from these other actions; and
- the overall impacts that can be expected if the individual impacts are allowed to accumulate (*Fritiofson v. Alexander*, 772 F.2d 1225, 1245 [5th Cir. 1985]).

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 reasonably foreseeable future projects. 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 EIS/EIR, related area projects with a potential to contribute to cumulative impacts were identified using one of two approaches: the *list* methodology or 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 traffic/circulation analyses use a projection or a combined list and projection approach as described below. Cumulative analysis of air quality impacts uses projections from the South Coast Air Basin (SCAB) 2007 AQMP and the Multiple Air Toxics Exposure Study (MATES-II). The traffic/circulation cumulative analysis uses annual regional growth, which is described in Section 3.11, "Transportation and Circulation (Ground)." 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.

For purposes of thresholds, the concept of *cumulatively considerable* effects, as derived from the CEQA guidelines, is used, and this CEQA concept is adequately protective and encompassing of the NEPA concept of cumulatively significant effects.

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 of Los Angeles.

4.1.2.1 Past Projects

History of the Port of Los Angeles

The Port of Los Angeles is located at 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. A few years later, the advent of containerization resulted in dramatic changes at the Port. Because of this new mode of shipping, the Port, like major new and old harbors, modernized facilities to meet the needs of the new geometry required by containerization. In addition to the 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.

History of the Proposed Project Area

Historically, the proposed project area (see Figures 2-1 and 2-2) has been intensively used for various Port activities. The San Pedro Waterfront area has been involved in Port operations since the mid 1800s. Historic topographic maps of San Pedro from the middle and late nineteenth century show that prior to modern development, the LA/LB Harbor was a low-lying coastal marsh called Wilmington Lagoon or San Pedro Creek (Schell et al. 2003). The lagoon had a complex network of estuaries, stream channels, tidal channels, sand spits, beaches, and marshy inlands. Major streams draining the Los Angeles Basin, including the Los Angeles River, Compton Creek, and possibly the San Gabriel River, emptied into the lagoon primarily from the east. Smaller local creeks draining from the Palos Verdes Hills and the Torrance Plain entered the lagoon from the west (Schell et al. 2003).

Early commercial development of the Port was dominated by two enterprising figures. Local entrepreneurs and economic boosters Phineas Banning and Augustus W. Timms capitalized upon the Port. In 1852, Augustus Timms bought the old Sepulveda Landing located at the base of the bluff where 15th Street meets Beacon Street today and proceeded to modernize this landing to compete with Phineas Banning, who was hauling freight and passengers to Los Angeles from the Hide House site. Timms improved the wharf and built a corral, warehouse, and other structures at his landing, which resulted in the area receiving the name "Timms Point." Similarly, Banning constructed new docks to capitalize on the increasing trade coming in and out of Los Angeles.

As maritime industry and the transportation infrastructure grew, so did the city. Several events set the stage for the economic, social, and physical development of the area, determining the present form of the area between the Vincent Thomas Bridge and the Federal Breakwater. These events included the construction of the Federal Breakwater from 1899 to 1912; investment by the municipal and federal governments; the arrival of the Pacific Electric Trolley in 1904; long range planning by the federal Harbor Lines Board; and the annexation of San Pedro by the City of Los Angeles in 1906. The 1920s saw an important milestone in the Port's history.

During this decade, the Port of Los Angeles surpassed San Francisco as the busiest port on the West Coast. The lumber, petroleum, boat building, and commercial fishing industries became the economic heart of the modernizing Port, bringing jobs and residents to the area.

Landfill and landside facility construction along the Main Channel completely altered the shape of the land and water. The shallow marshes were either dredged or filled, the sandbar was filled and expanded to become an industrial center, and much of the bluffs were either leveled or separated from the water by extensive landfill. The construction of berthing and marinas drastically changed the water's edge.

The most recent major act in the evolution of the present Port was the container shipping revolution that began in the 1960s. As containerization became the dominant mode of maritime-based commerce, it brought to the Port further physical transformations. The new containerization system also had a significant impact on the social environment of San Pedro. Until the 1960s, the labor force consisted primarily of jobs directly associated with the Port activities on the wharves. Cargo loading was previously labor intensive, as pieces of cargo, drums, boxes, bags, or crates were loaded individually into ships. Using containerization, appropriate cargo is shipped in standard-sized, sealable, steel boxes, typically 20- or 40-feet long and designed to be placed on special trailers and transported to and from the Port by trucks or by rail. This community-based local workforce provided supportive linkages between the Port and the community, and served as the primary economic base for San Pedro, particularly in the commercial areas of Beacon Street, 6th Street, and Pacific Avenue. Containerization reduced the number of direct jobs on the wharves. In addition, globalization led to an increased international participation in the shipping industry at the Port. While direct jobs decreased, jobs were created in many port-related industries such as freight-forwarding services. The Port continues to play an important role in the economy of Southern California, accounting for more than 1 out of every 27 jobs in the region. These jobs, however, are spread throughout the Los Angeles region and are not as concentrated in San Pedro as prior to containerization.

Because the waterfront land area between the Vincent Thomas Bridge and the Federal Breakwater was not reconfigured for containerized shipping operations, this area became available for the development of a variety of maritime-related uses including two museums, several marinas, a public beach and boat launch, a fishing fleet harbor, and commercial enterprises.

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

Current and Future Projects

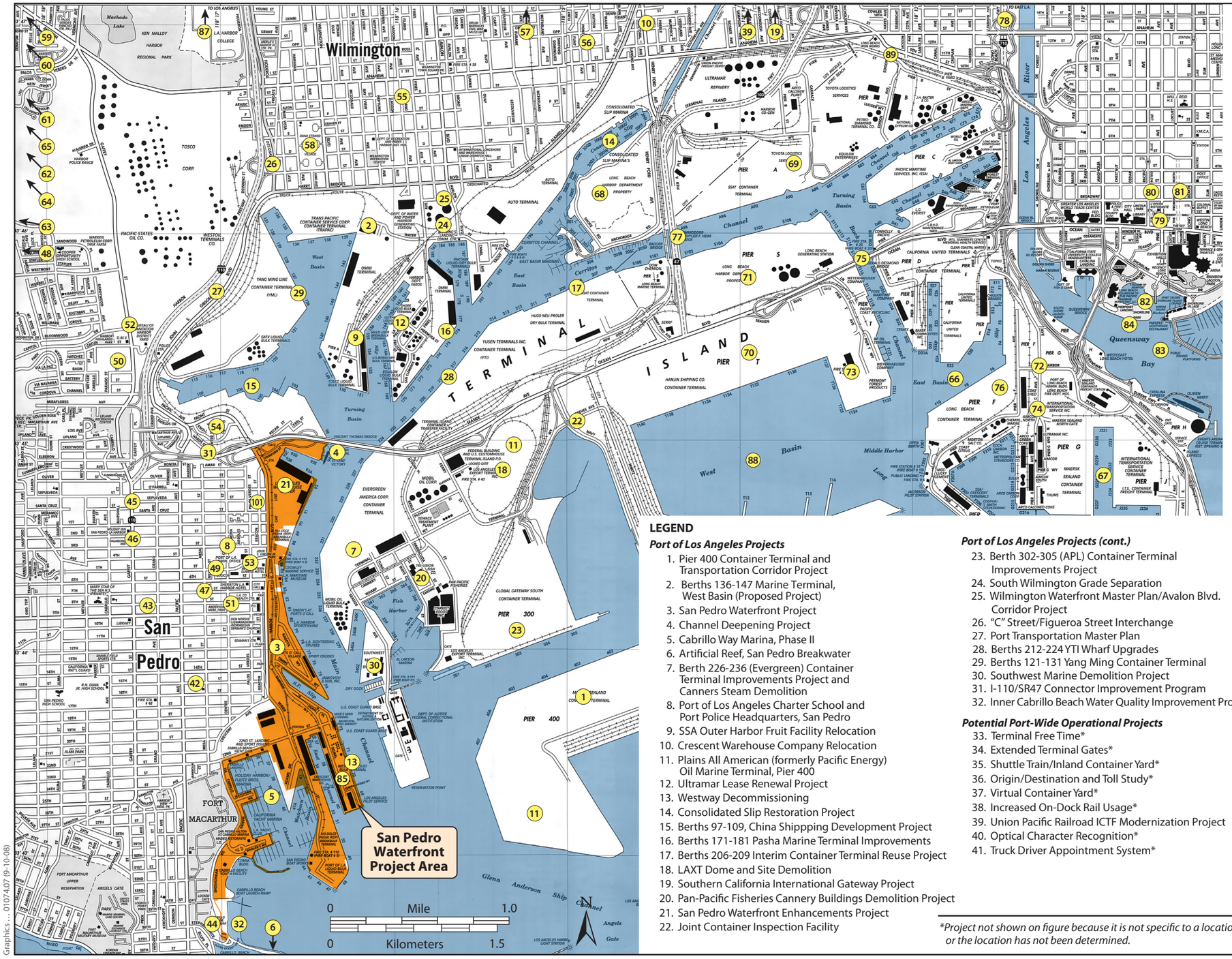
A total of 89 present or reasonably foreseeable future projects (approved or proposed) were identified within the general vicinity of the proposed Project that could contribute to cumulative impacts (Figure 4-1). A corresponding list of the

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, and for these resources a larger set of past, present, and reasonably foreseeable future projects was included for analysis of cumulative impacts.)

For the purposes of this EIS/EIR, the timeframe of current or reasonably anticipated projects extends from 2006 to 2037, 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 consists of construction of the remaining 150 acres (61 hectares) into a container terminal. The EIR certified for the project identified significant air, transportation, and noise and vibration impacts.	Approved. Phase I construction completed and terminal opened August 2002. Phase II construction started in April 2003 and was completed in September 2004.
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 late 2008 to 2010 and 2015 to 2020.
3	**San Pedro Waterfront Project, Port of Los Angeles**	**The San Pedro Waterfront Project is a 5 to 7 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 of the project include construction of a North Harbor**	**Proposed Project. An NOP/NOI was released in August 2005. A revised NOP/NOI was released in December 2006. A scoping meeting was held in January 2007. The comment period on**



LEGEND

Port of Los Angeles Projects

1. Pier 400 Container Terminal and Transportation Corridor Project
2. Berths 136-147 Marine Terminal, West Basin (Proposed Project)
3. San Pedro Waterfront Project
4. Channel Deepening Project
5. Cabrillo Way Marina, Phase II
6. Artificial Reef, San Pedro Breakwater
7. Berth 226-236 (Evergreen) Container Terminal Improvements Project and Canners Steam Demolition
8. Port of Los Angeles Charter School and Port Police Headquarters, San Pedro
9. SSA Outer Harbor Fruit Facility Relocation
10. Crescent Warehouse Company Relocation
11. Plains All American (formerly Pacific Energy) Oil Marine Terminal, Pier 400
12. Ultramar Lease Renewal Project
13. Westway Decommissioning
14. Consolidated Slip Restoration Project
15. Berths 97-109, China Shippping Development Project
16. Berths 171-181 Pasha Marine Terminal Improvements
17. Berths 206-209 Interim Container Terminal Reuse Project
18. LAXT Dome and Site Demolition
19. Southern California International Gateway Project
20. Pan-Pacific Fisheries Cannery Buildings Demolition Project
21. San Pedro Waterfront Enhancements Project
22. Joint Container Inspection Facility

Port of Los Angeles Projects (cont.)

23. Berth 302-305 (APL) Container Terminal Improvements Project
24. South Wilmington Grade Separation
25. Wilmington Waterfront Master Plan/Avalon Blvd. Corridor Project
26. "C" Street/Figueroa Street Interchange
27. Port Transportation Master Plan
28. Berths 212-224 YTI Wharf Upgrades
29. Berths 121-131 Yang Ming Container Terminal
30. Southwest Marine Demolition Project
31. I-110/SR47 Connector Improvement Program
32. Inner Cabrillo Beach Water Quality Improvement Program

Potential Port-Wide Operational Projects

33. Terminal Free Time*
34. Extended Terminal Gates*
35. Shuttle Train/Inland Container Yard*
36. Origin/Destination and Toll Study*
37. Virtual Container Yard*
38. Increased On-Dock Rail Usage*
39. Union Pacific Railroad ICTF Modernization Project
40. Optical Character Recognition*
41. Truck Driver Appointment System*

Community of San Pedro Projects

42. 15th Street Elementary School
43. Pacific Corridors Redevelopment Project
44. Cabrillo Marine Aquarium Expansion
45. Gas Station and Mini-Mart
46. Fast Food Restaurant w/drive thru
47. Mixed Use Development, 407 Seventh Street
48. Condos., 28000 Western Ave.
49. Pacific Trade Center
50. Single Family Homes (Gaffey St.)
51. Mixed-use Development, 281 West 8th Street
52. Target (Gaffey Street)
53. Palos Verdes Urban Village
54. Temporary Little League Park

Community of Wilmington Projects

55. Banning Elementary School #1
56. East Wilmington Greenbelt Community Center
57. Distribution Center and Warehouse
58. Dana Strand Public Housing Redevelopment Project

Projects in Harbor City, Lomita, and Torrance

59. 1437 Lomita Blvd. Condos.
60. Harbor City Child Development Center
61. Kaiser Permanente South Bay Master Plan
62. Drive-thru Restaurant, Harbor City
63. Ponte Vista
64. Warehouses, 1351 West Sepulveda Blvd.
65. Sepulveda Industrial Park

Port of Long Beach Projects

66. Middle Harbor Terminal Redevelopment
67. Piers G & J Terminal Redevelopment
68. Pier A West Remediation Project
69. Pier A East
70. Pier T TTI Terminal, Phase III
71. Pier S Marine Terminal
72. Administration Building Replacement Project
73. Pier T, Long Beach LNG Terminal
74. San Pedro Bay Rail Study
75. Gerald Desmond Bridge Replacement Project
76. Chemoil Marine Terminal Tank Installation

ACTA and CalTrans Projects

77. Schuyler Heim Bridge Replacement/SR47 Expressway
78. I-710 Major Corridor Study

City of Long Beach Projects

79. Renaissance Hotel Project
80. D'Orsay Hotel Project
81. City Place Development
82. The Pike at Rainbow Harbor
83. Queensway Bay Master Plan
84. Pike Property Development

Additional Projects

85. Proposed Marine Research Center
86. Condos, 319 N Harbor Blvd.
87. Vermont Christian School Expansion
88. Port of Long Beach Installation Restoration Site 7 (West Basin)
89. Edison Avenue Closure

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

Sources: TraPac EIR/EIS 2007 , Fehr & Peers/Kaku Associates 2008.
Base map: California State Automobile Association 2005.

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Figure 4-1
San Pedro Waterfront—
Cumulative Impacts Scope of Analysis

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		Promenade, construction of a Downtown Harbor Promenade, construction of a Downtown Civic Fountain, 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 California Coastal Trail along the waterfront, construction of additional cruise terminal facilities, construction of a Ralph J. Scott Historic Fireboat Museum, relocation of the Catalina Cruises Terminal and the S.S. Lane Victory, extension of the Waterfront Red Car line, and related parking improvements. **(Project analyzed in this EIS/EIR)**	**NOP/NOI closed on February 28, 2007. Construction expected 2009–2014.**
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 ft mean lower low water (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 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 would provide environmental enhancements at various locations in the Port of Los Angeles.	SNOI/SNOP released in October 2005. Draft SEIS/SEIR released for public review between July 2008 and September 2008. Final SEIS/SEIR being prepared. Construction expected 2008–2010.
5	Cabrillo Way Marina, Phase II, 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. Construction anticipated 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).

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
7	Berth 226–236 (Evergreen) Container Terminal Improvements Project and Canners Steam Demolition.	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. Project also includes 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/EIS to be prepared. NOP/NOI anticipated in 2009. Construction expected 2011–2013.
8	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 in 2008 and expected to be complete in 2010.
9	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.
10	Crescent Warehouse Company Relocation, Port of Los Angeles	Relocate the operations of Crescent Warehouse Company from Port Warehouses Nos.1, 6, 9, and 10 to an existing warehouse at Berth 153. Relocate Catalina Freight operations from Berth 184 to the same building at Berth 153.	MND to be prepared. Release anticipated in 2008.
11	Pacific LA Marine Terminal (formerly Pacific Energy) Oil Marine Terminal, Pier 400, Port of Los Angeles	Proposal to construct a Crude Oil Receiving Facility on Pier 400 with tanks at Pier 400 and on Terminal Island, as well as construct new pipelines between berth, storage tanks, and existing pipeline systems.	NOI/NOP released in June 2004. Draft SEIS/SEIR review period ended August 2008. Final SEIS/SEIR being prepared. Construction expected 2009–2011.
12	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.	Project EIR under preparation; Final EIR expected in 2008. NOP released for public review in April 2004.
13	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.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
14	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 EPA.
15	Berths 97–109, China Shipping Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, land fill and terminal construction, and backland development.	Draft EIR/EIS released August 2006. Phase I construction completed in 2004. Recirculated Draft EIR/EIS released April 2008, comment period closed July 2008. Final EIS/EIR being prepared. Construction expected 2009–2015.
16	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.
17	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.
18	LAXT Dome and Site Demolition	Demolition and clean up of existing storage dome and associated buildings on LAXT property.	Demolition began in 2007.
19	Southern California International Gateway Project (SCIG), 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 in 2009.
20	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. Demolition expected mid to late 2008.
21	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.
22	Joint Container Inspection Facility, Port of Los Angeles	Construction and operation of a facility to be used to search and inspect random and suspicious containers arriving at the Ports of	In planning. EIR to be prepared.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
	and Port of Long Beach	Los Angeles and Long Beach.	
23	Berth 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 (Project 4 above).	EIR/EIS to be prepared. NOP/NOI anticipated in 2009. Construction expected 2011–2013.
24	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 separation.	Conceptual planning. Current planning indicates summer 2011 completion.
25	Wilmington Waterfront Master Plan (Avalon Blvd. Corridor Project)	Planned development intended to provide waterfront access and promoting development specifically along Avalon Boulevard.	NOP issued March 2008. Draft EIR in preparation, anticipated 2008. Construction expected in 2009.
26	"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 Blvd. 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 Blvd.	Conceptual planning. Caltrans approval obtained on Project Study Report
27	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 Blvd. interchange improvements, south Wilmington grade separations, and additional traffic capacity analysis for the Vincent Thomas Bridge.	Conceptual planning completed.
28	Berths 212–224 (YTI) Container Terminal Improvements Project	Wharf modifications at the YTI Marine Terminal Project involves wharf upgrades and backland reconfiguration, including new	EIR/EIS to be prepared. NOP/NOI anticipated in 2009. Construction expected 2011–

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		buildings.	2013.
29	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. NOP/NOI anticipated in 2009. Construction expected 2011–2013.
30	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.
31	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 Blvd. intersection improvements, and SR 47 on- and off-ramp at Front Street. These projects would reduce delays and emissions in the I-110/SR 47 area and improve safety and access.	Conceptual planning.
32	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 above high tide line completed in 2007. Additional sand replacement below high tide line anticipated in Fall 2008.
PORT OF LOS ANGELES AND/OR PORT OF LONG BEACH POTENTIAL PORT-WIDE OPERATIONAL PROJECTS			
33	Terminal Free Time	LAHD and POLB program to reduce container storage time and use gates at off-peak travel times.	Program in progress.
34	Extended Terminal Gates (Pier Pass)	LAHD and POLB program to use economic incentives to encourage cargo owners to use terminal gates during off-peak hours.	Program in progress.
35	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.
36	Origin/Destination and Toll Study	LAHD/POLB study to identify the origin and destination of international containers in the Los Angeles area, to determine the location of warehouses, and to identify the routes truck drivers use to move containers to and from the Ports. The bridges serving Terminal Island (Vincent Thomas, Gerald Desmond, and Heim Bridge) are not currently designed to handle the trade volumes projected at the	Study in progress.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		Ports of Los Angeles and Long Beach. 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.	
37	Virtual Container Yard	ACTA, LAHD, and POLB 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.
38	Increased On-Dock Rail Usage	ACTA, LAHD, and POLB 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.
39	Union Pacific Railroad ICTF Modernization Project	UP proposal to modernize existing intermodal yard four miles from the Port.	Conceptual planning. Application submitted and the EIR is being completed by the Joint Powers Authority.
40	Optical Character Recognition	Port terminals have implemented OCR technology, which eliminates the need to type container numbers in the computer system. This expedites the truck driver through terminal gates.	Ongoing planning and implementation.
41	Truck Driver Appointment System	Appointment system that provides a pre-notification to terminals regarding which containers are planned to be picked up.	Conceptual planning.
		COMMUNITY OF SAN PEDRO PROJECTS	
42	15th Street Elementary School, San Pedro	Los Angeles Unified School District construction of additional classrooms at 15th Street Elementary School.	Construction completed and school operating. Completed in 2006.
43	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.
44	Cabrillo Marine Aquarium Expansion, San Pedro	Expansion of existing Cabrillo Marine Aquarium.	Construction complete.
45	Gas station and mini-mart	6-pump gas station and 1,390 sf mini-mart at 311 N. Gaffey Street, San Pedro (north of Sepulveda Street).	Project on hold. No construction has started.
46	Fast food restaurant w/drive-thru	Construct fast food restaurant with drive through (expand from existing 3,000 sf to 4,816 sf restaurant). 303 S. Gaffey Street (at 3rd Street), San Pedro.	Construction is complete and restaurant is operating.
47	Mixed use development, 407 Seventh Street	Construct 5,000 sf retail and 87-unit apartment complex. 407 W. Seventh Street (at Mesa St.),	In final stages of construction

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		San Pedro.	
48	Condominiums, 28000 Western Ave.	Construct 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.
49	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; LADOT Planning Department has no estimated completion year.
50	Single Family Homes (Gaffey Street)	Construct 135 single-family homes. About 2 acres.1427 N. Gaffey St (at Basin St), San Pedro.	In construction. Estimated 2009 completion year according to LADOT Planning Department.
51	Mixed-use development, 281 W 8th Street	Construct 72 condos & 7,000 sf retail. 281 West 8th Street (near Centre Street), San Pedro.	No construction started. LADOT Planning Department has no estimated completion year.
52	Target (Gaffey Street)	Construct 136,000 sf 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.
53	Palos Verdes Urban Village	Construct 251 condos and 4,000 sf retail space. 550 South Palos Verdes Street, San Pedro.	No construction has started. Estimated 2011 completion year, according to LADOT Planning Department.
54	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 completed in fall 2007.
		COMMUNITY OF WILMINGTON PROJECTS	
55	Banning Elementary School #1, 500 North Island Avenue, Wilmington	Banning Elementary School No. 1 is a two-building elementary school consisting of one two-story classroom building with a subterranean parking garage and a one-story multipurpose building. The school also provides about 2 acres of playground and green space.	Construction completed and school operating. Completed in 2006.
56	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.
57	Distribution center and warehouse	135,000 sf distribution center and warehouse on 240,000 sf 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.
58	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.	Under construction (construction started in 2005).

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		The plans also include a day care center, lifelong learning center, parks, and landscaped open space.	
PROJECTS IN HARBOR CITY, LOMITA, AND TORRANCE			
59	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.
60	Harbor City Child Development Center	Conditional use permit to open 50-student pre-school at existing church building (25000 South Normandie Avenue, Harbor City, at Lomita Boulevard).	Public hearing in August 2006.
61	Kaiser Permanente South Bay Master Plan	Construct 303,000 sf medical office building, 42,500 sf records center/office/warehouse, with 260 hospital beds.25825 Vermont Street, Harbor City (at Pacific Coast Hwy).	In construction. Estimated completion year is 2009, according to LADOT Planning Department.
62	Drive-through restaurant, Harbor City	Construct 2,448 sf fast food restaurant with drive-through. 1608 Pacific Coast Highway, Harbor City (at President Avenue).	In planning phase. Old building still in operation.
63	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.
64	Warehouses, 1351 West Sepulveda Blvd	Construct warehouses with total capacity 400,000 sf. 1351 West Sepulveda Blvd. (at Western Ave.), Torrance.	Project building permit cleared February 2007.
65	Sepulveda Industrial Park	Construct 154,105 sf 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			
66	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, and wharf construction; construction of an intermodal rail yard; and reconstruction of terminal operations buildings. The Initial Study prepared for this project identified significant air, public health, transportation, biological, and water quality impacts.	NOP/NOI released December 20, 2005. Project EIS/EIR released May 2008. Anticipated construction 2008–2025.
67	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine container terminals into one terminal. The Piers G & J Redevelopment Project is in the Southeast Harbor Planning District area of the	Approved. Construction underway (anticipated construction period is 2005–

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		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 impacts to air quality and geologic resources.	2015).
68	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.
69	Pier A East, Port of Long Beach	Redevelopment of 32 acres of existing auto storage area into container terminal.	EIR to be prepared.
70	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. Final phase of construction underway.
71	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.
72	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 2009–2012.
73	Sound Energy Solutions-Pier T, Long Beach Liquefied Natural Gas (LNG) Terminal, Port of Long Beach	Construction of a 25-acre (10-hectare) liquefied natural gas (LNG) import terminal facility including pipeline and wharf construction on a portion of Pier T on Terminal Island within the Port of Long Beach.	Final EIR/EIS completed. Project disapproved by Board of Harbor Commissioners January 2007; legal challenge underway.
74	San Pedro Bay Rail Study	Port-wide rail transportation plan with multiple projects in and around Harbor District.	EIR to be prepared.
75	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.	NOP/NOI released in 2005. EIR/EA released in 2005; Recirculated EIR/EA being prepared. Anticipated construction 2008–2013.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
76	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.	NOP released June 2007. EIR to be prepared.
	ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY AND CALTRANS PROJECTS		
77	Schuyler Heim Bridge Replacement and State Route (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 Heim Bridge to SR 1 (Pacific Coast Highway).	ACTA and Caltrans issued Draft EIS/EIR August 2007. Final EIS/EIR expected in 2008. Anticipated construction 2009–2011 (for SR47 and bridge) and 2015–2017 (for flyover).
78	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 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 Chavez Park. b) Mid Corridor Interchange: Reconfigurations Project for Firestone Blvd. Interchange and Atlantic/Bandini Interchange.	Conceptual planning.
	CITY OF LONG BEACH PROJECTS		
79	Renaissance Hotel Project, City of Long Beach	Development of a 374-room hotel on the southeast corner of Ocean Boulevard and the Promenade.	Approved. Construction complete.
80	D'Orsay Hotel Project, City of Long Beach	Development of a hotel. The D'Orsay Project is a 162-room boutique style hotel on the northwest corner of Broadway and the Promenade.	Approved. Construction underway. Anticipated completion in Fall 2008.
81	City Place Development, City of Long Beach	Development of commercial and residential space at the former Long Beach Plaza Mall, downtown between 3rd and 6th Streets and between Long Beach Boulevard and Pacific Avenue. The approved project will redevelop 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.	Construction complete. Completed in 2005.
82	The Pike at Rainbow Harbor, City of Long Beach	Commercial use development. This project site 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	Approved. Construction complete.

No. in Figure 4-1	*Project Title and Location*	*Project Description*	*Project Status*
		770 residential units, a 500-room hotel, and 25,000 sf of commercial space. The EIR prepared for this project identified significant air quality, cultural resources, noise, public service, and transportation impacts.	
83	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. Construction complete.
84	Pike Property Development	Commercial use development.	Construction complete and property operating. Completed in 2003.
		ADDITIONAL PROJECTS	
85	Proposed Marine Research Center	Up to 28-acre site for potential marine research at City Dock No. 1.	Conceptual planning.
86	Condos, 319 N Harbor Blvd.	Construction of 94 unit residential condominiums, 319 N Harbor Blvd, San Pedro.	LADOT Planning Department has no estimated completion year.
87	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.
88	Port of Long Beach Installation Restoration Site 7 (West Basin)	Dredging project removal of about 700,000 cubic yards of contaminated sediments at the Port of Long Beach, with beneficial/ sustainable reuse of the material in the Pier G landfill.	In planning stages. Dredging is expected in 2008–2009.
89	Edison Avenue Closure	Close a short section of Edison Avenue between 9th 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.

1

4.2 Cumulative Impact Analysis

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

4.2.1 Aesthetics and Visual Resources

4.2.1.1 Scope of Analysis

The geographic area for cumulative visual impacts includes both those areas bordering the Port from that have views of Port development projects as well as the geographical limits from which cumulative projects can be viewed bordering the Port. The resulting area for impact analysis generally encompasses the Port of Los Angeles, San Pedro, Wilmington, and the Port of Long Beach.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.1. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.1.2 Cumulative Impact AES-1: The proposed Project would contribute to a cumulatively considerable adverse effect on a scenic vista from a designated scenic resource due to obstruction of views—cumulatively considerable and unavoidable.

Cumulative Impact AES-1 represents the potential of the proposed Project or alternatives along with related cumulative projects to result in significant/significant adverse impacts on a scenic vista within the cumulative study area from a designated scenic resource. A cumulative impact on a scenic vista would occur if the development activities necessary to implement the proposed Project, in combination with one or more of the related cumulative projects, would result in significant/significant adverse impacts to such scenic vistas. Significant impacts would include substantial or total blockage of views from a designated scenic view vantage point. Two critical public viewpoints were chosen for analysis because of their local designation as scenic resources—Harbor Boulevard (KOP A and sequential viewpoints) and Lookout Point Park (KOP B).

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Factors for determining significance address scenic views from two designated scenic resources: 1) a segment of Harbor Boulevard (2nd Street north to Swinford Street),

which is a locally designated scenic roadway with views of the Vincent Thomas Bridge and 2) Lookout Point Park, a scenic viewpoint, with commanding panoramic views of the cumulative study area.

Views of the Vincent Thomas Bridge from Harbor Boulevard (KOP A and sequential viewpoints). The Vincent Thomas Bridge is a local landmark that is eligible for listing in the National Register of Historic Places as the first major suspension bridge erected in southern California and the first bridge of its kind to be built on pilings. The bridge's prominence in the visual landscape is the combined functional beauty of its towers, suspended roadway, and transition to land. Current views of the bridge are partially interrupted by the World Cruise Center, which has degraded views to the bridge from this segment of roadway but has not substantially obstructed views. The terminals are not tall enough to block the road deck of the bridge; however, views to the lower portion of the west tower is interrupted. When at berth, cruise ships can temporarily block the towers of the bridge. Existing landscaping provides fenestrated views of the bridge as motorists travel north on the road. Future cumulative projects include the San Pedro Waterfront Enhancement Project—with pedestrian corridors, landscaping, open space, and other features that would not obstruct views to the bridge—and the Channel Deepening Project. None of the past, present, or reasonably foreseeable future projects would pose a direct impact to the Vincent Thomas Bridge from this segment of Harbor Boulevard by either substantially blocking or obstructing the view. Therefore, these projects are not cumulatively considerable, and the cumulative impacts of past, present, and reasonably foreseeable future projects combined would be less than significant.

Views from Lookout Point Park (KOP B). Lookout Point Park is an identified scenic vista in the San Pedro Community Plan, offering panoramic views of the Port, the Pacific Ocean, and the southern California coastline. Views from this viewpoint represent a mixture of past projects that have combined to form the distinctive visual setting of the Port landscape. Visual character is defined by a broad array of industrial and visually complex images within the natural setting of the ocean and distant mountain backdrop. Although many of the future projects would be visible within the panoramic view, they would not obstruct views from this viewpoint, which is located approximately 250 feet above the cumulative project area. The cumulative impacts of past, present, and reasonably foreseeable future projects combined would be less than significant.

Contribution of the Proposed Project

The proposed Project's impact on views from KOP A and KOP B is discussed in detail in Section 3.1.4.3.1 under Impact AES-1. As determined in the impact analysis, the proposed Project would not obstruct views from the designated viewpoint represented by KOP B; however, construction of the proposed Inner Harbor Parking complex at the Inner Harbor Cruise Ship Terminal would have a significant and unavoidable impact on views from Harbor Boulevard north of KOP A to the Vincent Thomas Bridge along an approximately 1,440-foot segment of the scenic highway. Therefore, along a short segment of Harbor Boulevard, the proposed

Project in combination with past, present, and foreseeable projects, would result in a cumulatively considerable impact under CEQA and NEPA relative to Impact AES-1.

Contribution of Alternatives

As with the proposed Project, the proposed Inner Harbor Parking complex at the Inner Harbor Cruise Ship Terminal would have a significant and unavoidable impact on views from Harbor Boulevard to the Vincent Thomas Bridge for Alternatives 1 through 3 under CEQA and NEPA. With Alternatives 4 and 5, views to the Vincent Thomas Bridge would be maintained because of the reduced footprint of the proposed parking structure. Alternative 4 would be cumulatively less than significant under CEQA and NEPA. Alternative 5 would be cumulatively less than significant under CEQA and there would be no impact under NEPA because there would be no federal action. Alternative 6 is the No-Project Alternative and there would no contribution to cumulative impacts under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

There is no mitigation to reduce the affects that the mass and siting of the proposed Inner Harbor Parking Structures would have on obstruction of views to the Vincent Thomas Bridge because two structures are proposed and there is no room to reduce the height of the structures, maintain the proposed footprint, and provide the number of required parking spaces. Cumulative impacts would be considerable under CEQA and NEPA for the proposed Project or Alternatives 1 through 3

4.2.1.3 Cumulative Impact AES-2: The proposed Project would not contribute to cumulatively substantial damage to scenic resources (including, but not limited to, trees, rock outcroppings, and historic buildings) within a state scenic highway—less than cumulatively considerable.

There are no designated state scenic highways within the proposed project area; however, portions of Harbor Boulevard have been designated a local scenic highway by the City of Los Angeles. Views from this roadway that could be impacted are addressed under Impact AES-1. Because there would be no proposed project-specific impact, there would be no cumulatively considerable impacts under CEQA and NEPA.

4.2.1.4 Cumulative Impact AES-3: The proposed Project would not contribute a cumulatively considerable

impact due to degradation of existing visual character or quality of a site and its surroundings—less than cumulatively considerable.

Cumulative Impact AES-3 represents the potential of the proposed Project or alternatives along with related cumulative projects to result in significant impacts on visual character or quality within the cumulative study area.

A cumulative impact on visual character or quality would occur if implementation of the proposed Project or alternatives, in combination with one or more of the related cumulative projects, would alter or remove valued features that substantially define the character of the San Pedro community or the Port in positive terms—the alteration or removal of which would significantly diminish visual quality within the cumulative visual impacts study area. Significant impacts would include the demolition of visual landmarks or the insertion of new development that degrades visual quality.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The visual character of the cumulative project area comprises a diverse array of engineered, industrial, marine, and recreational elements associated with the working port, waterfront commerce, and recreational beaches and marinas. These contrasting elements make the Port a highly textured, large-scaled, and lively landscape. Views of the marina and water-related recreational activities are framed by cranes, cargo ships, and containers, and there is an overall compositional harmony between natural and manmade elements. Visual quality is a combination of 1) highly diverse, industrial imagery punctuated by vibrant-colored cranes that pierce the skyline, 2) a manmade landscape that is functionally intact but a kaleidoscope of contrasting visual elements, and 3) a natural harbor, ocean, and mountain setting that unifies and frames the composition from the northeast to the south.

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. For example, development of the Pier 400 Container Terminal and Transportation Corridor Project reduced 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. The result of these past changes has been cumulatively considerable and significant.

Present and reasonably foreseeable future projects would be consistent with existing features of the Port landscape region. Overall, the Port setting would be capable of integrating well-designed Port-related development within the array of compositional elements because this type of development defines the visual imagery of the Port. A more specific analysis is provided below, which summarizes cumulative impacts of present and future projects from selected viewpoints based on viewer sensitivity, as described in Section 3.1.4.1.

Views from Inner Cabrillo Beach (KOP C), Crescent Avenue (KOP F), Lookout Point (KOP B), and the San Pedro Bluffs Residential Area (KOPs D and E). KOP C represents an unobstructed beachfront view of the Outer Harbor Berths, Cabrillo Way Marina, and Pier 400 from Inner Cabrillo Beach. KOP F also represents a low-elevation viewpoint of these areas. Both share foreground and middle ground views of Port features, with views consistent with the character of a working port. Distant, panoramic views are provided from hillside locations represented by KOPS B, D, and E. Collectively, views from these five observation points represent the cumulative effect of actions taken over the last century, which, as noted above, has been the creation of a distinct character type within the region, that of a highly engineered, working port.

Related projects within the field of view from these 5 observation points include:

- Project 1: Pier 400 Container Terminal and Transportation Corridor Project (APM Container Terminal). The 1992 Deep Draft FEIS/FEIR concluded that unavoidable significant visual impacts would result from construction of the Pier 400 landfill project due to the permanent loss of open water views and because the landfill would initially appear "stark or blank, fairly light in color and with no texture (no development)." The report further concluded that while the loss of open water from views would be permanent, the stark character of the undeveloped, flat, and barren fill areas would disappear with the development of terminal facilities, which would compatibly blend with existing Port activities. The EIR certified for the Pier 400 Container Terminal and Transportation Corridor Project (APM Container Terminal) identified no significant visual impacts. The context for the views toward Pier 400 from Cabrillo Beach and its vicinity at the time Project 1 started construction was that of the working Port environment. The quality of the view, together with the beach's serving recreation uses, indicates that views of the Port environment from Cabrillo Beach and other recreation facilities in its vicinity are valued, if not specifically recognized by policies or objectives stated in the City of Los Angeles General Plan or its elements. With the completion of Project 1, distant views of the Port of Long Beach were substantially obstructed. However, the Port facilities constructed at Pier 400 are features of a working port. They have supplanted those port features that they obscure, and there is no net loss from view of Port features. Under Cumulative Impact AES-3, relative to views from Cabrillo Beach (KOP C), there has been no adverse impact due to the construction and operation of Project 1. From the elevated positions along the San Pedro Bluffs residential area (KOPs D and E) and at Lookout Point Park (B), the Port views also are not interrupted by the facilities at Pier 400 for the same reason. These facilities supplant those they obstruct from view. Therefore, under Cumulative

Impact AES-3, there would be no adverse impact on the views from the San Pedro Bluffs residential area or from Lookout Point Park. Pier 400 is not visible from Crescent Avenue (KOP F).

- Project 5: Cabrillo Way Marina, Phase II. This project consists of the redevelopment of 42.4 acres of land and 38.9 acres of water for a marina and marina-related facilities in the Watchorn Basin section of the West Channel. Included in the project is a proposed Marina Village Retail Center, which would feature retail, restaurant, and office space. This project, particularly when compared to the gantry cranes at Piers 300 and 400, would be low in profile and would have no potential to block distant views of the mountains to the northeast. From Cabrillo Beach (KOP C) and its vicinity (KOP F), from the San Pedro Bluffs residential area (KOPS D and E), and from Lookout Point Park (KOP C), there would be no adverse impact relative to Cumulative Impact AES-3.

- Project 6: Artificial Reef, San Pedro Breakwater. Project 6 entails the development of an artificial reef south of the San Pedro Breakwater. Clean construction materials will be transported by barge to the site for placement. It is assumed that on-barge cranes will be used to deposit the materials and that the barges will be present for brief periods of time.

  The views that would be affected by this project include those directed to the south from the Cabrillo Beach breakwater toward the open ocean and Catalina Island. The obstruction of views in this direction, however, is not relevant to the assessment of cumulative visual impacts on the views in the opposite direction from Cabrillo Beach (KOP C), which would include the proposed Project.

  Valued views from the San Pedro Bluffs residential area (KOPs D and E) include the Outer Harbor and the open ocean to the southeast. However, while Project 6 is to the southeast and is within a line of sight toward the Outer Harbor and open ocean, the substantial elevation of viewing positions along the bluffs is such that this project's low-profile features could not project noticeably into the scene.

  Relative to the view from Lookout Point Park (KOP B), the views of the Port are considered to be implicitly valued because the purpose of the park is to provide such views. Project 6, however, is to the southwest of the park, and views from the park are directed to the northeast and east. Therefore, features of this project cannot interfere with views of the Port features within view. Relative to Cumulative Impact AES-3, there would be no adverse impact.

- Project 33: Proposed Marine Research Center. City Dock No. 1 is the site for a marine research facility that would include various laboratories, a research and development park, and educational support facilities. The site would be up to 28 acres in size and is in the conceptual stage of planning. Therefore, there is no specific information on the design of the facility or its construction. It is assumed that the structures would not be higher than one or two stories and that the multi-story Warehouse No. 1 may be removed to accommodate the research center. Based on the above assumptions, this project would not obstruct scenic vistas or panoramic views currently available from Cabrillo Beach (KOP C) and its vicinity, or from Crescent Avenue (KOP F). This is also true of elevated positions along the San Pedro Bluffs, as represented by the views from KOPs D and E, and from Lookout Point Park (KOP C) due to the vertical angle of view

relative to the plane of City Dock No. 1. The possible removal of the multi-story Warehouse No. 1 would reduce to a minimal extent view obstruction from KOP C into the interior of the Port but not substantially so. Relative to Cumulative Impact AES-3, there would be no adverse impact due to this project.

- Project 13: Westway Decommissioning. This project is to occur along Berths 70–71 at City Dock No. 1 in 2009 and includes removal of 136 storage tanks. These tanks are not within views from Cabrillo Beach (KOP C) and its vicinity due to the sheds along the west side of City Dock No. 1 that intervene in these views, or from KOP F. Concerning views from the San Pedro Bluffs residential area (KOPS D and E) and Lookout Point Park (KOP C), the viewing positions there are elevated such that the tanks do not block views of Port facilities or features to the east of the Port. Removing the tanks would not affect Port views, so this project would cause no adverse impact relative to Cumulative Impact AES-3.

- Project 23: Berth 302–305 (APL) Container Terminal Improvements. This project includes a terminal expansion area and new berth on the east side of Pier 300. It is assumed that an undisclosed number of gantry cranes would be installed along the new berth. These cranes, being along the east side of Pier 300, would not be noticeable from Cabrillo Beach (KOP C) or KOP F because of intervening structures, such as the much closer gantry cranes along Berths 302–304 and/or the facilities at the Port of Los Angeles Liquid Bulk Terminal. Given the location of the improvements and the facilities which intercede in views from Cabrillo Beach and its vicinity, Project 23 has no potential to interrupt or block views of Port features. There would be no adverse impact under Cumulative Impact AES-3 relative to those views. Views from the San Pedro Bluffs residential area (KOPs D and E) and from Lookout Point Park (KOP C) are substantially elevated; gantry cranes along the east side of Pier 300 would therefore be at least partially within view from here. However, because they would be installed along a new berth on the east side of Pier 300, they have no potential to block Port facilities from view as nearly all Port facilities are west (in front of) of the proposed berth. Therefore, there would be no adverse impact under Cumulative Impact AES-3.

- Project 32: Inner Cabrillo Beach Water Quality Improvement Program. The work under this project includes sewer and storm drain work, sand replacement, bird excluders, and groin removal. Most, if not all, of the sewer and storm drain work has been completed. The first phase of sand replacement above the high tide line was completed in 2007. The remaining sand replacement work, that occurring below the high tide line, is expected to be completed in 2008. The groin removal work has not yet been done but is expected to occur in 2008. In summary, nearly all of the work contemplated for this project has already been done or will be completed in 2008. There is no evidence of any effects on views from the beach apparent as of March 2008 due to this project. Any impacts that may occur in 2008 will be temporary. Relative to Cumulative Impact AES-3, this project has not caused, and is not expected to cause, significant impacts other than temporary adverse effects and, therefore, cannot contribute cumulatively to the effect of the other projects considered in this cumulative impact assessment.

- Project 45: Cabrillo Marine Aquarium Expansion. This project has been completed. Since the aquarium is located along the west edge of the parking lot at Cabrillo Beach and also is well below the nearest residences further to the west, this structure does not block Port views from Cabrillo Beach and its vicinity or from the residential area to the west of the aquarium. Therefore, this project has caused no adverse impact relative to Cumulative Impact AES-3.

Summary

Relative to Cumulative Impact AES-3 and views from Cabrillo Beach and vicinity (KOP C), Crescent Street (KOP F), San Pedro Bluffs residential area (KOPs D and E), and Lookout Park (KOP B), Projects 5, 6, 33, 13, and 23 planned for the future, are not expected to cause an adverse cumulative impact under Cumulative Impact AES-1. Projects 1 and 45, which have been completed, have caused no adverse impact and will not contribute toward any adverse cumulative impact relative to this impact category. Project 32 cannot contribute cumulatively to the effect of the other projects considered in this assessment because the work has been mostly completed and has left no residual visual effects; the part of the work yet to be completed may cause temporary adverse effects that will cease immediately upon project completion, leaving no residual visual effect. As noted, past projects at the Port (those completed prior to June 2004) have had a demonstrable negative effect on views from the surrounding area and have resulted in a cumulatively significant impact relative to Cumulative Impact AES-3.

Contribution of the Proposed Project

The Port's visual setting is dominated by industrial uses and consists overwhelmingly of manmade structures, including paved jetties, boat slips, cranes, dry bulk and liquid bulk storage, railroad lines, ship terminals, and other exposed infrastructure. There is a diverse array of functionally designed industrial equipment and architecture. The Port is active and overly large, and the combination of contrast, scale, and dynamics makes the Port a visually rich landscape. Proposed project features include a waterfront promenade; a Town Square area consisting of the North Harbor, Downtown Harbor, 7th Street Harbor, and 7th Street Pier; development and improvements to Ports O'Call and public parks (John S. Gibson Jr. Park, Fisherman's Park, San Pedro Park, and the Outer Harbor Park); and a 4-level parking structure to service Ports O'Call (Inner Harbor parking is discussed under AES-1). As discussed in Section 3.1.4.3.1, these proposed project components would blend with the diverse range and scale of features present along the waterfront and enhance visual quality through coherent master planning and a unified design. All development would be guided by *The San Pedro Waterfront and Promenade Design Guidelines* provided as Appendix C.2, which provide the framework for quality and appropriate design to ensure that proposed project features would not adversely affect visual quality by introducing highly contrasting, inharmonious, or unsuitably scaled architecture. Changes to the visual environment of the Port would be noticeable; however, these changes would provide a visual cohesiveness to the Port's interface with the community of San Pedro through the use of landscaping and architectural design. Impacts would be less than significant.

The most extensive changes to existing landscaped areas would occur in the vicinity of the Downtown Harbor. Existing mature landscaping nearest to the harbor could be removed and/or relocated to accommodate Downtown Harbor improvements. However, no significant reduction in park acreage is proposed, and the new trees, landscape, and hardscape improvements that are proposed are expected to unify and preserve visual quality in this particular visual setting. Removal of trees that are visually significant to the character of the community and historic setting to accommodate the construction of the Downtown Harbor would be significant. Mitigation Measure MM AES-1, described in Section 3.1.4.3.1, would reduce these impacts to less than significant.

Because of their size and mass, the berthing cruise ships at the Outer Harbor would have a commanding influence on visual composition when located in the foreground or front middle ground of a focused view. Consequently, visualizations were developed to assess their effect on views from Cabrillo Beach and its vicinity (KOP C), Crescent Avenue (KOP F), San Pedro Bluffs residential area (KOPs D and E), and Lookout Point Park (KOP B) relative to Impact AES-3. Proposed project effects from these sensitive viewing locations are detailed in Section 3.1.4.3.1. The analysis determined that from all viewing locations, the cruise ships would effectively integrate with the aesthetic image of surrounding features, would be a suitable use within the Los Angeles Harbor, and would visually complement existing activities and the patterns and rhythms of the Port setting. Impacts would be less than significant.

Conclusion

Past projects have caused a significant cumulative impact under Cumulative Impact AES-3; however, proposed project features would not contribute to the degradation of existing visual quality. Construction of the Downtown Harbor would require removal of trees that are significant to the visual character of the community, resulting in a cumulatively significant impact on visual quality under CEQA and NEPA. Mitigation Measure MM AES-1 would relocate and replace trees significant to the visual landscape, resulting in no adverse affect on Cumulative Impact AES-3.

Contribution of Alternatives

As with the proposed Project, construction of the Downtown Harbor under Alternatives 1, 2, 3, or 4 would require removal of landscaping that is significant to the visual character of the San Pedro community coastal skyline; without mitigation, the contribution of Alternatives 1, 2, 3, or 4 would be cumulatively considerable under CEQA and NEPA. As with the proposed Project, no other project features would contribute to a significant cumulative impact for Impact AES-3 under CEQA or NEPA.

There would be no harbor cuts under Alternative 5, and no project under Alternative 6; therefore, there would be no CEQA or NEPA contribution to Cumulative Impact AES-3 under Alternatives 5 and 6.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure MM AES-1 would reduce impacts for the proposed Project or Alternatives 1 through 4 to less-than-significant levels. Therefore, the proposed Project or alternatives would not make a cumulatively considerable contribution to the significant cumulative impact of related projects under Cumulative Impact AES-3 (no NEPA impact for Alternatives 5 and 6).

4.2.1.5 Cumulative Impact AES-4: The proposed Project would not contribute a cumulatively considerable impact due to negative shading on the existing visual character or quality of the site or its surroundings—less than cumulatively considerable.

Cumulative Impact AES-4 represents the potential for the proposed Project, along with related cumulative projects, to result in significant impacts on the cumulative study area through negative shadow effects that would affect shade-sensitive receivers.

Under the *L.A. CEQA Thresholds Guide* (City of Los Angeles 2006a), if the proposed project structures would be over 60 feet tall and within a distance of three times their height to shadow-sensitive land uses on the north, northwest, or northeast, the potential for an adverse effect on those land uses must be considered. An impact would be considered significant if shadow-sensitive uses would be shaded by project-related structures for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. between October and early April, or for more than four hours between 9:00 a.m. and 5:00 p.m. between early April and late October.

The proposed Project or alternatives would not include any structures that exceed 60 feet in height; consequently, Cumulative Impact AES-4 would not be applicable. Since the proposed Project categorically would have no impact in terms of Impact AES-4, it is not necessary to document the effects of past, present, and reasonably foreseeable future projects in terms of Cumulative Impact AES-4.

4.2.1.6 Cumulative Impact AES-5: The proposed Project would create a new source of cumulatively substantial light or glare that would adversely affect day or nighttime views of the area—cumulatively considerable and unavoidable.

Cumulative Impact AES-5 represents the potential for the proposed Project and related cumulative projects to result in cumulatively significant adverse impacts in the cumulative study area through the creation of a new source of substantial light or glare that would adversely affect day or nighttime views.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Due to the Port's current operations, the visual setting is brightly lit at night to ensure a safe nighttime outdoor work environment. The major sources of illumination within the Port are down lights on tall light standards and floodlighting, including floodlights on the crane booms used in loading and unloading cargo. Lighting is designed to provide an almost daylight environment through the use of these tall light standards.

Past projects at the Port of Los Angeles and in surrounding industrial districts have had the effect of creating sources of unshielded or poorly shielded and directed light that have had the effect of causing light spill and a change in ambient illumination levels in nearby areas. Because of the standards that LAHD is now implementing to minimize the lighting impacts of new projects, the contributions of present and future projects to cumulative lighting impacts in the area would be limited. The net effect of the past projects has been to create a significant cumulative impact.

There are 19 past, present, and reasonably foreseeable future projects in the geographic area that could contribute or add light and glare, including the following: 1, Pier 400 Container (Project 1), TraPac (Project 2), Cabrillo Way Marina (Project 5), Evergreen Container Terminal (Project 7), Pacific L.A. Marine Terminal (Project 11), China Shipping (Project 15), Pasha Marine Terminal Improvements Project (Project 16), SCIG (Project 19), Joint Container Inspection Facility (Project 22), APL Container Terminal Improvement (Project 23), Wilmington Waterfront Development Project (Project 25), YTI Container Terminal Improvement (Project 28), Yang Ming Container Terminal (Project 29), Mixed Use Development (Project 47), Condominiums (Project 48), Pacific Trade Center (Project 49), Single Family Homes (Project 50), Mixed Use Development (Project 51), Target (Project 52), Palos Verdes Urban Village (Project 53), Temporary Little League Park (Project 54), Distribution Center and Warehouse (Project 57), and Dana Strands Public Housing Redevelopment Project (Project 58).

Of these, the following 10 projects have the capability of contributing the most light and glare through the use of cranes, light backlots, or other uses that need extra lighting: Pier 400 Container (Project 1), TraPac (Project 2), Evergreen Container Terminal (Project 7), Plains All America (Project 11), China Shipping (Project 15), SCIG (Project 19), Joint Container Inspection Facility (Project 22), APL Container Terminal Improvement (Project 23), YTI Container Terminal Improvement (Project 28), and Yang Ming Container Terminal (Project 29). These projects would likely include lighting designed to provide an almost daylight environment through the use of these tall light standards. Therefore, the cumulative adverse effects/impacts associated with the light and glare of each of the past, present, and reasonably foreseeable future projects would result in a significant impact and are cumulatively considerable.

Contribution of the Proposed Project

As discussed in Section 3.1.4.3, the proposed Project or alternatives would not create a new source of substantial light or glare that would adversely affect day or nighttime views resulting in significant impacts. Proposed project features that would contribute to ambient nighttime illumination would be negligible within the context of the functional lighting of the Port and would include the Inner Harbor Parking Structure, lighting of the Town Square area and associated harbors, lighting of the waterfront promenade and Ports O'Call area, and lighting of the Outer Harbor Cruise Terminals.

New lighting would be both functional and decorative to enhance visual quality. As discussed in Section 3.1.4.3, within the context of the brightly lit night setting of the Port, the incremental change in ambient proposed project lighting would have little effect on light-sensitive areas. Lighting associated with proposed project components would comply with the San Pedro Waterfront and Promenade Design Guidelines, which include lighting recommendations to minimize light pollution, spill light, and glare while promoting goals to create an attractive and safe daytime and nighttime waterfront that supports local economic growth. Additionally, lighting would comply with the PMP, which requires an analysis of design and operational effects on existing community areas. Design consistency with these guidelines and regulations would minimize lighting effects and keep the lighting impacts of the proposed Project below significance. However, the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

Contribution of Alternatives

As with the proposed Project, design guidelines and regulations would minimize lighting effects and keep lighting impacts of Alternatives 1, 2, 3, 4, or 5 below significance. However, the cumulative context is significant, and Alternative 1, 2, 3, 4, or 5 would make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 1, 2, 3, or 4 would make a cumulatively considerable contribution to a significant cumulative impact under NEPA.

Alternative 5 is the No-Federal-Action Alternative; therefore, there would be no NEPA contribution to Cumulative Impact AES-5 under Alternative 5.

Alternative 6 is the No-Project Alternative; therefore, there would be no CEQA or NEPA contribution to Cumulative Impact AES-5 under Alternative 6.

Mitigation Measures and Residual Cumulative Impacts

As documented in Section 3.1.4.3, the design of the lighting proposed for the proposed project site incorporates a range of measures to minimize offsite lighting

impacts. Given that the lighting plan already makes maximum use of measures to attenuate the proposed Project's lighting impacts or those of the alternatives, no additional mitigation measures are available to reduce the proposed Project's contribution to the cumulative lighting impact. Therefore, the proposed Project or Alternatives 1 through 5 would make a cumulative considerable contribution to a significant cumulative impact under CEQA, and the proposed Project or Alternatives 1 through 4 would make a cumulative considerable contribution to a significant impact under NEPA (no NEPA impact for Alternative 5). Alternative 6 is the No-Project Alternative; therefore, there would be no CEQA or NEPA contribution to Cumulative Impact AES-5 under Alternative 6.

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 (SCAB), which is consistent with the thresholds established by SCAB. However, the highest project impacts would occur within the communities adjacent to the proposed Project site, including San Pedro, Wilmington, and Long Beach. For Cumulative Impact AQ-9 (GHG emissions), the region of analysis is the state of California.

4.2.2.2 Cumulative Impact AQ-1: The proposed Project would result in cumulatively considerable construction-related emissions that exceed an SCAQMD threshold of significance—cumulatively considerable and unavoidable.

Cumulative Impact AQ-1 assesses the potential for proposed project construction along with other cumulative 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

In the time period between the beginning and end of proposed project construction (2009–2014), several large construction projects would occur at the two ports and surrounding areas (see Table 4-1) that would overlap and contribute to cumulative construction impacts.

The construction impacts of the 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 (VOC, CO, NO_X, SO_X, PM10, and PM2.5), the related projects would result in a significant cumulative air quality criteria pollutant impact.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As shown in Table 3.2-17, emissions from proposed project construction would increase relative to CEQA and NEPA baseline emissions for VOC, CO, NO_X, PM10, and PM2.5. These emission increases would combine with construction emissions from concurrent construction projects in the vicinity of the proposed project site, which would already be cumulatively significant. As a result, without mitigation, emissions from proposed project construction would make a cumulatively considerable contribution to a cumulative significant impact for VOC, CO, NO_X, SO_X, PM10, and PM2.5 emissions under CEQA and NEPA.

Alternatives 1 through 5 would all include construction. Alternatives 1 through 4 would make a cumulatively considerable contribution to significant impacts for VOC, CO, NO_X, SO_X PM10, and PM2.5 emissions under CEQA and NEPA.

Alternative 5 does not contain a NEPA component and would therefore make a cumulatively considerable contribution to significant impacts for VOC, CO, NO_X, SO_X, PM10, and PM2.5 under CEQA only. Alternative 6 is the No-Project Alternative and as such would have no construction emissions and therefore would not contribute to a cumulative significant impact.

Mitigation Measures and Residual Cumulative Impacts

MM AQ-1 through MM AQ-8 would be applied to the proposed Project to reduce construction emissions. Table 3.2-19 shows that after mitigation, proposed project construction emissions would continue to exceed CEQA and NEPA baseline emissions for VOC, CO, NO_X, SO_X, PM10, and PM2.5. Alternatives 1 through 4 construction emissions would also continue to exceed CEQA and NEPA baseline emissions for VOC, CO, NO_X, SO_X, PM10, and PM2.5. Therefore, during construction, the proposed Project or Alternatives 1 through 4 after mitigation would make a cumulatively considerable and unavoidable contribution to a cumulative significant impact for VOC, CO, NO_X, SO_X, PM10, and PM2.5 emissions under CEQA and NEPA.

Alternative 5 does not contain a NEPA component and would therefore make a cumulatively considerable contribution for VOC, CO, NO_X, SO_X, PM10, and PM2.5 after mitigation under CEQA only. Alternative 6 would have no construction emissions and therefore would not contribute to a cumulative significant impact.

4.2.2.3 Cumulative Impact AQ-2: Proposed project construction would result in cumulatively considerable offsite ambient air pollutant concentrations that exceed a SCAQMD threshold of significance—cumulatively considerable and unavoidable.

Cumulative Impact AQ-2 assesses the potential for proposed project construction along with other cumulative 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.

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 the SCAQMD ambient concentration thresholds for pollutants from construction. 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. However, based on the modeling results for the proposed Project, cumulative air quality impacts are likely to exceed the thresholds for NO_2, PM10, and PM2.5, and are unlikely to exceed the threshold for CO. Consequently, construction of the related projects would result in significant cumulative air quality impacts related to exceedances of the significance thresholds for NO_2, PM10, and PM2.5.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The SCAQMD develops ambient pollutant thresholds that signify cumulatively considerable increases in criteria pollutant concentrations. As shown in Table 3.2-20, proposed project construction emissions would produce offsite impacts that would exceed the SCAQMD ambient thresholds for 1-hour NO_2, and would exceed CEQA and NEPA baseline levels for PM10 and PM2.5. Any concurrent emissions-generating activity that occurs in the vicinity of the proposed project site would add additional air emission burdens to these significant levels. As a result, without mitigation, emissions from proposed project construction would make cumulatively considerable contributions to significant cumulative ambient NO_2, PM10, and PM2.5 levels under CEQA or NEPA.

All alternatives, with the exception of Alternative 6, would produce NO_2, PM10, and PM2.5 emissions during construction phases. As with the proposed Project, Alternatives 1 through 5 would therefore produce cumulatively considerable

contributions to cumulative significant NO_2, PM10, and PM2.5 levels under CEQA or NEPA (except there would be no impact under NEPA for Alternative 5). Alternative 6 would not result in construction activities and would therefore not produce cumulatively considerable contributions to criteria pollutant levels under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

Table 3.2-21 shows that with mitigation, impacts from the proposed project construction would exceed the SCAQMD 1-hour NO_2, 24-hour PM10, and 24-hour PM2.5 ambient thresholds. Therefore, construction emissions of the proposed Project or Alternatives 1 through 5, with mitigation, would still make a cumulatively considerable (and unavoidable) contribution to significant cumulative ambient NO_2, PM10, and PM2.5 levels from concurrent related proposed project construction under the proposed Project or Alternatives 1 through 5 under CEQA, and the proposed Project or Alternatives 1 through 4 for NEPA (no NEPA impact for Alternative 5). Alternative 6 would not have construction emissions and would therefore have no contribution to cumulative impacts.

4.2.2.4 Cumulative Impact AQ-3: The proposed Project would result in cumulatively considerable operational emissions that exceed 10 tons per year of VOCs or an SCAQMD threshold of significance—cumulatively considerable and unavoidable.

Cumulative Impact AQ-3 assesses the potential for proposed project operation along with other cumulative 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The other projects would be cumulatively significant if their combined operational emissions would exceed the 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.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Table 3.2-23 shows that peak daily emissions from proposed project operation would increase relative to CEQA and NEPA baseline emissions for VOC, CO, NO_X, SO_X, PM10, and PM2.5 during one or more project analysis years. These emission increases would combine with operation emissions from other projects in the vicinity of the proposed project site, which would already be cumulatively significant. As a result, without mitigation, emissions from proposed project operation would make a cumulatively considerable contribution to a cumulative significant impact for VOC, CO, NO_X, SO_X, PM10, and PM2.5 emissions under CEQA and NEPA.

Peak daily emissions from operation of Alternatives 1 or 2 would increase relative to CEQA and NEPA baseline emissions for VOC, CO, NO_X, SO_X, PM10, and PM2.5 during one or more project analysis years. These emission increases would combine with operation emissions from other projects in the vicinity of the proposed project site, which would already be cumulatively significant. As a result, without mitigation, emissions from operation of Alternatives 1 or 2 would make a cumulatively considerable contribution to a cumulative significant impact for VOC, CO, NO_X, SO_X, PM10, and PM2.5 emissions under CEQA and NEPA.

Peak daily emissions from operation of Alternatives 3 through 6 would increase relative to CEQA baseline emissions for VOC, NO_X, SO_X, PM10, and PM2.5, during one or more project analysis years. As a result, emissions from operations of Alternatives 3 through 6 would make a cumulatively considerable contribution to a cumulative significant impact for VOC, NO_X, SO_X, PM10, and PM2.5 emissions under CEQA.

Peak daily emissions from operation of Alternatives 3 or 4 would increase relative to NEPA baseline emissions for VOC, CO, NO_X, SO_X, PM10, and PM2.5, during one or more project analysis years. As a result, emissions from operation of Alternatives 3 or 4 would make a cumulatively considerable contribution to a cumulative significant impact for VOC, CO, NO_X, SO_X, PM10, and PM2.5 emissions under NEPA.

There would be no impact under NEPA for Alternatives 5 and 6.

Mitigation Measures and Residual Cumulative Impacts

MM AQ-9 through MM AQ-24 would be applied to the proposed Project to reduce project emissions. Table 3.2-28 shows that after mitigation, peak daily emissions from operation of the proposed Project would increase relative to the CEQA and NEPA baseline emissions for VOC, NO_X, SO_X, PM10, and PM2.5 during one or more project analysis years. As a result, after mitigation, emissions from the proposed Project would make a cumulatively considerable and unavoidable contribution to a cumulative significant impact for VOC, CO, NO_X, SO_X, PM10, and PM2.5 emissions under CEQA and NEPA.

After mitigation, peak daily emissions from operation of Alternative 2 would increase relative to the CEQA and NEPA baseline emissions for VOC, CO, NO_X, SO_X, PM10, and PM2.5 during one or more project analysis years. As a result, after mitigation, emissions from Alternative 2 would make a cumulatively considerable and unavoidable contribution to a cumulative significant impact for VOC, CO, NO_X, SO_X, PM10, and PM2.5 emissions under CEQA and NEPA.

After mitigation, peak daily emissions from operation of Alternatives 1, 3, 4, or 5 would increase relative to CEQA baseline emissions for VOC, NO_X, SO_X, PM10, and PM2.5 during one or more project analysis years. As a result, after mitigation, emissions from operation of Alternatives 1, 3, 4, or 5 would make a cumulatively considerable and unavoidable contribution to a cumulatively significant impact for VOC, NO_X, SO_X, PM10, and PM2.5 emissions under CEQA.

After mitigation, peak daily emissions from operation of Alternatives 1, 3, or 4 would increase relative to NEPA baseline emissions for VOC, CO, NO_X, SO_X, PM10, and PM2.5 during one or more project analysis years. As a result, after mitigation, emissions from operation of Alternatives 1, 3, or 4 would make a cumulatively considerable and unavoidable contribution to a cumulative significant impact for VOC, CO, NO_X, SO_X, PM10, and PM2.5 emissions under NEPA.

There would be no impact under NEPA for Alternative 5.

Mitigation measures were not applied to Alternative 6 because there would be no new uses introduced to the No-Project Alternative.

4.2.2.5 Cumulative Impact AQ-4: Proposed project operations would result in cumulatively considerable offsite ambient air pollutant concentrations that exceed a SCAQMD threshold of significance—cumulatively considerable and unavoidable.

Cumulative Impact AQ-4 assesses the potential for proposed project operation along with other cumulative projects to produce ambient concentrations that exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The related projects would result in significant cumulative impacts if their combined ambient concentration levels during operations would exceed the SCAQMD ambient concentration thresholds for operations. 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. However, based on modeling results for the proposed Project, cumulative air quality impacts are likely to exceed the thresholds for NO_2, could exceed the thresholds for PM10 and PM2.5, and are unlikely to exceed for CO. Consequently, operation of the related projects would result in a significant cumulative air quality impacts related to exceedances of the significance thresholds for NO_2, PM10, and PM2.5.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The SCAQMD develops ambient pollutant thresholds that signify cumulatively considerable increases in concentrations of these pollutants. As shown in Tables 3.2-30 and 3.2-31, proposed project operational emissions would produce offsite impacts that would exceed the SCAQMD ambient thresholds for 1-hour and annual NO_2, 24-hour and annual PM10, and 24-hour PM2.5. Any concurrent emissions-generating activity that occurs in the vicinity of the proposed project site would add additional air emission burdens to these significant levels. As a result, without mitigation, emissions from proposed project operations would produce cumulatively considerable contributions to ambient NO_2, PM10, and PM2.5 levels under CEQA or NEPA.

Alternatives 1 through 6 all include operational emissions, and given the significant cumulative impact from the related projects for NO_2, PM10, and PM2.5, operation of any of these alternatives would make cumulatively considerable contributions to cumulative significant cumulative NO_2, PM10, and PM2.5 concentrations under CEQA or NEPA (except there would be no impact under NEPA for Alternatives 5 or 6).

Mitigation Measures and Residual Cumulative Impacts

MM AQ-9 through MM AQ-24 would be applied to the proposed Project to reduce project emissions. Tables 3.2-32 and 3.2-33 show that with mitigation, impacts from proposed project or Alternatives 1 through 5 operation would exceed the 1-hour and annual NO_2, 24-hour and annual PM10, and annual PM2.5 SCAQMD ambient thresholds. As a result, emissions from operation of the proposed Project would produce cumulatively considerable and unavoidable contributions to ambient NO_2, PM10, and PM2.5 levels under CEQA and NEPA. Similarly, emissions from operation of Alternatives 1 through 5 would produce cumulatively considerable and unavoidable contributions to ambient NO_2, PM10, and PM2.5 levels under CEQA and NEPA (except there would be no impact under NEPA for Alternative 5).

Mitigation measures were not applied to Alternative 6 because there would be no new uses introduced to the No-Project Alternative.

4.2.2.6 Cumulative Impact AQ-5: The proposed Project would not generate cumulatively considerable onroad traffic that would contribute to an exceedance of the 1-hour or 8-hour CO standards—less than cumulatively considerable.

Cumulative Impact AQ-5 assesses the potential of the proposed project operation along with other cumulative projects to create on-road traffic that would contribute to an exceedance of the 1-hour or 8-hour CO standards.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The related projects would result in significant cumulative impacts to air quality if they would generate traffic levels that cause exceedances of the ambient air quality standards for CO near roadways and intersections. Exceedances of the CO standards are unlikely to occur, based on the ambient monitoring levels of CO in the proposed project area (Table 3.2-2) and the continued downward trend in CO levels through the South Coast Air Basin due to the phase-in of stricter on-road engine standards for passenger cars and trucks. Therefore, the cumulative impacts of the other projects would be considered less than significant.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Based on the CO hot spot modeling analysis, which includes cumulative growth in traffic levels, in the vicinity of the proposed Project, significant hot spot impacts for proposed project operation are not anticipated because CO standards would not be exceeded (see Tables 3.2-34 and 3.2-35) under CEQA and NEPA. 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 or NEPA.

As with the proposed Project, none of the proposed project alternatives would make a cumulatively considerable contribution to a significant cumulative CO impact under CEQA or NEPA (there would be no impact under NEPA for Alternative 5 and no impact under CEQA and NEPA for Alternative 6).

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because neither the proposed Project nor any alternatives would result in cumulatively considerable contributions to significant cumulative CO hot spot impacts (no NEPA impact for Alternatives 5 and 6).

4.2.2.7 Cumulative Impact AQ-6: The proposed Project would create a cumulatively considerable objectionable odor at the nearest sensitive receptor—cumulatively considerable and unavoidable.

Cumulative Impact AQ-6 assesses the potential of the proposed project operation along with other cumulative projects to create objectionable odors at the nearest sensitive receptor.

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 feel 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) adjacent to Port operations, odorous emissions in the proposed project region are cumulatively significant.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Operation of the proposed Project would increase diesel emissions within the Port. Any concurrent emissions-generating activity that occurs in the vicinity of the proposed project site would add additional air emissions burden to cumulative impacts. As a result, without mitigation, proposed project operations would result in cumulatively considerable contributions to significant cumulative odor impacts within the proposed project region under CEQA or NEPA.

As with the proposed Project, Alternatives 1 through 6 would involve the use of diesel equipment and/or trucks and would therefore make a cumulatively considerable contribution to significant cumulative odor impacts under CEQA or NEPA (except there would be no impact under NEPA for Alternatives 5 or 6).

Mitigation Measures and Residual Cumulative Impacts

Implementation of proposed project mitigation that reduce diesel combustion, including MM AQ 1-6, MM AQ 9-21, and MM AQ 26-30, would reduce odor emissions from operation of the proposed Project or Alternatives 1 through 5. After mitigation, the proposed Project or Alternatives 1 through 5 would produce

cumulatively considerable and unavoidable contributions to ambient odor levels within the proposed project region from operations (except there would be no impact under NEPA for Alternative 5).

Mitigation measures were not applied to Alternative 6 because there would be no new uses introduced to the No-Project Alternative.

4.2.2.8 Cumulative Impact AQ-7: The proposed Project would expose receptors to cumulatively significant levels of TACs—cumulatively considerable and unavoidable.

Cumulative Impact AQ-7 assesses the potential of the proposed project construction and operation along with other cumulative projects to produce TACs that exceed acceptable public health criteria.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The *Multiple Air Toxics Exposure Study* (MATES-III) conducted by the South Coast Air Quality Management District in 2008 estimated the existing cancer risk from toxic air contaminants in the South Coast Air Basin to be approximately 1,200 in a million (SCAQMD 2008). In the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, 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 2006b). Based on this information, airborne cancer and non-cancer levels within the proposed project region are therefore cumulatively significant.

LAHD has approved port-wide air pollution control measures through their San Pedro Bay Ports Clean Air Action Plan (CAAP) (LAHD et al. 2006). Implementation of these measures would 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 also would 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, they have not been accounted for in the emission calculations or health risk assessment for the proposed Project. Therefore, it is unknown at this time how these future measures would reduce cumulative health risk impacts within the Port project area, and therefore, airborne cancer and non-cancer impacts within the proposed project region would therefore still be cumulatively significant.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Table 3.2-37 shows that prior to mitigation, proposed project construction and operational emissions of TACs would increase cancer risks from CEQA and NEPA baseline levels to above the significance criterion of 10 in a million (10×10^{-6}) risk to offsite residential, occupational, sensitive, and recreational receptors. The proposed project construction and operation emissions of TACs would increase cancer risks from NEPA baseline levels to above the significance criterion of 10 in a million risk to offsite residential, occupational, and recreational receptors. In addition, proposed project emissions of TACs would make a cumulatively considerable contribution (although a contribution of less than 10 in a million risk) to cancer risks relative to CEQA and NEPA baseline levels to offsite student receptors.

Prior to mitigation, proposed project construction and operational emissions of TACs would increase acute non-cancer effects from CEQA and NEPA baseline levels to above the 1.0 hazard index significance criterion at offsite residential, occupational, and recreational receptors in proximity to the proposed project site.

Proposed project construction and operational emissions of TACs would not increase non-cancer chronic effects from CEQA and NEPA Baseline levels to above the 1.0 non-cancer chronic significance criterion.

Any concurrent emissions-generating activity that occurs in the vicinity of the proposed project site would add an additional airborne health burden to these significant levels. As a result, without mitigation, emissions from proposed project construction and operation would make a cumulatively considerable contribution to airborne cancer and non-cancer levels at all receptor types under CEQA or NEPA.

While the proposed project emissions would not have an individually significant impact on chronic non-cancer health effects at any receptor type under CEQA or NEPA, the proposed Project would make a greater than zero, and therefore cumulatively considerable, contribution to cumulatively significant impacts on chronic non-cancer health risks.

As with the proposed Project, any concurrent emissions-generating activity that occurs in the vicinity of the proposed project site would add additional airborne health burdens to these significant levels. As a result, without mitigation, emissions from construction and operation of Alternatives 1 through 5 would make a cumulatively considerable contribution to airborne cancer and non-cancer levels at all receptor types under CEQA, and for the proposed Project or Alternatives 1 through 4 for NEPA (see Tables 3.2-59, 3.2-78, 3.2-91, 3.2-110 and 3.2-138) (no NEPA impacts for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

MM AQ 9-24 would be applied to the proposed Project to reduce project TAC emissions. Table 3.2-38 shows that with mitigation, construction and operational emissions of TACs under the proposed Project would increase cancer risks from CEQA baseline levels to above the significance criterion of 10 in a million (10×10^{-6}) risk to offsite occupational and recreational receptors, resulting in a significant cumulative impact. In addition, proposed project emissions of TACs would make a cumulatively considerable contribution (although a contribution of less than 10 in a million risk) to cancer risks relative to CEQA baseline levels to offsite residential, student, and sensitive receptors.

Table 3.2-38 also shows that, with mitigation, construction and operational emissions of TACs under the proposed Project would increase cancer risks from NEPA baseline levels to above the significance criterion of 10 in a million (10×10^{-6}) risk to offsite residential, occupational, and recreational receptors, resulting in a significant cumulative impact. In addition, proposed project emissions of TACs would make a cumulatively considerable contribution (although a contribution of less than 10 in a million risk) to cancer risks relative to NEPA baseline levels to offsite student and sensitive receptors.

Similar to the proposed Project, even after mitigation, Alternatives 1 through 5 would increase cancer risk levels to above CEQA and NEPA baseline levels at offsite receptors, although not always in excess of the 10 in a million risk threshold for an individual project (except there would be no impact under NEPA for Alternative 5). Therefore, after mitigation, Alternatives 1 through 5 would have a greater than zero contribution to cumulatively significant impacts on cancer risk, and therefore would be cumulatively considerable under CEQA, and the proposed Project and Alternatives 1 through 4 would be cumulatively significant under NEPA (no NEPA impact for Alternative 5).

With mitigation, construction and operational emissions of TACs from the proposed Project would increase acute non-cancer effects from CEQA baseline levels to above the 1.0 hazard index significance criterion at residential, occupational, and recreational receptors in proximity to the proposed project terminal, resulting in a significant cumulative impact. In addition, proposed project emissions of TACs would make a cumulatively considerable contribution (although a contribution of less than 1.0 hazard index) to acute noncancer effects relative to CEQA baseline levels to offsite student and sensitive receptors.

With mitigation, construction and operational emissions of TACs from the proposed Project would increase acute noncancer effects from NEPA baseline levels to above the 1.0 hazard index significance criterion at occupational and recreational receptors in proximity to the proposed project terminal, resulting in a significant cumulative impact. In addition, proposed project emissions of TACs would make a cumulatively considerable contribution (although a contribution of less than 1.0 hazard index) to acute noncancer effects relative to NEPA baseline levels to offsite residential, student, and sensitive receptors.

Similar to the proposed Project, even after mitigation, Alternatives 1 through 5 would increase acute noncancer effects to above CEQA and NEPA baseline levels at offsite receptors, although not always in excess of the 1.0 hazard index threshold for an individual project (except there would be no impact under NEPA for Alternative 5). Therefore, after mitigation, Alternatives 1 through 5 would make a greater than zero, and therefore cumulatively considerable, contribution to cumulatively significant impacts on acute noncancer health effects (except there would be no NEPA impact for Alternative 5).

With mitigation, construction and operational emissions of TACs from the proposed Project or Alternatives 1 through 5 would not increase chronic non-cancer effects from CEQA and NEPA baseline levels to above the 1.0 hazard index significance criterion at the analyzed receptors (except there would be no impact under NEPA for Alternative 5). However, while the mitigated emissions would not have an individually significant impact on chronic noncancer health effects at any receptor type under CEQA or NEPA, the mitigated proposed Project or mitigated Alternative 1 through 5 emissions would make a greater than zero, and therefore cumulatively considerable, contribution to cumulatively significant impacts on chronic noncancer health risks (except there would be no impact under NEPA for Alternative 5).

Mitigation measures were not applied to Alternative 6 because there would be no new uses introduced to the No-Project Alternative.

Levels of toxic air contaminant emissions from both Port facilities and Port-related trucks traveling along adjacent streets will diminish in future years with the implementation of the recently approved CAAP and current and future rules adopted by CARB and EPA. Specifically, DPM emissions from trucks are anticipated to diminish by approximately 80% over the next 5 years with the implementation of the CAAP. It is unknown at this time whether these future emission reductions would reduce the cumulative health impacts in the Port region to less-than-significant levels. However, LAHD is in the process of developing a Port-wide HRA that will define the cumulative health impacts of Port emissions in proximity to the Port. The Port-wide HRA would not include emissions from sources outside the Port, such as area refineries, that may continue to contribute to cumulative health risk independent of CAAP or current and future Port-focused rules adopted by CARB and EPA.

4.2.2.9 Cumulative Impact AQ-8: The proposed Project would not conflict with or obstruct implementation of an applicable AQMP—less than cumulatively considerable.

Cumulative Impact AQ-8 represents the potential of the proposed Project along with other cumulative projects to conflict with or obstruct implementation of an applicable AQMP.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The 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. The related projects would be subject 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 the Southern California Association of Governments, and accounts for planned land use and transportation infrastructure growth, the related projects would be consistent with the AQMP. Because of this, the related projects would not result in significant cumulative impacts related to an obstruction of the AQMP.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project would produce emissions of nonattainment pollutants. The 2003 and 2007 AQMPs propose mobile source control measures and clean fuel programs that are designed to bring the SCAB into attainment of the state and national ambient air quality standards. Many of these AQMP control measures are adopted as SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the region. Proposed sources would have to comply with all applicable SCAQMD rules and regulations and in this manner, the proposed Project would not conflict with or obstruct implementation of the AQMP.

LAHD regularly provides the Southern California Association of Governments with its Port-wide forecasts of ocean-going vessels and harbor craft for development of the AQMPs. Therefore, the attainment demonstrations included in the 2003 and 2007 AQMPs account for the emissions generated by projected future growth at the Port. Because one objective of the proposed Project is to accommodate Port growth, the AQMP accounts for the proposed project development. As a result, without mitigation, the proposed Project would result in less than cumulatively considerable contributions in terms of conflicting with or obstructing implementation of an applicable AQMP under CEQA or NEPA.

As with the proposed Project, Alternatives 1 through 6 would result in less than cumulatively considerable contributions in terms of conflicting with or obstructing implementation of an applicable AQMP under CEQA or NEPA (there would be no impact under NEPA for Alternative 5 or 6).

Mitigation Measures and Residual Cumulative Impacts

None are required because cumulative impacts would be less than significant (no NEPA impact for Alternatives 5 and 6).

4.2.2.10 Cumulative Impact AQ-9: The proposed Project would produce cumulatively considerable GHG emissions that would exceed CEQA and NEPA baseline levels—cumulatively considerable and unavoidable.

Cumulative Impact AQ-9 represents the potential of the proposed Project along with other cumulative projects to contribute to global climate change.

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 gases (GHG) emissions from human activities, as further 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 (California Energy Commission 2006a). Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, city, and essentially every individual on earth. In California alone, CO_2 emissions totaled approximately 478 million metric tons in year 2003 (CEC 2006a), which was an estimated 6.4% of global CO_2 emissions from fossil fuels. Based upon 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 therefore cumulatively significant.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The challenge in assessing the significance of an individual project's contribution to global GHG emissions and associated global climate change impacts is to determine 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 478 million metric tons in year 2003 (CEC 2006a).

As shown in Tables 3.2-40 and 3.2-41, proposed project construction and operation would produce higher GHG emissions within California borders in each future project year, compared to CEQA and NEPA baseline levels. Furthermore, emissions from proposed project-associated ships traveling beyond California borders, while not quantified in the tables, would further increase GHG emissions above CEQA and NEPA baseline levels. Any concurrent emissions-generating activity that occurs global-wide would add additional air emission burdens to these significant levels, which could further exacerbate environmental effects as discussed above and Section 3.2. Therefore, emissions from proposed project construction and operation would produce cumulatively considerable contributions to global climate change under CEQA.

As with the proposed Project, emissions from Alternatives 1 through 5 construction and operation and Alternative 6 operation would produce cumulatively considerable contributions to global climate change under CEQA (see Tables 3.2-61, 3.2-62, 3.2-80, 3.2-81, 3.2-93, 3.2-94, 3.2-112, 3.2-113, 3.2-131 and 3.2-132).

Mitigation Measures and Residual Cumulative Impacts

As shown in Table 3.2-43, the mitigated proposed Project would produce higher GHG emissions than CEQA baseline emissions in each future project year except 2011. Therefore, emissions from construction and operation of the proposed Project after mitigation would produce cumulatively considerable and unavoidable contributions to global climate change under CEQA.

As with the proposed Project, mitigated emissions from Alternatives 1 through 5 construction and operation would produce cumulatively considerable contributions to global climate change under CEQA.

As shown in Table 3.2-43, the mitigated proposed Project would produce higher GHG emissions than NEPA baseline emissions in each future project year. These GHG emissions are in addition to those generated during construction of the proposed Project (Table 3.2-40). The construction emissions and mitigated operational emissions from Alternatives 1 through 4 would also exceed NEPA baseline emissions (see Tables 3.2-61, 3.2-63, 3.2-80, 3.2-82, 3.2-93, 3.2-95, 3.2-112, 3.2-114). There would be no federal action or NEPA impact for Alternatives 5 or 6.

Mitigation measures were not applied to Alternative 6 because there would be no new uses introduced to the No-Project Alternative.

4.2.3 Biological Resources

4.2.3.1 Scope of Analysis

The geographic region of analysis for biological resources differs by organism groups such as birds, fish, marine mammals, plankton, and benthic invertebrates. The

mobility of species in these groups, their population distributions, and the normal movement range for individuals living in an area varies so that effects on biotic communities in one area can affect those communities in other nearby areas. For terrestrial biological resources (excluding water-associated birds), the geographic region of analysis is limited to those land areas at the proposed Project development areas (i.e., terminal and parking structure construction sites, demolition of existing facilities, roadway expansion, and Waterfront Red Car line expansion). The resources present in upland areas are common species that are abundant throughout the region and are adapted to industrial areas in the LA/LB Harbor.

For marine biological resources, excluding marine mammals, the geographical region of analysis for benthic communities, water column communities (plankton and fish), and water-associated birds is the water areas of the LA/LB Harbor (Inner and Outer Harbor areas) because the basins, slips, channels, and open waters are hydrologically and ecologically connected. Effects on plankton are more restricted; however, no distinct boundary can be established so the entire LA/LB Harbor area is used. For marine mammals, the analysis area includes the LA/LB Harbor as well as the Pacific Ocean from near Angels Gate to Catalina Island in order to cover cruise ship and other vessel traffic effects.

The special-status bird species have differing population sizes and dynamics, distributional ranges, breeding locations, and life history characteristics. Because the bird species are not year-long residents but migrate to other areas where stresses unrelated to the proposed Project and other projects in the LA/LB Harbor area can occur, the area for cumulative analysis is limited to the LA/LB Harbor and adjacent water and lands. Sea turtles are not expected to occur in the LA/LB Harbor and their presence in the nearshore areas where cruise ship and other 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 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 LA/LB 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. These criteria are the same for both the CEQA and NEPA analyses. This cumulative effects analysis considers past, present, and reasonably foreseeable projects in the study area. The timeline for impacts to biological resources that have occurred in the past would date back to pre-Port development (approximately 1869) condition. Present impacts would be those that have occurred since the issuance of the NOP in September 2005 and future effects would be those that would take place by 2037.

4.2.3.2 Cumulative Impact BIO-1: The proposed Project would result in the cumulative loss of individuals, or the reduction of existing habitat, of a state- or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a species of special concern, or the loss of federally listed critical habitat—cumulatively considerable and unavoidable.

Cumulative Impact BIO-1 assesses the potential of the proposed Project along with other past present and reasonably foreseeable 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 listed critical habitat. No critical habitat for any federally listed species is present in the LA/LB Harbor; therefore, no cumulative impacts to critical habitat would occur.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Looking back to pre-Port conditions, construction of past landfill projects has significantly reduced the amount of open water and naturally occurring habitat within the LA/LB Harbor and affected the condition (urbanization) of that which remains. Construction of past landfill projects in the LA/LB Harbor has significantly reduced open water habitat available for 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 then Pier 400 provided new nesting sites for the California least tern, and the Pier 400 site is still being used. Shallow water areas to 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 (Project 4). Cumulative impacts of marine habitat loss on special-status species for present and reasonably foreseeable projects would be less than significant.

The past projects that have increased vessel traffic have also increased underwater sound in the LA/LB 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 [Project 2], Channel Deepening [Project 4], Evergreen Improvements [Project 7], Pacific L.A. Marine Terminal [Project 11], Ultramar [Project 12], Berths 97–109 [Project 15], Berths 212–214 YTI [Project 28], Berths 121–131 [Project 29], Middle Harbor [Project 66], Piers G & J [Project 67], Pier T TTI [Project 70], Pier S [Project 71], and Long Beach LNG Terminal [Project 73]) would increase vessel traffic and its associated underwater sound. The increase in frequency of vessel sound events could cause some individual marine mammals to

avoid the vessels as they move into, through, and out of the LA/LB Harbor. The overall increase in sound would be less than 3 dBA because the number of vessels would not double. Cumulative impacts from increased sound levels due to additional vessel traffic would be less than significant.

Development of the vacant land on Pier 400 adjacent to the California least tern nesting site (Pacific LA Marine Terminal Project [Project 11]) has the potential to adversely affect that species during construction. Construction of the Cabrillo Shallow Water Habitat Expansion and Eelgrass Habitat Area as part of the Channel Deepening Project (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 mitigable 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, foraging habitat, or individuals would be lost as a result of backland developments. Cumulative impacts to California least tern would be less than significant.

In-water construction activities (e.g., Berths 136–147 Marine Terminal [Project 2], Channel Deepening [Project 4], Cabrillo Way Marina [Project 5], Evergreen Improvements [Project 7], Pacific LA Marine Terminal [Project 11], Berths 97–109 [Project 15], Berths 212–214 YTI [Project 28], Berths 121–131 [Project 29], Middle Harbor [Project 66], Piers G & J Redevelopment [Project 67], Pier T TTI [Project 70], Pier S [Project 71], Long Beach LNG Terminal [Project 73], and Schuyler F. Heim Bridge [Project 77]) 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 LA/LB Harbor and only some are likely to overlap in time, the birds could use other undisturbed areas in the LA/LB Harbor, and few individuals would be affected at any one time. Construction of the Schuyler F. Heim Bridge (Project 77), 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 could be significant but mitigable by scheduling the work to begin after the nesting season is complete. Cumulative impacts to other special-status bird species would be less than significant.

In-water construction activities, particularly pile driving, would also result in underwater sound pressure waves that could affect marine mammals. The locations of most of these activities (e.g., pile and sheetpile driving) are in areas where few marine mammals occur. Marine mammals are expected to avoid areas where pile driving is occurring by moving to other areas within the LA/LB Harbor. However, pile driving that occurs from more than one project concurrently, particularly the proposed Project and Pacific LA Marine Terminal on Pier 400, would reduce the area available for marine mammals to avoid the disturbance. Cumulative impacts to marine mammals from construction related pile driving activities would be significant and unavoidable.

The addition of annual ship vessel calls to the Port as a result of past and planned projects (e.g., Pier 400 Container Terminal [Project 1], Berths 136–147 Marine Terminal [Project 2], Cabrillo Way Marina [Project 5], Pacific LA Marine Terminal

[Project 11], China Shipping Development Project [Project 15], Pasha Marine Terminal Improvements Project [Project 16], Berths 206–209 Interim Container Terminal Reuse Project [Project 17], Berth 302–305 (APL) Container Terminal Improvements Project [Project 23], Berths 212–224 (YTI) Container Terminal Improvements Project [Project 28], Berths 121–131 (Yang Ming) Container Terminal Improvements Project [Project 29], Piers G & J Terminal Redevelopment Project [Project 67], Pier T, TTI Terminal, Phase III [Project 70], Pier S Marine Terminal [Project 71], and Sound Energy Solutions-Pier T, Long Beach Liquefied Natural Gas (LNG) Terminal [Project 73]) has the potential to increase ship strikes. 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 19 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 gray whale population was delisted in 1994.

In Southern California, potential strikes to blue whales are of the most concern due to the migration patterns of blue whales and the established shipping channels. Historically, blue whales normally passed through the Santa Barbara Channel en route from breeding grounds in Mexico to feeding grounds farther north. Blue whales were a target of commercial whaling activities worldwide. In the North Pacific, pre-whaling populations were estimated at approximately 4,900 blue whales. The current population estimate is approximately 3,300 blue whales (NMFS 2008). Along the California coast, blue whale abundance has increased over the past two decades (Calambokidis et al. 1990; Barlow 1994; 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.

Historical data on whale strikes suggest that the vessel speed reduction would significantly reduce the potential for whale strikes because 80% of recorded strikes occurred with ships traveling faster than 12 knots. The Port has in place its Vessel Speed Reduction Program (VSRP), which lowers vessel speeds traveling to the Port to 12 knots from Point Fermin, 40 nautical miles from the Port. Port records show they currently have over 90% participation in the VSRP, thereby reducing potential for present and future increases in whale strikes due to vessel entering the LA/LB Harbor. Nonetheless, operation of many of the past, present, and future projects would result in increased vessel trips to and from the LA/LB Harbor; therefore, the related projects could potentially increase whale mortalities from vessel strikes, which is considered to be a significant and unavoidable cumulative impact.

The Channel Deepening (Project 4), Cabrillo Way Marina (Project 5), Evergreen Improvements (Project 7), Pacific LA Marine Terminal (Project 11), Berths 97–109 (Project 15), Berths 212–214 YTI (Project 28), Berths 121–131 (Project 29), and Middle Harbor (Project 66) projects all include dredging components. Dredging can adversely affect aquatic organisms present in sediments that are being removed if

toxic substances are present in sediments and if those sediments are suspended in the water column during dredge activities or when disposed of at a marine disposal site. Disposal of dredge spoils at designated ocean disposal sites LA-2 or LA-3 would be conducted by only if the dredged material met the permitted volume and quality requirements for these sites. Dredge disposal at these sites was evaluated prior to approval of these sites and was determined to cause insignificant effects on the biological environment (EPA and USACE 2004). Cumulative impacts to other special-status bird species would be less than significant.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As discussed in Section 3.3.4.3.1 (Impact BIO-1), the proposed Project would have less-than-significant impacts, prior to mitigation, on special-status species under CEQA and NEPA with the exception of whales and marine mammals. Although the increased number of vessels attributed to the proposed Project is relatively small, 24 in total annually, the proposed Project's contribution to the cumulative impact of whale strikes would be significant and unavoidable. Additionally, although MM BIO-3 (avoid marine mammals) would reduce the impacts from the proposed Project or Alternatives 1through 4 to less than significant, if pile driving from other projects in the vicinity of the proposed Project were to occur concurrently, a significant and unavoidable cumulative impact would occur as a result of the proposed Project or alternative contribution. 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. Therefore, the contribution of the proposed Project or Alternatives 1, 2, 3 and 4 to Impact BIO-1 would be cumulatively considerable under CEQA or NEPA. Cumulative impacts under Alternative 5 and 6 would be less than significant under CEQA, and there would be no impact for Alternative 5 or 6 under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures MM BIO-1 through MM BIO-6 would reduce the construction impacts to special-status species to less than significant. However, MM BIO-3 (avoid marine mammals) would not eliminate potential cumulative effects from pile driving to marine mammals, and there are no additional feasible mitigation measures to reduce the potential to less than significant; therefore, the potential for the proposed Project to make a cumulatively considerable contribution to a significant cumulative impact related to pile driving construction activities under CEQA or NEPA would remain. Operation of the proposed Project would not significantly affect whales through vessel strikes, and the VSRP has an approximate 90% participation rate, which minimizes the potential for vessel strikes to occur. No other mitigation is available to reduce cumulative impacts related to vessel strikes to below the level of significance; therefore, the potential for operation of the proposed Project or Alternatives 1, 2, 3 and 4 to make a cumulatively considerable contribution to a significant cumulative residual impact related to vessel strikes under CEQA or NEPA would remain. No cumulatively significant impacts

would occur for Alternatives 5 and 6 under CEQA; no NEPA impact would occur for Alternatives 5 and 6.

4.2.3.3 Cumulative Impact BIO-2: The proposed Project would not result in a cumulatively substantial reduction or alteration of a state-, federally, or locally designated natural habitat, special aquatic site, or plant community, including wetlands—less than cumulatively considerable with mitigation.

Cumulative Impact BIO-2 represents the potential of the proposed Project along with other cumulative projects to substantially reduce or alter state, federally, or locally designated natural habitats, special aquatic sites, or plant communities, including wetlands.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Essential fish habitat (EFH) has been and would be lost due to past, present, and future landfill projects in the LA/LB Harbor. EFH protection requirements began in 1996 and therefore only apply to projects since that time. The projects in Table 4-1 that could result in a loss of EFH are Pier 400 (Project 1), Berths 136–147 Marine Terminal (Project 2), Channel Deepening (Project 4), Berths 97–109 (Project 15), Berths 302–305 APL (Project 23), Middle Harbor Terminal redevelopment (Project 66), Piers G & J (Project 67), Pier T (Project 70), and Schuyler Heim Bridge (Project 77). The losses since 1996 are the same, significant but mitigable under CEQA and NEPA, as the marine habitat losses described in Cumulative Impact BIO-5 below, and the use of mitigation bank credits for the latter impacts also offset the losses of EFH. Temporary disturbances within EFH also occur during in-water construction activities from cumulative projects, including Berths 136–147 Marine Terminal [Project 2], Channel Deepening (Project 4), Cabrillo Way Marina Marine (Project 5), Evergreen Improvements (Project 7), Pacific LA Marine Terminal (Project 11), Berths 97–109 (Project 15), Berths 212–214 (Project 25), Berths 121–131 (Project 29), Middle Harbor Terminal Redevelopment (Project 66), Piers G & J (Project 67), Pier T (Project 70), Pier S (Project 71), and Pier T LNG Terminal (Project 73). These temporary disturbances in the LA/LB Harbor occur at specific locations that are scattered in space and time within the LA/LB Harbor. They would not likely reduce or permanently alter EFH within the LA/LB Harbor and therefore would not cause a significant cumulative impact to EFH. Increased vessel traffic and runoff from on-land construction and operations resulting from the cumulative projects would not result in a loss of EFH nor would these activities cumulatively alter or reduce this habitat.

Natural habitats, including special aquatic sites (e.g., eelgrass beds, mudflats, or wetlands), have a limited distribution and abundance in the LA/LB Harbor. The 40-

acre Pier 300 expansion project caused a loss of eelgrass beds that was mitigated. The Southwest Slip Fill-in West Basin completed as part of the Channel Deepening Project (Project 4) resulted in a small loss of saltmarsh that was also mitigated. Prior to agreements to preserve natural habitats such as the 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 LA/LB Harbor waters. Therefore, cumulative impacts of past construction activities to natural habitats are considered significant and unavoidable Impacts to natural habitats as a result of present or future projects would be required to fully mitigate their impacts.

The presence of the San Pedro Breakwater may actually make the shallow water habitat adjacent to the Inner Cabrillo Beach and Cabrillo Beach Youth Camp more suitable for eelgrass growth and survival by reducing wave action and current velocity in this area.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project or Alternatives 1, 2, 3 and 4 would adversely affect the mudflat at Berth 78 by shading this 0.175-acre area under the proposed Ports O'Call promenade. Construction of the rock groin at the inlet to the Salinas de San Pedro salt marsh would result in a permanent loss of 0.07 acre of eelgrass and 0.04 acre of mudflat habitat. There would also be a short-term impact to salt marsh habitat including the 0.25 acre of eelgrass that currently surrounds the island located in the middle of the salt mash that is to be removed as a result of sediment removal and lowering the existing elevation to -4 MLLW under the proposed Project or Alternatives 1, 2, 3, and 4. The proposed Project's contribution is cumulatively significant and unavoidable prior to mitigation. No cumulatively significant impacts would occur for Alternatives 5 and 6 under CEQA; no NEPA impact would occur for Alternatives 5 and 6.

Mitigation Measures and Residual Cumulative Impacts

Cumulative impacts to natural habitats, special aquatic sites, and plant communities would be cumulatively significant when compared to past conditions (i.e. pre-Port). Other projects that are underway or are planned within the LA/LB Harbor complex are not anticipated to affect these resources significantly and would have to fully mitigate any impacts to natural habitats that may occur as would the proposed Project or Alternatives 1, 2, 3, and 4. Eelgrass and mudflat impacts due to rock groin placement and salt marsh enhancement activities would be fully mitigated with implementation of BIO MM-4 (Enhancement and Expansion of the Salinas de San Pedro Salt Marsh) and BIO MM-5 (Implementation of the MMP), as would mudflat impacts at Berth 78. Although short-term significant impacts to eelgrass and mudflat habitat would occur under the proposed Project or Alternatives 1, 2, 3, and 4, with mitigation implementation, present and reasonably foreseeable future projects would not result in additional significant cumulative impacts related to the loss to natural

habitats and EFH (i.e., no contribution to a cumulatively significant impact). No cumulatively significant impacts would occur for Alternatives 5 and 6 under CEQA; no NEPA impact would occur for Alternatives 5 and 6.

4.2.3.4 Cumulative Impact BIO-3: The proposed Project would not cumulatively interfere with wildlife movement/migration corridors that may diminish the chances for long-term survival of a species—no cumulative impact.

Cumulative Impact BIO-3 represents the potential of the proposed Project along with other cumulative projects to interfere with wildlife migration or movement corridors.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

No known terrestrial wildlife or aquatic species migration corridors are present in the LA/LB Harbor. Migratory birds pass through the LA/LB Harbor area, and some such as the California least tern rest or breed in this area, but aerial migration has not been impeded nor would it be by LA/LB Harbor construction. Past, present, and reasonably foreseeable future projects in the LA/LB Harbor would not interfere with movement of these species because the birds are agile and would avoid obstructions caused by equipment and structures. Some species of fish move into and out of the LA/LB Harbor during different parts of their life cycle or seasonally, but no identifiable corridors for this movement are known. Marine mammals migrate along the coast, and vessel traffic associated with the cumulative projects could interfere with their migration. However, because the area in which the marine mammals can migrate is large and the cargo vessels and cruise ships generally use designated travel lanes, the probability of interference with migrations is low.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project or alternatives would not affect any migration or movement corridors in the LA/LB Harbor or along the coast. Consequently, it would not contribute a cumulatively considerable impact on wildlife migration or movement corridors under CEQA or NEPA.

As discussed in Section 3.3.4.3, the proposed Project or Alternative 1 through 4 would only interfere with fish and wildlife movement or migration through temporary avoidance of construction noise and activity. Avoidance would be short term and temporary and would not constitute a significant impact. No migration corridors would be blocked.

Mitigation Measures and Residual Cumulative Impacts

No mitigation is required, and no cumulative residual impacts to migration corridors would result from the proposed Project or Alternatives 1 through 6 (no NEPA impact for Alternatives 5 and 6).

4.2.3.5 Cumulative Impact BIO-4: The proposed Project would result in cumulatively substantial disruptions of local biological communities—cumulatively considerable and unavoidable.

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

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Dredging and Wharf Work

Construction of past projects in the LA/LB Harbor has involved in-water disturbances such as dredging and wharf construction that removed surface layers of soft bottom habitat as well as 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 affected habitats. Because these activities affected a small portion of the LA/LB Harbor at a time and recovery has occurred or is in progress, biological communities in the LA/LB Harbor are not persistently subjected to construction and alteration. Similar construction activities (e.g., wharf construction/reconstruction and dredging) would occur for these cumulative projects that are currently underway and for some of those that would be constructed in the future: Berths 134–147 Marine Terminal (Project 2), Channel Deepening (Project 4), Cabrillo Way Marina (Project 5), Evergreen Improvements (Project 7), Pacific LA Marine Terminal (Project 11), Berths 97–109 (Project 15), Berths 212–214 (Project 25), Berths 121–131 (Project 29), Middle Harbor Terminal Redevelopment (Project 66), Piers G & J (Project 67), Pier T (Project 70), Pier S (Project 71), and Pier T LNG Terminal (Project 73). 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 LA/LB Harbor would not substantially disrupt benthic communities from current conditions. Construction disturbances at specific locations in the water and at different times that are caused by the cumulative projects, which can cause fish and marine mammals to avoid the work area, are not expected to substantially alter the distribution and abundance of these organisms in the LA/LB 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 LA/LB Harbor and are of limited duration for each project. Those projects that are occurring at the same time but which are not in close proximity would thus not have additive effects.

Furthermore, based on biological baseline studies described in Section 3.3, the benthic marine resources of the LA/LB 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 LAHD dredged most of the Inner Harbor channels and basins from -45 ft to -53 ft (Channel Deepening Project [Project 4]). In addition, additional Channel Deepening dredging may be occurring in late 2008 and 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 to disturb adjacent habitats in the LA/LB Harbor. The projects from Table 4-1 involving landfill construction are Pier 400 (Project 1), Channel Deepening (Project 4), Berths 97–109 (Project 15), Berths 302–305 APL (Project 23), Middle Harbor Terminal redevelopment (Project 66), Piers G & J (Project 67), and Pier T (Project 70). 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 LA/LB Harbor has decreased, a large amount remains, and the biological communities present in the remaining LA/LB 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 LA/LB Harbor waters at some locations during past project construction, particularly for projects implemented prior to the 1970s when environmental regulations were promulgated. The past projects included Pier 300, Pier J, and the remaining terminal land areas within the LA/LB 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 listed is ultimately to the LA/LB 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 LA/LB 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 LA/LB 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 LA/LB 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 LA/LB 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 LA/LB 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 (Project 2), Channel Deepening (Project 4), Evergreen Expansion (Project 7), SSA Outer Harbor Fruit Facility Relocation (Project 9), Crescent Warehouse Company Relocation (Project 10), Ultramar (Project 12), Berths 97–109 (Project 15), Berths 171–181 (Project 16), Berths 206–209 (Project 17), South Wilmington Grade Separation (Project 24), Avalon Boulevard Corridor Project (Project 25), "C" Street/Figueroa Street Interchange (Project 26), Port Transportation Master Plan (Project 27), Berths 212–224 (Project 28), Berths 121–131 (Project 29), Banning Elementary School #1

(Project 55), East Wilmington Greenbelt Community Center (Project 56), Pier A West Remediation (Project 68), Pier A East (Project 69), and Schuyler Heim Bridge Replacement (Project 77). Based on this, past, present, and reasonably foreseeable future projects would not result in significant cumulative biological resource impacts related to upland development within the geographical scope.

Vessel Traffic

Cumulative marine terminal projects (e.g., Berths 136–147 Marine Terminal [Project 2], Channel Deepening [Project 4], Evergreen Improvements [Project 7], Pacific LA Marine Terminal [Project 11], Ultramar [Project 12], China Shipping [Project 15], LAXT Crude Oil [Project 18], YTI [Project 28], Yang Ming [Project 29], Middle Harbor [Project 66], Piers G & J [Project 67], Pier T TTI [Project 70], and Pier S [Project 71]) that involve vessel transport of cargo into and out of the LA/LB Harbor have increased vessel traffic in the past and would continue to do so in the future. These vessels have introduced invasive exotic species into the LA/LB 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, and 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 LA/LB Harbor, there is no evidence that these species have disrupted the biological communities in the LA/LB Harbor. Biological baseline studies conducted in the LA/LB 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 vessel hulls, it is possible that additional invasive exotic species could become established in the LA/LB Harbor over time, even with these control measures. This represents a significant cumulative impact from past, present, and reasonably foreseeable future projects.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

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. The greatest changes associated with the proposed Project or alternatives to local marine biological communities would be to increase shade of intertidal and LA/LB harbor edges from construction of new overwater structures. These changes would not, however, alter the general character of Inner Harbor channel habitat and associated communities from the existing condition.

Permanent impacts to 0.175-acre mudflat habitat at Berth 78–Ports O'Call associated with the proposed Project or alternatives would contribute to the significant impact resulting from overall loss of this habitat from past projects that were implemented prior to mitigation requirements. Impacts from the Salinas de San Pedro expansion and enhancement activities intended to restore tidal flushing and improve habitat conditions would result in permanent coverage of 0.07 acre of eelgrass and 0.04 acre

of mudflat habitat (rock groin placement) would result in a significant contribution to a cumulatively significant impact for the proposed Project or Alternatives 1 through 4. Temporary loss of 0.25 acre of eelgrass and salt marsh habitat functions from construction expansion and enhancement activities within the mudflat and salt marsh area are expected and would result in a temporary significant and unavoidable impact under both CEQA and NEPA for the proposed Project or Alternatives 1 through 4. No cumulatively significant impacts would occur for Alternatives 5 and 6 under CEQA; no NEPA impact would occur for Alternatives 5 and 6.

The proposed Project or alternatives would increase cruise ship vessel traffic, but these vessels have less of an impact from exchange of ballast water than from cargo vessels. Nevertheless, the increased vessel traffic from cruise ships associated with the proposed Project or Alternatives 1 through 4 would contribute a cumulatively significant impact related to introduction of exotic species from ballast water. No cumulatively significant impacts would occur for Alternatives 5 or 6 under CEQA; no NEPA impact would occur for Alternatives 5 and 6.

Mitigation Measures and Residual Cumulative Impacts

Impacts to mudflat habitat at Berth 78–Ports O'Call and the inlet to the Salinas de San Pedro salt marsh and eelgrass would be mitigated by implementation of MM BIO-4 and MM BIO-5, as would temporary impacts to the 0.25 acre eelgrass habitat located within the salt marsh. Impacts from the promenade and wharf construction would be mitigated through implementation of MM BIO-1. The release of contaminated sediments during dredging would be mitigated via Mitigation Measure MM BIO-6. With implementation of mitigation, construction impacts resulting from the proposed Project or Alternatives 1 through 4 would not be cumulatively considerable for CEQA or NEPA. However, operation of the proposed Project or Alternatives 1 through 4 has the potential to introduce invasive marine species into the LA/LB Harbor through minor ballast water exchanges that could occur, or through attachment to ship hulls or equipment. No feasible mitigation is currently available to totally prevent introductions of invasive species via vessel hulls, equipment, or ballast water due to the lack of a proven technology. Therefore, impacts would be cumulatively considerable for the proposed Project or Alternatives 1 through 4. No cumulatively significant impacts would occur for Alternatives 5 or 6 under CEQA; no NEPA impact would occur for Alternatives 5 and 6.

4.2.3.6 Cumulative Impact BIO-5: The proposed Project would not result in a cumulatively considerable permanent loss of marine habitat—less than cumulatively considerable

Cumulative Impact BIO-5 represents the potential of the proposed Project along with other cumulative projects to result in a permanent loss of marine habitat.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Numerous landfill projects have been implemented in the LA/LB Harbor since the LA/LB Harbor 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 LA/LB Harbor (Pier 400 [Project 1] and Channel Deepening [Project 4]), another 75 acres are in the process of being filled (Piers G & J [Project 67] and Pier T [Project 70]), and future planned landfills (without the proposed Project) total about 65 acres (Channel Deepening [Project 4], Berths 97–109 [Project 15], and Middle Harbor Terminal Redevelopment [Project 66]). Thus, well over 700 acres of marine habitat have been or will be lost in the LA/LB Harbor. Losses of marine habitat prior to implementation of the agreements among LAHD, the Port of Long Beach, and regulatory agencies (City of Los Angeles et al. 1984, 1997) were not mitigated. Losses since that time have been 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 due to 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 due to present and reasonably foreseeable future projects has 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.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project would create 6.8 acres of marine habitat in the Inner Harbor. This could add 3.4 mitigation credits to the Inner Harbor mitigation bank because Inner Harbor marine habitat is credited at 0.5 credits per acre. Alternatives 1 through 4, which also include harbor cuts, could also add mitigation credits to the Inner Harbor mitigation Bank. Inner Harbor mitigation bank credits are used to offset aquatic losses associated with Port projects, such as those listed in Table 4-1. Because the proposed Project or Alternatives 1 through 4 would create open water marine habitat, additional losses of marine habitat relative to the cumulatively significant context are not expected from any of these scenarios (Alternatives 5 and 6 would not impact open water or result in NEPA impacts).

Mitigation Measures and Residual Cumulative Impacts

Since the proposed Project or Alternatives 1 through 4 would create open water marine habitat, no mitigation would be required (neither Alternative 5 nor Alternative 6 would impact marine habitat). All Port projects that would result in a permanent loss of marine habitat would be required to fully mitigate these losses either through use of the Port Inner and Outer Harbor mitigation credits or through creation of additional open water. Therefore, there would be no residual cumulative impacts from the proposed Project or any of the alternatives.

4.2.4 Cultural, Archaeological, and Paleontological Resources

4.2.4.1 Scope of Analysis

The geographic region of analysis for cumulative effects on cultural, archaeological, historical architectural, and paleontological resources related to Port projects consists of the areas at the Port and in the immediate vicinity on natural landforms (i.e., excluding modern built land in the Port), and under CEQA and NEPA in water where there may be submerged prehistoric remains or where there is evidence that historical maritime activity occurred. Thus, past, present, and reasonably foreseeable future development that would contribute to cumulative impacts on archaeological resources under CEQA and NEPA includes projects that would have the potential for ground disturbance in this region of analysis. Those projects on land that have the potential to modify or demolish structures over 50 years of age have the potential under CEQA and NEPA to contribute to cumulative impacts on historical architectural resources. Projects that involve grading of intact, natural landforms (i.e., not modern built land areas) have the potential under CEQA to contribute to cumulative impacts on paleontological resources.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.4. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.4.2 Cumulative Impact CR-1: The proposed Project would result in cumulatively considerable impacts by disturbing, damaging, or degrading known prehistoric and historic archaeological resources—cumulatively considerable and unavoidable.

Cumulative Impact CR-1 represents the potential of the proposed Project or alternative along with other projects to disturb, damage, or degrade listed, eligible, or otherwise unique or important known archaeological resources.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Archaeologists estimate that projects within urban areas, including the proposed project vicinity, have destroyed over 80% of all prehistoric sites without conducting systematic data collection. Most of this destruction took place prior to modern legal requirements for site protection or mitigation, such as CEQA or Section 106 of the National Historic Preservation Act. Prehistoric sites are non-renewable resources, and the cumulative impacts of the destruction of these sites are significant. Destructive projects have eliminated our ability to study sites that could have yielded important prehistoric information. As a result, the vast majority of the prehistoric record is lost.

Construction activities (i.e., excavation, dredging, and land filling) associated with present and reasonably foreseeable future projects, including the Pier 400 Container Terminal Project (Project 1), Channel Deepening Project (Project 4), Cabrillo Way Marina (Project 5), Artificial Reef, San Pedro Breakwater (Project 6), Consolidated Slip Restoration (Project 14), Berths 97–109 Container Terminal Project (Project 15), Southern California International Gateway (Project 19), and Berths 212–224 Container Terminal Improvements (Project 28) would potentially require excavation. These activities, however, would be in areas of historical estuary habitats and recently built land, and therefore would not be within the landforms inhabited by Native American populations.

Although much of the area has been previously disturbed, there is the potential for areas of the project and other related upland Port projects on the periphery of the Port, including the San Pedro Waterfront Enhancements Project, (Project 21), South Wilmington Grade Separation (Project 24), Avalon Boulevard Corridor Development (Project 25), and "C" Street/Figueroa Street Interchange (Project 26) I-110 / SR 47 Connector Improvement Program (Project 31), on or adjacent to natural landforms to disturb unknown, intact subsurface prehistoric or historic archaeological resources. Reasonably foreseeable future projects within upland areas, such as San Pedro (Projects 42, 43, 45, 48, 49, 50, 51, 52, 53, and 54); Wilmington (Projects 55, 57, and 58); Harbor City, Lomita, and Torrance (Projects 59, 61, 62, 63, 64, and 65); and Long Beach (Projects 80, 81, and 82) would also potentially contribute to this impact. Therefore, the impacts of each of these projects would result in significant cumulative impacts.

Contribution of the Proposed Project (Prior to Mitigation)

Two archaeological resources, CA-LAN-146 and a historical site known as "Mexican Hollywood" have been recorded within the CEQA proposed project area. Construction of the proposed Project or Alternatives 1 through 5 would potentially damage or destroy these sites. Therefore, construction of the project would have significant cumulative impacts on archaeological resources for the purposes of CEQA.

CA- LAN-146 is a shell midden located approximately 200 feet north of Berth 93. Intact, undiscovered deposits associated with CA- LAN-146 could be exposed and damaged during project activities or during construction activities associated with the proposed Project or Alternatives 1 through 5. The possibility of adverse impacts is an incremental effect which would be cumulatively considerable when combined with the impacts of past, present, and reasonably foreseeable projects.

Mexican Hollywood is a historic neighborhood located in the vicinity of the Inner Harbor, between Berths 90 and 93. "El Barrio" or "Mexican Hollywood," as it came to be known, existed on a 5-acre parcel now occupied by the Cruise Center on the main channel of the harbor, just north of O'Farrell Street. An intact deposit associated with this site was identified within the proposed project area (Shaver 2004). Construction of the proposed Project would result in significant impacts that would damage or destroy Mexican Hollywood. This site appears to be eligible for listing in the CRHR. This resource has also been recorded within the federal APE. This historic neighborhood could be disturbed by construction associated with the Inner Harbor Parking Structure, which is an indirect impact under federal jurisdiction. Construction of the proposed Project would result in significant impacts that would damage or destroy Mexican Hollywood. Therefore, the proposed Project would result in significant cumulative impacts on known archaeological resources for the purposes of NEPA.

Two additional archaeological sites, CA-LAN-145 and CA-LAN-1129H, are recorded near the proposed project area. Site CA-LAN-1129H has been demolished. Intact deposits associated with site CA-LAN-145 could be exposed and damaged during proposed project activities or construction associated with Alternatives 1, 2, 3, 4, and 5. The possibility of adverse impacts to site CA-LAN-145 is an incremental effect which would be cumulatively considerable when combined with the impacts of past, present, and reasonably foreseeable projects.

Contribution of the Alternatives

Under CR-1, construction of Alternatives 1 through 5 would potentially result in damage or destruction of Mexican Hollywood. Therefore, the cumulative impact of the Alternatives 1 through 5 would be a cumulatively considerable contribution under CEQA.

For the purposes of NEPA, Alternatives 1 through 4 would potentially result in damage or destruction of Mexican Hollywood. Construction of these alternatives would result in significant cumulative impacts on known archaeological resources.

Alternative 5 is the No Federal Action alternative, and as such would not contribute to a cumulative significant impact under NEPA. Alternative 6 is the No-Project Alternative and as such would not contribute to a cumulative significant impact under NEPA or CEQA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation Measure MM CR-1, as described in Section 3.4.4.3.1, requires the proposed Project to generate a treatment plan and conduct archaeological testing for Mexican Hollywood prior to construction. If Mexican Hollywood is determined eligible for listing in the CRHR or NRHP, implementation of Mitigation Measures MM CR-2a and/or MM CR-2b would reduce impacts to less-than-significant levels.

Mitigation Measure MM CR-2 requires data recovery if additional CRHR/NRHP-eligible deposits associated with Mexican Hollywood are identified (MM CR-2b), or that Mexican Hollywood be preserved and protected in place (MM CR-2a).

Mitigation Measure MM CR-3 provides that archaeological and Native American monitoring will be conducted during ground disturbing activities within the vicinity of CA-LAN-145 and CA-LAN-146. The archaeological monitor would ensure that any portions of previously identified significant resources exposed during construction are avoided and protected.

While MM CR-1 through MM CR-3 would reduce impacts to known prehistoric or historical archaeological sites, there remains a significant cumulative impact after the mitigation measures described above are implemented.

4.2.4.3 Cumulative Impact CR-2: The proposed Project would result in cumulatively considerable impacts by disturbing, damaging, or degrading unknown archaeological and ethnographic cultural resources—cumulatively considerable and unavoidable.

Cumulative Impact CR-2 represents the potential of the proposed Project along with other projects to disturb, damage, or degrade listed, eligible, or otherwise unique or important unknown archaeological or ethnographic resources.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Impacts of past, present, and reasonably foreseeable future projects for Cumulative Impact CR-2 are the same as those described above for Cumulative Impact CR-1.

Contribution of the Proposed Project (Prior to Mitigation)

Much of the San Pedro Waterfront Project area is located on historic fill, where resources have been mapped over time, and the probability of encountering any

additional intact, unknown historic resources is low in these fill areas. However, the proposed Project at its peripheries would impact intact natural landforms where prehistoric occupation could have occurred. Given previous disturbance, there is a low likelihood of disturbing, damaging, or degrading unknown prehistoric remains or ethnographic resources considered significant to contemporary Native Americans prior to mitigation in the proposed project area. However, the remote possibility of an adverse impact is an incremental effect that would be cumulatively considerable when combined with the impacts of past, present, and reasonably foreseeable future projects. The cumulative impact of the proposed Project would be significant, and the proposed Project would have a cumulatively considerable contribution under CEQA and NEPA.

Contribution of the Alternatives

Alternatives 1 through 4 are construction alternatives, and the cumulative impact for these alternatives under CEQA are the same as those described for the proposed Project. Alternatives 1 through 4 involve federal action and could have a cumulative significant impact under NEPA. Alternative 5 is the No Federal Action alternative, and as such would not contribute to a cumulative significant impact under NEPA and reduced cumulative impacts under CEQA. Alternative 6 is the No-Project Alternative and as such would not contribute to a cumulative significant impact under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation Measure MM CR-4 requires the proposed Project to stop work if cultural resources are discovered during ground-disturbing activities. However, even with application of this mitigation effort and the extent of previous soil disturbances throughout much of the proposed project area, the incremental contribution of the proposed Project to cumulative impacts on archaeological and ethnographic resources cannot be eliminated. Mitigation of an archaeological resource that is encountered during construction must be done expeditiously, resulting in the ability to collect or salvage only enough information to characterize the nature of the find. As with any non-renewable archaeological site, it is impossible to retain all information that is represented in a given assemblage of prehistoric site remains. Similarly, the destruction of any archaeological site, regardless of its condition (i.e., previously disturbed or intact) represents a loss of heritage values to contemporary Native Americans. Therefore, the contribution of the proposed Project or Alternatives 1 through 5 would be cumulatively considerable and unavoidable with mitigation under CEQA, and the proposed Project or Alternatives 1 through 4 would be cumulatively considerable and unavoidable with mitigation under NEPA.

4.2.4.4 Cumulative Impact CR-3: The proposed Project would not result in a cumulatively substantial adverse change in the significance of a historical

resource, involving demolition, relocation, conversion, rehabilitation, alteration, or other construction that reduces the integrity or significance of important resources on the site or in the vicinity—less than cumulatively considerable.

Cumulative Impact CR-3 represents the potential of the proposed Project along with other cumulative 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects within urban areas including the proposed project vicinity 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 45 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; may have been associated with the lives of persons significant in the past; 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 projects requiring removal of significant or potentially significant historical architectural resources (i.e., demolition of structures over 45 years of age) include the Pan-Pacific Fisheries Cannery Buildings Demolition Project (Project 20) and Canner's Steam Demolition Project (Project 7), the Port of Los Angeles Administration Building Replacement Project (Project 72), the 1437 Lomita Boulevard Condominiums project (Project 59), the Southwest Marine Demolition Project (Project 30), and the Channel Deepening Project (Project 4). Impacts would be cumulatively significant with respect to historical architectural resources.

The former Southwest Marine Shipyard facility, which includes Berths 243–245, contains structures which have been evaluated as NRHP eligible. A portion of the total facility, the Southwest Marine Historic District (former Bethlehem Shipyard facility), was found eligible for listing in the National Register of Historic Places in 2006 as the last remaining example of a highly significant World War II shipbuilding facility (LAHD 2006). As reported in Section 3.4-12 of the Southwest Marine Buildings Demolition Project EIR, "numerous buildings that are proposed for demolition were found to be contributing buildings to the National Register eligible district." This would result in a significant historic impact and contributes to significant cumulative impacts.

As part of the proposed Channel Deepening Project, four Colby cranes that are contributing elements of the Southwest Marine Historic District would be relocated.

Demolition or damage to these cranes could result in adverse effects to potentially significant historic resources. However, these cranes are mobile structures and would be relocated within the historic district boundary. Because the cranes would not be damaged or destroyed, their relocation would not have a significant effect on the historic district and would not contribute to the overall significant cumulative impacts.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As documented in Section 3.4, one historic district and seven individual properties are located in the federal APE or determined eligible for the NRHP, the California Register, and the Los Angeles Historic-Cultural Monument List within the proposed project area. Impacts associated with the proposed Project or alternatives to these properties would either not occur or be less than significant. There are 13 properties that are determined eligible for the California Register and/or are Los Angeles City Historic Cultural Monuments. However, it was determined either no impact or less-than-significant impacts would occur to these properties as a result of the proposed Project or alternatives. There are 12 properties that have either been determined significant by the lead agency or have been determined to be significant in a historical resources survey. Impacts to these properties associated with the proposed Project would either not occur or be less than significant. Therefore, neither the proposed Project nor an alternative would contribute to any cumulatively significant impacts to these resources under CEQA or NEPA.

Significant cumulative impacts on the Southwest Marine Historic District would result from the Southwest Marine Demolition Project. The Channel Deepening Project would relocate four Colby Cranes within the historic district, which would not contribute to the overall significant cumulative impact.

Construction of the new Berth 240 Fueling Station would also occur within the Southwest Marine Historic District. This facility consists of one 120,000 gallon sulfur diesel tank, one 50,400 gallon biodiesel tank, and one 6,000 gallon gas tank. Waterside construction would include approximately 6,400 square feet of new floating docks to be supported by 46 new piles. The proposed fueling station would be compatible with the historic district's industrial character. New tanks, equipment, and infrastructure would be built on the site for the proposed fueling station. The Compressor Building, a non-contributing building within the district boundaries, would be demolished. With respect to viewshed impacts, the proposed fueling station equipment and infrastructure would be low in profile and would not block views to any district contributors. Tanks would be located west of the contributing Administration Building where public views from Ports O'Call are currently blocked by the existing Exxon Mobil site. The tanks would not block public views to the Administration Building from Ports O'Call east of the Exxon Mobil site. There would be no viewshed impacts to the historic district buildings.

Because there would be no demolition of contributing elements and no visual impacts on the historic district, there would not be a significant effect on the historic district, and it would not contribute to the overall significant cumulative impacts.

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternatives would be less than cumulatively considerable under CEQA and NEPA.

4.2.4.5 Cumulative Impact CR-4: The proposed Project would not result in cumulatively considerable impacts through the permanent loss of or loss of access to a paleontological resource of regional or statewide significance—less than cumulatively considerable with mitigation.

Cumulative Impact CR-4 represents the potential of the proposed Project along with other cumulative projects to result in the permanent loss of, or loss of access to, a paleontological resource of regional or statewide significance.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The number and percentage of significant paleontological resources in the proposed project vicinity destroyed by past and present projects is difficult to determine. 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. There is the potential 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 reasonable to expect that past excavation and construction projects have resulted in a 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 projects, including the Pier 400 Container Terminal Project (Project 1), Channel Deepening Project (Project 4), Cabrillo Way Marina (Project 5), Artificial Reef, San Pedro Breakwater (Project 6), Consolidated Slip Restoration (Project 14), Berths 97–109 Container Terminal Project (Project 15), Southern California International Gateway (Project 19), and Berths 212–224 Container Terminal Improvements (Project 28) would potentially require excavation. Construction activities associated with these projects would be on built land that would

not contain natural fossil deposits, or in areas of historical estuaries containing sediments dating from recent geologic time (i.e., the last 10,000 years), after the time period when fossil materials would develop. Therefore, these projects would be located within areas that do not encompass potentially significant 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, (Project 21), South Wilmington Grade Separation (Project 24), Avalon Boulevard Corridor Development (Project 25), and "C" Street/Figueroa Street Interchange (Project 26) I-110 / SR 47 Connector Improvement Program (Project 31) to disturb unknown paleontological resources. Reasonably foreseeable future projects within upland areas that may affect paleontological resources include those in San Pedro (Projects 42, 43, 45, 48, 49, 50, 51, 52, 53, and 54); Wilmington (Projects 55, 57, and 58); Harbor City, Lomita, and Torrance (Projects 59, 61, 62, #3, 64, and 65); and Long Beach (Projects 80, 81, and 82). 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.

Contribution of the Proposed Project (Prior to Mitigation)

Except in the East and West Channels, where construction-related excavations would be confined to areas underlain by artificial fill materials, the proposed Project would disturb ground within areas of high paleontological sensitivity on the upland bluffs west of Harbor Boulevard, or in deep excavations below filled or disturbed areas. This potential disturbance to paleontological resources by the proposed Project would be significant, prior to mitigation. Therefore, the incremental effect of the proposed Project on paleontological resources prior to mitigation would be cumulatively considerable under CEQA when considered in conjunction with past projects and related present and future projects outside of the jurisdiction of LAHD.

Contribution of the Alternatives

Alternatives 1 through 3 are construction alternatives, and the cumulative impact for these alternatives are the same as those described for the proposed Project, and prior to mitigation would be cumulatively considerable under CEQA. Alternative 4 would have reduced affects in comparison to the proposed Project because it would not create the North Harbor. Alternative 5 is the No-Federal Action alternative, and as such would have reduced cumulative impacts under CEQA and would not contribute to a cumulative significant impact under NEPA. Alternative 6 is the No-Project Alternative and as such would not contribute to a cumulative significant impact.

There would be no cumulative incremental effect under NEPA under the proposed Project or Alternatives 1 through 4.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure MM CR-5 would reduce the cumulative impacts of the proposed Project or alternatives. Under Mitigation Measure MM CR-5, a program would be developed by a qualified vertebrate paleontologist to monitor for non-renewable paleontological resources during initial ground disturbance in sensitive area (i.e., 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 or alternatives' individual contribution to cumulative impacts. Therefore, with implementation of Mitigation Measure MM CR-5, the proposed Project or alternatives would not contribute to significant cumulative impacts to paleontological resources.

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 (Impact GEO-1) is the LA/LB Harbor area, San Pedro, and Wilmington communities because an earthquake capable of creating substantial damage or injury 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 tsunamis (Impact GEO-2) is the area of potential inundation due to a large tsunami, which could extend throughout the low-lying coastal areas of Los Angeles and Orange counties. The geographic scope with respect to subsidence/settlement (Impact GEO-3), expansive soils (Impact GEO-4), and unstable soil conditions (Impact GEO-6) would be confined to the proposed project area because these impacts are site-specific and relate primarily to construction techniques. The geographic scope with respect to landslides and mudflows (Impact GEO-5) and prominent geologic and topographic features (Impact GEO-7) would be confined to the proposed project area; however, the Port area is generally flat and not subject to slope instability. Modification or destruction of topography or prominent geologic features would not occur because the Port complex contains no unique geologic or topographic features. The geographic scope with respect to mineral resources (Impact GEO-8) is the Wilmington Oil Field, which traverses the northern portion of the proposed project area and extends to the northwest and southeast, as mineral resource impacts relate primarily to potential loss of petroleum reserves in the Wilmington Oil Field.

Past, present, and reasonably foreseeable future developments that could contribute to cumulative impacts associated with geologic resources, under both CEQA and NEPA, are those that involve the addition of new land area, infrastructure, and

personnel that would be subject to earthquakes and tsunamis, or would preclude additional development of the Wilmington Oil Field.

All projects located in and surrounding the Port of Los Angeles and Port of Long Beach 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 cumulative projects listed in Table 4-1, with the exception of projects that do not involve existing or proposed structural engineering or onsite personnel, such as the Channel Deepening Project and the Artificial Reef Project.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.5.4.2, and for both the CEQA and NEPA analyses.

4.2.5.2 Cumulative Impact GEO-1: The proposed Project would result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury from 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 along with other cumulative projects places structures and/or infrastructure in danger of substantial damage or exposes 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 50 earthquakes of magnitude 6.0 or greater since 1796. Earthquakes of magnitude 7.8 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 Los Angeles Harbor area, where the Palos Verdes Fault is present and hydraulic fill and alluvial deposits are pervasive. Also noteworthy, due to its proximity to the site, is the Newport-Inglewood Fault, which was the source of the 1933 Long Beach magnitude 6.4 earthquake. 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 ground shaking 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.

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 Los Angeles 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 LA/LB Harbor area (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. Therefore, these developments have had the effect of increasing the potential for seismic ground shaking to result in damage to people and property.

All of the present and reasonably foreseeable future projects listed in Table 4-1, with the exception of the Channel Deepening Project (Project 4) and the Artificial Reef Project (Project 6), would also result in increased infrastructure, structures, and number of people working on site in the cumulative geographic scope. The Channel Deepening Project (Project 4) and the Artificial Reef Project (Project 6) would not contribute to this impact because they do not involve existing or proposed structures that would result in greater exposure to seismically induced ground failure. The cumulative projects other than Channel Deepening and the Artificial Reef Project would expose new workers to these hazards and therefore, are considered a significant cumulative impact.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As discussed in section 3.5.4.3, the proposed Project or Alternatives 1 through 5 would result in significant impacts relative to Impact GEO-1, even with incorporation of modern construction engineering and safety standards. 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. The proposed Project or alternatives would not increase the risk of seismic ground shaking, but they would (with the exception of Alternative 6) contribute to the potential for seismically induced fault rupture and/or ground shaking to result in injury to people and damage to structures because they would increase the amount of structures and people

working at the Port. Because no new development would occur under Alternative 6, this alternative would not result in or expose people to increased risk of injury or damage to structures as a result of fault rupture and/or ground shaking. The impact of the proposed Project or alternatives would be cumulatively considerable under both CEQA and NEPA, except there would be no NEPA impact for Alternatives 5 and 6.

Mitigation Measures and Residual Cumulative Impacts

LAHD uses 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 that 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 or alternatives would result in a cumulatively considerable and unavoidable impact under CEQA and NEPA, except there would be no NEPA impact for Alternatives 5 and 6.

4.2.5.3 Cumulative Impact GEO-2: Construction of the proposed Project would result in substantial damage to structures or infrastructure, or expose people to substantial risk involving tsunamis or seiches—cumulatively considerable and unavoidable.

Cumulative Impact GEO-2 addresses the degree to which the proposed Project, along with other cumulative projects, exposes people and structures to substantial risk from local or distant tsunamis or seiches.

Tsunamis are a relatively common natural hazard, although most of the events are small in amplitude and not particularly damaging. As has been shown historically, the potential loss of human life following a tsunami or seiche can be great if a large submarine earthquake or landslide occurs in a populated area. As discussed in Chapter 3.5.2.1.4, abrupt sea level changes associated with tsunamis in the past had a great impact on human life. Tsunamis also have reportedly caused damage to moored vessels within the outer portions of the Los Angeles Harbor.

For onsite personnel, the risk of tsunami or seiches is a part of any ocean-shore interface, and therefore personnel working in the cumulative effects area cannot avoid some risk of exposure. Similarly, berth infrastructure, cargo/containers, and tanker vessels would be subject to some risk of damage as well. Designing new facilities based on existing building codes may not prevent substantial damage to structures from coastal flooding.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects would not change the risk of tsunamis or seiches. However, past projects have resulted in the backfilling of natural drainages and creation of new low-lying land areas, which are subject to inundation by tsunamis or seiches. In addition, past development has increased the amount of infrastructure, structural improvements, and the number of people working onsite in the LA/LB Harbor area. This past development has placed commercial and industrial structures and their occupants in areas that are susceptible to tsunamis and seiches. Thus, these developments have had the effect of increasing the potential for tsunamis and seiches to result in damage to people and property.

All of the present and reasonably foreseeable future projects listed in Table 4-1, with the exception of the Channel Deepening Project (Project 4) and the Artificial Reef Project (Project 6), would also result in increased infrastructure, structures, and number of people working on site in the cumulative geographic scope. The Channel Deepening Project (Project 4) and the Artificial Reef Project (Project 6) would not contribute to this impact because they do not involve existing or proposed structures that would result in greater exposure to tsunamis. The cumulative projects other than Channel Deepening and the Artificial Reef Project would expose new workers to these hazards and therefore are considered a significant cumulative impact.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The LA/LB Harbor complex model indicates that a reasonable maximum source for future tsunami events at the proposed project site would either be a moment magnitude 7.6 earthquake on the Catalina Fault or a submerged landslide along the nearby Palos Verdes Peninsula. The model predicts maximum tsunami wave heights in the Port area of approximately 5.2 feet to 6.6 feet above MSL for the earthquake scenario and approximately 7.2 feet to 23.0 feet above MSL for the landslide scenario. The highest anticipated water levels from the landslide scenario would occur in the Outer Harbor area. Based on the lowest deck elevations, tsunami-induced flooding could occur in the proposed project area under both the earthquake and landslide scenarios, particularly in the area of the West Channel where deck elevations are the lowest. Additionally, the modeled landslide scenario could result in localized overtopping of the existing deck in the proposed project area.

The modeled worst-case tsunami scenario was based partially on a magnitude 7.6 earthquake on the offshore Catalina Fault. The recurrence interval for a magnitude 7.5 earthquake along an offshore fault in southern California is about 10,000 years. Similarly, the recurrence interval of a magnitude 7.0 earthquake is about 5,000 years, and the recurrence interval of a magnitude 6.0 earthquake is about 500 years. However, there is no certainty that any of these earthquake events would result in a tsunami, since only about 10% of earthquakes worldwide result in a tsunami. In addition, available evidence indicates that tsunamis generated by landslides would be

extremely infrequent and occur less often than large earthquakes. This suggests recurrence intervals for such landslide events would be longer than the 10,000-year recurrence interval estimated for a magnitude 7.5 earthquake (Moffatt and Nichol 2007).

The additional infrastructure, structural improvements, and onsite personnel associated with the proposed Project or alternatives (with the exception of Alternative 6) would contribute to the potential for damage to infrastructure and harm to people. Because no new development would occur under Alternative 6, this alternative would not result in or expose people to increased risk of injury or damage to structures as a result of tsunami hazard. The individually significant impact of the proposed Project or alternative would be cumulatively considerable under both CEQA and NEPA, except there would be no NEPA impact for Alternatives 5 and 6.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure MM GEO-1 (Emergency Response Planning) would reduce impacts from the proposed Project or alternatives. However, even with incorporation of emergency planning, substantial damage and/or injury would potentially occur in the event of a tsunami or seiche. No mitigation is available that would reduce impacts to less than cumulatively significant, or the contribution of the proposed Project or alternative to less than cumulatively considerable, in the event of a major tsunami. Therefore, the proposed Project or alternative would contribute to a cumulatively considerable and unavoidable impact, except there would be no NEPA impact for Alternatives 5 and 6.

4.2.5.4 Cumulative Impact GEO-3: Construction of the proposed Project would not result in substantial damage to structures or infrastructures, or expose people to substantial risk of injury from land subsidence/settlement—less than cumulatively considerable.

Cumulative Impact GEO-3 addresses the degree to which the proposed Project, along with other cumulative projects, could 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, or compressible sediments.

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. Regional subsidence due to historic oil withdrawal has been arrested through subsurface water injection; therefore, regional subsidence impacts are not anticipated. However, localized settlement could occur as a result improperly placed Project-related fill (e.g., pipeline trench backfill).

Past projects on the proposed project site have contributed fill and therefore there is risk, albeit low, of settlement. Portions of the proposed project site are underlain by older fill that may have been subject to settlement during the years following construction. However, the risk of such settlement decreases over a relatively long period of time as potential areas of non-uniformly compacted fill settles and generally reaches equilibrium in the years immediately following construction. Therefore, the risk of non-seismic related settlement impacts in these older areas of fill is low. (See Impact GEO-1 for a discussion of potential seismic-related differential settlement.)

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Settlement impacts in proposed project areas would be less than significant under CEQA, as the proposed Project or Alternatives 1 through 5 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. The proposed Project does not include any areas of fill, with the exception of pile driving. Past projects on the proposed project site may have contributed to fill that was non-uniformly compacted, resulting in soil settlement. However, as described above, such settlement would have occurred primarily in the years immediately following construction, such that the contribution of risk of those past projects would be less than significant. Therefore, the proposed Project or alternatives would not result in a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

Because the proposed Project does not increase the amount of fill in the proposed project area, it does not contribute to increased settlement or subsidence impacts. No mitigation measures are required, and the contribution of the proposed Project or alternatives would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.5.5 Cumulative Impact GEO-4: Construction of the proposed Project would not result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury from expansive soils—less than cumulatively considerable.

Cumulative Impact GEO-4 addresses the degree to which the proposed Project or Alternatives 1 through 5, along with other cumulative projects, results in substantial damage to structures or infrastructure or exposes 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.

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 site have contributed 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 or alternatives to a cumulative impact in this area, and no other such projects are identified, impacts would not be cumulatively significant under both CEQA and NEPA.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Expansive soil impacts in proposed project upland areas would be less than significant under CEQA because the proposed Project or alternative 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. Since the proposed Project may place structures on existing fill, compliance with the Los Angeles Municipal Code would mitigate any impacts. Therefore, the proposed Project or alternatives would not result in a cumulatively considerable impact under CEQA or NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

The proposed Project or alternatives would comply with existing regulations guiding the design and construction of buildings to reduce impacts of expansive soils. No mitigation measures are required, and the contribution of the proposed Project or alternatives would be less than cumulatively considerable under NEPA and CEQA (no NEPA impact for Alternatives 5 and 6).

4.2.5.6 Cumulative Impact GEO-5: Construction of the proposed Project would not result in substantial damage to structures or infrastructure, or expose people to a substantial risk of landslides or mudflows—no cumulative impact.

Cumulative Impact GEO-5 addresses the degree to which the proposed Project or Alternatives 1 through 5, along with other cumulative projects, exposes people or property to a substantial risk of landslides or mudslides.

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 or alternative would not expose places, structures, or people to substantial damage or substantial risk of harm. A relatively small slope is located along the westerly border of the proposed project site. The slope ranges from approximately 0 to 20 feet in height and is vegetated and maintained. Due to the relatively small size of the slope, the potential of a deep-seated landslide or mudflow to occur on this slope is considered low. Because there would be no proposed project-specific impact, there would be no cumulatively considerable contribution to any cumulative impact from the proposed Project or alternatives (no NEPA impact for Alternatives 5 and 6).

4.2.5.7 Cumulative Impact GEO-6: Construction of the proposed Project would not result in substantial damage to structures or infrastructure, or expose people to a substantial risk of unstable soil conditions from excavation, grading or fill—less than cumulatively considerable.

Cumulative Impact GEO-6 addresses the degree to which the proposed Project or alternatives along with other cumulative projects results in substantial damage to structures or infrastructure or exposes 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. Construction activities may also include temporary slopes, including vertical slopes and trenching. The flat nature of the topography and the minimal grading required would minimize the height and size of temporary slopes. In addition, the slopes would be constructed in accordance with provisions of the Occupational Health and Safety Administration (OSHA).

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 proposed project site have contributed fill and therefore 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 or alternatives to a cumulative impact in this impact area, and no other such projects are identified, impacts would not be cumulatively significant under both CEQA and NEPA.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Due to implementation of standard engineering practices regarding temporary slopes, people and structures on the proposed project site would not be exposed to substantial adverse effects from the proposed Project or alternatives, and impacts associated with shallow groundwater would be less than significant under CEQA. Potential impacts to past onsite structures and people as a result of unstable soil conditions would have no impact on the proposed Project because such structures (if any) have been demolished. Therefore, the proposed Project or Alternatives 1 through 5 would not result in cumulatively considerable contribution to a significant cumulative impact under either CEQA or NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternatives would comply with the recommendations of a geotechnical engineer and would be consistent with the Los Angeles Municipal code. As such, the proposed Project or alternatives would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.5.8 Cumulative Impact GEO-7: Construction of the proposed Project would not result in one or more distinct and prominent geologic or topographic

features being destroyed, permanently covered, or materially and adversely modified—no cumulative impact.

Cumulative Impact GEO-7 addresses the degree to which the proposed Project, along with other cumulative projects, results 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.

Since the proposed project area is relatively flat and paved, with no prominent geologic or topographic features, proposed project operations would not result in any distinct and prominent geologic or topographic features being destroyed, permanently covered, or materially and adversely modified, while the proposed Project or Alternatives 1 through 4 involve new water cuts and enhancements to the Salinas de San Pedro saltmarsh. Alternative 5 does not involve new water cuts or enhancements to the Salinas de San Pedro salt marsh, and Alternative 6 does not involve any CEQA action. The proposed changes would not be adverse. Therefore, neither the proposed Project nor an alternative would contribute a cumulatively considerable impact (no NEPA impact for Alternatives 5 and 6), and no further analysis is needed.

4.2.5.9 Cumulative Impact GEO-8: The proposed Project would not result in the permanent loss of availability of any mineral resource of regional, statewide, or local significance—no cumulative impact.

Cumulative Impact GEO-8 addresses the degree to which the proposed Project, along with other cumulative projects, results in permanent loss of availability of a known mineral resource that would be of future value to the region and the residents of the state.

The proposed project site is located in an area where no significant aggregate mineral deposits are present and where little likelihood exists for their presence. Non-contaminated coarse-grained granular material, if encountered during excavation or dredging, may be suitable for reuse as fill during construction. With respect to petroleum resources, the proposed project site is located adjacent to, but outside the Wilmington Oil Field, and therefore, the proposed Project or alternatives would not impact operations of the Wilmington Oil Field. Because no mineral resources are present on or beneath the proposed project site, neither proposed project construction nor operation would affect mineral resources. Therefore, the proposed Project or alternative would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA (no NEPA impact for Alternatives 5 and 6).

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 impact. The geographic scope with respect to contaminated soils would be confined to the proposed project area. These 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 scope with respect to contaminated groundwater 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.

The time frame for the cumulative analysis of contaminated soil and groundwater includes the historical time since the study area was developed and extends for decades into the future. Hazardous substances can be retained in soil and groundwater for decades after the original spill occurred.

With respect to CEQA and NEPA, past, present, and reasonably foreseeable future developments that could contribute to cumulative impacts associated with groundwater and soil contamination are confined to projects that would either encounter historical onsite contamination, could result in increased areas of site paving (for either site development or for encapsulation of contaminated soil) and potential reduction in groundwater recharge, and any project that would introduce any type of contaminant to the soil or groundwater. Since neither the proposed Project nor the alternatives would result in any impact 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, it would result in no cumulatively considerable contribution to a cumulative impact and no determination of geographic scope is required.

The cumulative area of influence is predominantly underlain by deep, unconfined potable aquifers, with an overlying shallow, perched water-bearing zone of saline, non-potable water. 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 significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.6. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.6.2 Cumulative Impact GW-1: The proposed Project would not expose toxic substances or other

contaminants associated with historical uses of the Port—less than cumulatively considerable.

Cumulative Impact GW-1 addresses the degree to which the proposed Project or the alternatives, along with other cumulative projects, results in exposing soils containing toxic substances and petroleum hydrocarbons associated with prior operations that would be deleterious to humans. Exposure to contaminants associated with historical uses of the Port could result in short-term effects (duration of construction) to onsite personnel and/or long-term impacts to future site occupants.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The cumulative geographic scope is the same as the proposed project site or the alternatives 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 site or the alternatives, including those discussed in Section 3.6, have contributed to soil and groundwater contamination. Therefore, past and present projects within the proposed project vicinity contribute to a cumulatively considerable impact regarding soil contamination and groundwater contamination.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As discussed in Section 3.6, portions of the proposed project area (or the alternatives) 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 or alternatives could potentially expose construction personnel, existing operations personnel, and future occupants of the site to contaminated soil and groundwater. Similarly, grading in the proposed park areas could expose construction personnel and future recreational users to contaminated soil. Human health and safety impacts would be significant pursuant to exposure levels established by Cal/EPA's Office of Environment Health Hazard Assessment (OEHHA).

However, this contamination currently exists and was generated by past and present projects prior to even the design of the proposed Project. The construction and operation of the proposed Project or alternatives could encounter historical contamination. The proposed Project or alternatives would be required to remediate and remove existing groundwater and soil contamination prior to the full operation of the proposed Project. Although, the proposed Project may expose construction

workers to soil and groundwater contamination during construction activities, the proposed Project or alternatives would not actually result in an increase of soil and groundwater contamination and would reduce the existing amount of soil and groundwater contamination caused by other past and present projects. Based on the potential exposure to construction workers, without implementation of mitigation measures, the proposed Project or alternatives would have a site-specific significant impact and a cumulatively considerable impact on groundwater and soils under CEQA and NEPA, except there would be no NEPA impact for Alternatives 5 and 6.

The proposed Project or alternatives would have a significant impact and contribution to a cumulatively significant impact to groundwater and soils, except there would be no NEPA impact for Alternatives 5 and 6. Mitigation measures are proposed below to reduce the significant impacts generated by the proposed Project or alternatives construction activities as fully described in Section 3.6.3.6.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures MM GW-1 (Complete Site Remediation), MM GW-1a (Remediate the Former GATX Site), MM GW-1b (Remediate Former Oil Wells), MM GW-1c (Abandon and Remove Navy Fuel Surge Line), and MM GW-2 (Contamination Contingency Plans) would reduce proposed project or alternatives impacts to less than cumulatively considerable levels under CEQA and NEPA, except there would be no NEPA impact for Alternatives 5 and 6. These benefits would apply for all identified contaminated sites including Berth 240 in Area G. These benefits would be similar for the proposed Project or its alternatives in reducing the proposed Project's or alternatives' contribution to a cumulatively significant impact to less than significant (no NEPA impact for Alternatives 5 and 6).

4.2.6.3 Cumulative Impact GW-2: The proposed Project would not cumulatively alter contaminant transport pathways or expand the area affected by contaminants—less than cumulatively considerable.

Cumulative Impact GW-2 addresses the degree to which the proposed Project or its alternatives, along with other cumulative projects, changes the rate or direction of movement of existing contaminants; expansion of the area affected by contaminants; or increased level of groundwater contamination, which would increase the risk of harm to humans. Excavation and grading activities in contaminated soils, unless adequately mitigated, could result in inadvertent spreading of unanticipated and unidentified 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.

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, because groundwater contamination can spread over relatively large areas subsequent to construction. Past projects on the site of the proposed project site or alternatives, as discussed in Section 3.6, have contributed to soil and groundwater contamination. Present and reasonably foreseeable future projects would have no effect on soil or groundwater contamination on site. However, the effects of past projects are cumulatively considerable.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As discussed for Cumulative Impact GW-1, soil and groundwater in limited and isolated portions of the proposed project area 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. If unanticipated contaminated soils are encountered during proposed project grading or excavations, contamination could be spread to other areas without appropriate mitigation. Health and safety impacts would be significant pursuant to exposure levels established by OEHHA.

This contamination currently exists and was generated by past and present projects prior to even the design of the proposed Project or alternatives. The proposed Project or alternatives 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 or alternatives may cause the existing contamination caused by other past projects to spread to other areas, although the proposed Project would not result in an increase of 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 under CEQA and NEPA.

The proposed Project or alternatives could potentially cause a significant contribution to a cumulatively considerable impact to groundwater and soils, except there would be no NEPA impact for Alternatives 5 and 6. Therefore, mitigation measures are proposed to reduce the significant impacts generated by the proposed project or alternatives construction activities as fully described in Section 3.6.3.6.

Mitigation Measures and Residual Cumulative Impacts

Because the proposed Project or alternatives could potentially have a cumulatively considerable impact in regards to the spread of groundwater and soil contamination**,** Mitigation Measures MM GW-1, MMGW-1a, MMGW-1b, MMGW-1c, and MMGW-2 would serve to reduce the significant impacts generated by the proposed Project or alternative construction activities, except there would be no NEPA impact for Alternatives 5 and 6. The mitigation measures would apply to all known or suspected contaminated sites including Berth 240 in Area G. Proposed project or alternatives impacts would be less than cumulatively considerable after proposed project-specific mitigation (no NEPA impact for Alternatives 5 and 6).

4.2.6.4 Cumulative Impact GW-3: The proposed Project would not result in a cumulatively considerable change to potable water levels—no cumulative impact.

Cumulative Impact GW-3 addresses the degree to which the proposed Project or alternatives, along with other cumulative projects, result in a 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.

As described in Section 3.6, the localized groundwater withdrawal that may occur as a result of the proposed Project or alternative (during construction dewatering operations) would have no impacts on underlying potable water supplies because withdrawals would occur from the shallower, non-potable groundwater table. Also, drinking water is provided to the proposed project area by the City of Los Angeles Department of Water and Power. Therefore, cumulative impacts would not occur, and the proposed Project or alternatives would not make a considerable contribution under both CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.6.5 Cumulative Impact GW-4: The proposed Project would not result in a cumulatively considerable demonstrable and sustained reduction in potable groundwater recharge capacity—no cumulative impact.

Cumulative Impact GW-4 represents the potential of the proposed Project or alternatives, along with other cumulative projects, to result in a demonstrable and sustained reduction in potable groundwater recharge capacity. Any recharge that may occur in the cumulative area of influence would likely only affect the shallow, saline non-potable groundwater underlying the coastal areas of the Los Angeles Basin. Deeper groundwater recharge occurs further inland and is important in sustaining the aquifers used as industrial and municipal water supply outside of the Port area.

There are no groundwater recharge areas on the proposed project site or in the proposed project area, and only saline or otherwise non-potable groundwater underlies the coastal areas of the Los Angeles Basin. Deeper groundwater recharge occurs further inland and upstream and is important in sustaining the aquifers used as industrial and municipal water supply outside the Port area. Although past, present, and reasonably foreseeable future projects would likely include new and/or repaved impermeable surface areas, they would not affect any groundwater recharge areas because none are present in the proposed project area. Consequently, no cumulative impact to groundwater recharge would occur. Furthermore, the proposed Project or any of the alternatives would not affect groundwater recharge or potable water supplies and therefore would not make a considerable contribution to a significant cumulative groundwater recharge impact under both CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.6.6 Cumulative Impact GW-5: The proposed Project would not result in cumulatively considerable violation of regulatory water quality standards at an existing production well—no cumulative impact.

Cumulative Impact GW-5 addresses the degree to which the proposed Project, along with other cumulative projects, results in violation of regulatory water quality standards at an existing production well, as defined in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act. Because no existing production wells are located in the vicinity of the proposed project site, neither the proposed Project nor an alternative would contribute to any cumulative potential to violate regulatory water quality standards at existing production wells; therefore, cumulative impacts would not occur, and neither the proposed Project nor an alternative would contribute considerably under both CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

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. 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 could contribute to these cumulative impacts include those projects that transport hazardous materials in the vicinity of the Port.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.7. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.7.2 Cumulative Impact RISK-1: The proposed Project would comply with applicable safety and security regulations and policies guiding development within the Port—less than cumulatively considerable.

Cumulative Impact RISK-1, as applied to cumulative impacts, represents the potential of the proposed Project along with other cumulative projects to not comply with applicable regulations and policies guiding development within the Port.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

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

Contribution of the proposed Project or Alternatives (Prior to Mitigation)

The construction and operation of the proposed Project or all alternatives is subject to numerous security and safety regulations for operation of the proposed facilities. 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 or alternative plans would include an internal circulation system, code-required features and other firefighting design element, as approved by LAFD.

Additionally, construction and operation of the proposed Project or all alternatives would be required to comply with all existing hazardous waste and materials laws and regulations, including, but not limited to, RCRA, CERCLA, and CCR Title 22 and 26. The proposed Project or alternatives 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.

Furthermore, LAHD has implemented various plans and programs to ensure compliance with these regulations that must be adhered to during the operation of the proposed Project or all alternatives. For example, as discussed in Section 3.7.3, "Applicable Regulations," the USCG would oversee and enforce the appropriate security measures for all cruise ships calling on the Port, as well as for the existing cruise terminals and proposed Outer Harbor Terminals. The cruise ships and cruise terminals would be required to operate using measures and methods approved and enforced by the USCG.

However, the operation of the proposed Project or Alternatives 1 through 4 would not comply with LAHD's RMP. The proximity of the visiting public and recreationists (defined as vulnerable populations under LAHD's RMP) to Mike's fueling station via the proposed waterfront promenade would not comply with the RMP with respect to locating vulnerable resources near existing or approved facilities handling hazardous liquid bulk cargos. Therefore, the operation of the proposed Project or Alternatives 1 through 4 would not comply with applicable safety regulations (e.g., RMP), and impacts would be significant. Therefore, the contribution of the proposed Project or Alternatives 1 through 4 would be cumulatively considerable under CEQA and NEPA. The implementation of Mitigation Measure MM RISK-1 would reduce impacts of the proposed Project or Alternatives 1 through 4 to less-than-significant levels.

Alternative 5 also does not comply with LAHD's RMP. Alternative 5 would also locate the proposed waterfront promenade within close proximity to Mike's fueling station. Additionally, under Alternative 5 Jankovich fueling station would remain in its existing location because no in-water work would be done at Berth 240. A part of Ports O'Call would be located within its hazardous footprint. The continued operation of Jankovich fueling station under these conditions is not consistent with LAHD's RMP. Therefore, Alternative 5 would result in significant impacts under CEQA, and the contribution of Alternative 5 would be cumulatively considerable under CEQA. The implementation of Mitigation Measure MM GW-1c and Mitigation Measure RISK-1 would reduce impacts of Alternative 5 to less-than-significant levels under CEQA (Alternative 5 would have no impact under NEPA).

Alternative 6 does not comply with LAHD's RMP; however, since there is no difference between Alternative 6 and the existing baseline with respect to Mike's fueling station and Jankovich fueling station, there would be no impact. Under Alternative 6, Mike's fueling station and Jankovich fueling station would remain in their existing location. There would be no proposed waterfront promenade built within close proximity to Mike's fueling station, and therefore, no vulnerable populations would be introduced near Mike's fueling station. This would be consistent with LAHD's RMP. Jankovich fueling station would also remain in its current location near Ports O'Call. The continued operation of the Jankovich fueling station would not differ from existing baseline conditions; however, continued operation of the facility would not comply with applicable policies guiding development within the Port, specifically the PMP and LAHD's RMP. Since the Jankovich fueling station would remain as it currently exists under Alternative 6, there is no difference between the CEQA baseline and Alternative 6. Since the CEQA baseline and Alternative 6 are the same, impacts would not occur. Therefore, Alternative 6, when considered with past, present and reasonably foreseeable future project, would not be cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure MM RISK-1 (Removal of all hazardous materials with flashpoints below 140 degrees from Mike's fueling Station) would reduce impacts from the proposed Project or Alternatives 1 through 5. Residual impacts would be less-than-significant for the proposed Project or Alternatives 1 through 4 under CEQA and NEPA; residual impacts of Alternative 5 would also be less than significant under CEQA with no impact under NEPA. There would be no impact for Alternative 6 under CEQA or NEPA.

4.2.7.3 Cumulative Impact RISK-2: The proposed Project would not cumulatively interfere with an existing emergency response or evacuation plan, thereby increasing the risk of injury or death—no cumulative impact.

Cumulative Impact RISK-2 represents the potential of the proposed Project along with other cumulative 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.

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, it is not anticipated that any of these projects would be approved if there were the potential to impact applicable emergency response or evacuation plans.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project or alternatives would expand the visitor serving and recreational opportunities in Planning Area (PA) 1, 2, and 3. It would generally increase the number of visitors to the area and increase the square footage of the available tenant space in Ports O'Call.

Proposed project or alternatives 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 or alternatives 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 or alternatives would be subject to existing emergency response and tsunami evacuation plans developed by the City of Los Angeles, in conjunction with LAHD, which 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 the Area Maritime Security Evacuation Committee (AMSEC) and cover all areas encompassed by the Ports of Los Angeles and Long Beach, which includes 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 are required to have their own emergency management plans. Therefore, any new tenants under the proposed Project or alternative 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, neither the proposed Project nor an alternative would substantially interfere with existing emergency response plans for the existing tenants of the proposed Project or alternatives but would require new emergency responses plans for some of the new tenants. Furthermore, the proposed project or alternatives operations would not interfere with any existing emergency response or evacuation plan. Therefore, the contribution of the proposed Project or alternatives would not be cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternative would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.7.4 Cumulative Impact RISK-3: The proposed Project would not result in a substantial increase in public health and safety concerns as a result of the accidental release, spill, or explosion of hazardous materials due to a tsunami—less than cumulatively considerable.

Cumulative Impact RISK-3 represents the potential of the proposed Project, along with other cumulative projects, to result in an accidental spill as a result of a tsunami.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Due to the historic occurrence of earthquakes and tsunamis along the Pacific Rim, placement of any development on or near the shore in Southern California, including the Port and activities within the Port, would always involve some measure of risk of impacts from a tsunami. Although relatively rare, should a large tsunami occur, it would be expected to cause some amount of damage to most onshore or near-shore locations, including the Port. Impacts due to seismically induced tsunamis are typical for the entire California coastline and would not be increased by the cargo operation, cruise terminal operations, or other facility operations of the Port in general. However, because of the low elevation of the Port facilities, there is a substantial risk of coastal flooding generally within the Port in the event of a tsunami.

As discussed in Sections 3.7 and 3.5, there is the potential for a large tsunami to impact the Port. A large tsunami would likely lead to a fuel spill if moored vessels (i.e., cargo vessels and cruise vessels) are present or if hazardous material bulk storage facilities are damaged in the event of tsunami-caused flooding or deck overtopping. A model has been developed specifically for the Los Angeles/Long Beach Port Complex that incorporates consideration of the localized landfill configurations, bathymetric features, and the interaction of the diffraction, reflection, and refraction of tsunami wave propagation in the predictions of tsunami wave heights (Moffatt and Nichol 2007). The Port Complex model uses a methodology similar to the above studies to generate a tsunami wave from several different potential sources, including local earthquakes, remote earthquakes, and local submarine landslides.

As previously discussed, the most likely worst-case tsunami scenario analyzed in the model was based partially on a magnitude 7.6 earthquake on the offshore Catalina fault. The recurrence interval for a magnitude 7.5 earthquake along an offshore fault in the Southern California Continental Borderland is about 10,000 years. Similarly, the recurrence interval of a magnitude 7.0 earthquake is about 5,000 years, and the recurrence interval of a magnitude 6.0 earthquake is about 500 years. However, there is no certainty that any of these earthquake events would result in a tsunami, since only about 10% of earthquakes worldwide result in a tsunami. In addition, available evidence indicates that tsunamis generated by landslides are extremely infrequent and occur less often than large earthquakes. This suggests recurrence intervals for such landslide events would be longer than the 10,000-year recurrence interval estimated for a magnitude 7.5 earthquake (Moffatt and Nichol 2007). Therefore, it is unlikely a major tsunami would be expected during the life of the proposed Project or alternative.

Generally, the containers of hazardous substances on ships or berths within the Port could be damaged as a result of a large tsunami. Such damage would result in the release of both hazardous and non-hazardous cargo to the environment, adversely impacting persons and/or the marine waters. However, containers within the Port carrying hazardous cargo would not necessarily release their entire contents in the event of a large tsunami due to existing regulations controlling the storage of the materials. The DOT regulations (49 CFR Parts 172 to 180) covering hazardous material packaging and transportation would serve to minimize potential release volumes since packages must meet minimum integrity specifications and size limitations. Furthermore, the owner or operators of vessels are required to have an approved Tank Vessel Response Plan on board and a qualified individual within the U.S. with full authority to implement removal actions in the event of an oil spill incident, and to contract with the spill response organizations to carry out cleanup activities in case of a spill. The existing oil spill response capabilities in the LA/LB Harbor are sufficient to isolate spills with containment booms and recover the maximum possible spill from an oil tanker within the LA/LB Harbor. LAHD and other regulations would prevent hazardous materials spills, releases, and explosions, as well as reduce the magnitude of any hazardous materials spills, releases, and explosions of past, present, and reasonably foreseeable projects including the proposed Project. Therefore, the cumulative impacts of past, present, and foreseeable future projects would be less than significant and not cumulatively considerable.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Seismically induced tsunamis are typical for the entire California coastline and the probability of such an event would not be increased by construction or operation of the proposed Project or alternative. Moffatt and Nichol (2007) updated the tsunami hazard assessment and evaluated the potential for a tsunami to overtop wharves in various areas throughout the Ports of Los Angeles and Long Beach. The results of this analysis indicated that in some landslide-induced tsunami situations, overtopping would occur in parts of the West Channel and East Channel and would almost occur in some parts of the Main Channel. However, the results of this analysis also

indicated that a worst-case earthquake generated tsunami wave is not likely to occur more than once every 10,000 years and that available evidence indicates that tsunamis generated by landslides would be extremely infrequent and occur less often than large earthquakes.

The proposed Project or Alternatives 1 through 5 could cause release, spill, or explosion of a hazardous material in the event of a tsunami via two general routes: (1) vessels associated with the proposed Project or alternative, and (2) facilities associated with the proposed Project or alternative. The proposed Project or alternative vessels (e.g., cruise ships and recreational vessels) could be damaged due to a tsunami if they are capsized or otherwise struck their moorings or berths, which could result in the release of hazardous materials (i.e., fuel) to the environment. This release would adversely impact persons or the marine waters. However, vessels would not necessarily release their entire fuel contents in the event of a tsunami. For example, cruise ships, which are built with safety foremost in mind, incorporate redundancy in their design. This includes hulls that are double-lined and, in many cases, interiors that are compartmentalized with watertight systems. These designs not only make the ship difficult to sink, but they also make the hulls difficult to breach. Although recreational vessels would not have the significant amounts of fuel stored on board as the cruise ships and may not have the same type of redundancy as cruise ships, the relocation of the recreational vessel slips under the proposed Project or alternative would not result in an increased likelihood of a hazardous materials release, spill, or explosion. The relocation of the majority of the recreational slips by Ports O'Call to the Cabrillo Way Marina would not completely remove the risk associated with any recreational vessels that may spill hazardous materials in the event of a tsunami, but since these recreational slips currently exist and are part of the existing baseline, the relocation associated with the proposed Project or alternatives would not increase the likelihood of a spill, release, or explosion in the event of a tsunami.

Facility damage due to a tsunami could result in release of hazardous materials (i.e., fuel, solvents, etc.) into the environment. These materials would adversely impact persons or the marine waters. However, many of the bulk fuel storage facilities likely to result in a hazardous material spill or release as a result of tsunami are actually being removed from area as part of the proposed Project. These included Jankovich fueling station and Westway Terminal. Therefore, the proposed Project or alternative would reduce the overall amount of hazardous materials that currently exist in the proposed project area and could be released in the event of a tsunami. Although the removal of Jankovich fueling station would not completely eliminate the risk because it would be replaced by a similar facility at Berth 240, the proposed Project or alternative would not increase the risk since Jankovich fueling station currently exists as part of the baseline.

In light of such a low probability of a large tsunami, in combination with the fact that the proposed Project or Alternatives 1 through 5 reduces the amount of hazardous materials available for release, spill, or explosion in the event of a tsunami, the contribution of the proposed Project or alternatives 1 through 5 would be less than cumulatively considerable (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternative would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.7.5 Cumulative Impact RISK-4: The proposed Project would not result in a cumulatively considerable increase in the likelihood of a spill, release, or explosion of hazardous materials due to a terrorist action—less than cumulatively considerable.

Cumulative impact RISK-4 represents the risk that a potential terrorist attack would result in adverse consequences to areas near the proposed project site.

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, which include terminal facilities, liquid bulk fuel facilities, and cargo vessels. Most of the past, present, and reasonably foreseeable future projects identified in Table 4-1 above include typical Port land uses; therefore, when analyzing the cumulative impacts associated with past, present, and foreseeable future projects, 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 of 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 the public (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 (the Ports of Los Angeles and Long Beach) 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% of the national total 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.

Furthermore, the likelihood of a terrorist attack would not be impacted by cumulative infrastructure growth or throughput increases at the San Pedro Bay Ports, but would be based on the terrorist's desired outcome. Cargo containers represent only one of many potential methods to smuggle weapons of mass destruction, and with current security initiatives, may be less desirable than other established smuggling routes (e.g., land-based ports of entry, cross border tunnels, illegal vessel transportation, etc.). There are no measurable or definitive links between container throughput and the probability of a terrorist attack, and there are no measurable or definitive links between container throughput and the consequences of a terrorist attack. Additionally, many factors other than container throughput could be the likely or primary motivations that would dictate the probability and consequences of a terrorist attack. Therefore, the majority of the past, present, and foreseeable future projects that increase container throughput at the Port would not result in a significant cumulative impact related to an increased likelihood of a terrorist attack.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The risk of a terrorist attack is considered part of the baseline for the proposed Project or Alternatives 1 through 6. Terrorism risk associated with cruise facilities and cruise vessels currently exists and is not influenced by changes in cruise vessels frequency or volume. Terrorism risk is part of the regional baseline risk and would not change as a result of the proposed Project or alternatives. The vulnerability and consequences of a terrorist action on the proposed Project can be qualitatively evaluated and defined. The vulnerability of cruise terminals and cruise ships to terrorist actions can be described within the context of the procedures and policies in place to specifically safeguard the Port, cruise terminals, and passengers and employees against a terrorist action and specifically discourage or avert a terrorist action. As described under Section 3.7.3.4.1, "World Cruise Center Terminal Security Measures," the Port, the existing cruise terminal operations, and the existing cruise ships must comply with all of the requirements outlined in Title 33, the MTSA, and the ISPS, which are enforceable by the USCG and the Homeland Security Division of the Port. Additionally, they must comply with existing internal Port security initiatives. Operations at the proposed cruise terminals and berths would also be required to comply with the same requirements, including a requirement to develop an FSA and FSP. Prior to operation, the Outer Harbor Cruise

Terminals would need the USCG to approve the FSA and FSP. The proposed Project or alternatives would comply with all existing applicable security and safety regulations, which are fully enforceable by the Port and the USCG and serve to reduce the vulnerability of cruise operations to a terrorist attack.

Potential environmental damage due to the spill, release, or explosion of hazardous materials, such as chlorine, bunker fuel, or diesel, as a consequence of one of these scenarios could include degradation of water quality, damage to marine and biological resources, and injury or loss of life for passengers, cruise ship employees, or terminal employees. Additionally, if there should be an explosion, any associated fire could result in impacts on local air quality. The reduction in vulnerability to any of the newer, larger cruise ships due to the required security measures discussed above would serve to protect the increased number of passengers expected under the proposed Project. This reduction of vulnerability would work to reduce the consequences should any attack be attempted. Furthermore, it is unlikely that a terrorist attack would result in the loss of an entire cruise ship when in Port, based on the historical data regarding the frequency of attacks against cruise ships. And although the cruise ships visiting the two proposed Outer Harbor Berths would be larger than the cruise ships today, they are not likely to contain significantly more amounts of fuel than the cruise ships do today. This means there would be approximately the same amount of fuel under the proposed Project that could be released during a terrorist attack. Finally, the proposed cruise ships would have the same safety and integrity standards as the existing cruise ships, if not better standards, and it would continue to be very difficult to penetrate the hull of the ships to cause a spill or release of fuel.

Although the proposed Project would increase the number of cruise terminals, cruise berths, and visiting cruise vessels to the Port, it would ultimately not substantially increase the vulnerability of these facilities or the seriousness of the consequences over the existing conditions. Thus, the environmental consequences of a terrorist action, including casualties arising from the action and from the release, explosion, or spill of hazardous materials would remain relatively the same as existing conditions for the proposed Project. Therefore, impacts of the proposed Project would be less than significant under CEQA and NEPA and would not result in cumulatively considerable impacts when considered with past, present, and reasonably foreseeable future projects.

Alternatives 1 or 3 would reduce the number of Outer Harbor cruise terminals when compared to the proposed Project. Alternative 1 or 3 would reduce the vulnerability of the cruise terminal by implementing the security measures that the proposed Project would also implement, which would reduce the consequences of a release, spill, or explosion of hazardous materials. Furthermore, any hazardous materials at the cruise terminals in Alternative 1 or 3 would be stored subject to the applicable state and federal laws, which are designed to first prevent hazardous materials spills, releases, and explosions, and second reduce the consequences of these events. The reduction in vulnerability to any of the newer, larger cruise ships due to the required security measures discussed above would serve to protect the increased number of passengers expected under Alternative 1 or 3. This reduction of vulnerability would work to reduce the consequences should any action be attempted. Therefore,

although there is a reduction of scale in the Outer Harbor Cruise components in Alternative 1 or 3, this would ultimately not substantially increase the vulnerability of these facilities or the seriousness of the consequences when compared to the existing conditions. The environmental consequences of a terrorist action, including casualties arising from the action and from the release, explosion, or spill of hazardous materials, would remain relatively the same for these alternatives. Therefore, impacts under Alternatives 1 or 3 would be less than significant under CEQA and NEPA and would not be cumulatively considerable.

Alternative 4, 5, and 6 would remove the Outer Harbor cruise terminals and berths; therefore, they would remove the sources of hazardous materials (i.e. bunker fuel, chlorine, etc.) from the Outer Harbor. This removal of the source would serve to reduce the potential of a hazardous materials spill, release, or explosion; therefore, impacts under Alternative 4, 5 or 6 would be less than significant and would not be cumulatively considerable. There would be no impacts for Alternative 5 or 6 under NEPA.

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternative would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.7.6 Cumulative Impact RISK-5: The proposed Project would not cumulatively increase the likelihood of an accidental spill, release, or explosion of hazardous materials as a result of modifications related to the proposed Project—less than cumulatively considerable.

Cumulative Impact Risk-5 represents the risk associated with the proposed Project along with other cumulative projects to substantially increase the likelihood of an accidental spill, release, or explosion of hazardous materials.

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, which include terminal facilities, liquid bulk fuel facilities, and cargo vessels. Most of the past, present, and reasonably foreseeable future projects include typical Port land uses that may store large quantities of hazardous materials; the proposed Project would store relatively few hazardous materials in comparison.

Between 1997 and 2004, there were 40 hazardous material spills directly associated with container terminals in the Ports of Los Angeles and Long Beach. This equates to approximately five spills per year for the entire Port complex. During this period, the total throughput of the container terminals was 76,874,841 twenty-foot equivalent units (TEU). Therefore, the probability of a spill at a container terminal can be estimated at 5.2×10^{-7} per TEU (40 spills divided by 76,874,841 TEU). This spill probability conservatively represents the baseline hazardous material spill probability since it include materials that would not be considered a risk to public safety, but would still be considered an environmental hazard. It should be noted that during this period, there were no reported impacts to the public (injuries, fatalities, or evacuations), with potential consequences limited to Port workers (two worker injuries that were treated at the scene and 20 workers evaluated as a precaution).

Other present and reasonably foreseeable future projects in the Port would result in an increase in hazardous materials and petroleum products that could potentially spill during construction and operational activities. Such spills could 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 foreseeable future projects must comply with all existing hazardous material regulations in place through the local, state, and federal government. 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 one 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 foreseeable future projects are not cumulatively considerable.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The construction and operation of the proposed Project or Alternative 1 through 4 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 or Alternatives 1 through 4 would include the removal of a number of industrial uses currently present in the proposed project area. The decommissioning and removal of Jankovich fueling station, the decommissioning and removal of the Westway Terminal at Berths 70–71, and the removal of the S.P. Rail Yard are all positive benefits that would reduce the amount of hazardous materials available for release in PA 2. Additionally, the removal of these industrial uses would allow for the development of uses that would benefit the public. The potential for hazardous materials spills, releases, or explosions during the decommissioning of these sites does exist. However, the decommissioning of these sites would require the adherence to all applicable regulations described in Section 3.7.3, including LAFD regulations, which would provide oversight and prevention techniques for the decommissioning. Additionally, the decommissioning would

likely 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." Any spill or release during the decommissioning of the sites would be relatively minor compared to the hazardous contamination that is already known or suspected to exist at the sites. Therefore, the incremental contribution of the proposed Project or Alternatives 1 through 4 to impacts from construction and operation projects would be less than significant and would not be cumulatively considerable.

The operational impacts of Alternative 5 related to the likelihood of an accidental spill, release, or explosion would be less than significant under CEQA for most of the proposed project components, as discussed above (and no impact under NEPA). However, Alternative 5 would not provide the benefits associated with the proposed Project of relocating the Jankovich fueling station. Additionally, under Alternative 5, Ports O'Call would be developed as under the proposed Project. Therefore, impacts would be significant, and the operation of Alternative 5 would result in cumulatively considerable impacts under CEQA. Implementation of Mitigation Measure MM RISK-2 would reduce impacts to less-than-significant levels under CEQA.

Alternative 6 would not remove Jankovich from the proposed project area and would leave many of the known existing contaminated areas in place.

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or Alternatives 1 through 4 and Alternative 6 would be less than cumulatively considerable under CEQA. Under NEPA, it would also be less than considerable for the proposed Project and Alternatives 1 through 4 with no impact for Alternatives 5 and 6.

Implementation of Mitigation Measure MM RISK-2 (Avoid development within the Jankovich fueling station hazard footprint) would reduce impacts from the Alternatives 5. Residual impacts would be less-than-significant for Alternative 5 under CEQA.

4.2.8 Land Use

4.2.8.1 Scope of Analysis

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 San Pedro and Wilmington, which are assessed in terms of their compatibility with existing Port uses.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.8. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.8.2 Cumulative Impact LU-1: The proposed Project would be consistent with the adopted land use/density designation in community plans, redevelopment plans, or specific plans—less than cumulatively considerable.

Cumulative Impact LU-1 represents the potential of the proposed Project along with other cumulative 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.

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 of Los Angeles Plan, other applicable community plans, and the zoning code. The PMP has been certified by the Coastal Commission, and all past development projects have been approved pursuant to the adopted PMP, ensuring compliance with the coastal zone management program. The City approved Port of Los Angeles Plan is the City's governing document that regulates the continued development and operation of the Port. Over the years, LAHD has developed consistent with the PMP and the Port of Los Angeles Plan, ensuring consistency with land use/density designations to minimize impacts on surrounding areas. On occasion, the PMP and the Port of Los Angeles Plan have required amendments in order to accommodate specific projects, ensuring ongoing consistency with planning programs. 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 of Los Angeles Plan designations and the short-term plans; 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.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As stated in Section 3.8.4.3.1 (Impact LU-1), the proposed Project or Alternatives 1 through 4 is located within Planning Area 1 (West Channel/Cabrillo Beach),

Planning Area 2 (West Bank), Planning Area 3 (West Turning Basin), and Planning Area 7 (Terminal Island/Main Channel) in the PMP. The proposed Project or Alternatives 1 through 4 would require amendments to the PMP for new water cuts associated with changes to the Los Angeles Harbor water boundaries. Additionally, the proposed Project would include a general plan amendment to the Port of Los Angeles Plan for the proposed Berth 240 fueling facility. The amendment would change the land use designation (General/Bulk Cargo and Commercial/Industrial Uses-Non-Hazardous) to allow hazardous liquid bulk water and land uses at Berth 240. The LAHD and Department of City Planning would be jointly responsible for the amendment and would require a City Planning Commission Recommendation Hearing and City Council approval. The proposed Project or Alternatives 1 through 4 would generally be consistent with all applicable land use/zoning designations after the proposed amendments are approved.

However, the proposed Project or Alternatives 1 through 4 would include the location of Mike's fueling station adjacent to the proposed waterfront promenade. This physical land use inconsistency would be inconsistent with the PMP Risk Management Plan. In addition, this physical land use inconsistency would be inconsistent with the long range land use plan of the PMP for PA 2. The inconsistency of locating a hazardous land use next to a public land use, which would be used by the recreating public, could create a physical environmental impact should Mike's fueling station experience an accidental hazardous release, spill, or explosion, endangering vulnerable populations (i.e., visiting public). Consequently, this land use inconsistency would result in a significant impact. Therefore, the proposed Project, combined with past, present, and reasonably foreseeable future projects, would be cumulatively considerable under CEQA and NEPA.

Alternative 5 would not require a General Plan Amendment for Berth 240 because this alternative would not require any in-water work. Therefore, the land use designations in the General Plan and PMP would remain consistent as they currently are. However, the Jankovich fueling station would remain in its current location near Ports O'Call and Mike's fueling station would remain in its current location, thereby leaving both fueling stations adjacent to the proposed waterfront promenade proposed under Alternative 5. The close proximity of these two hazardous liquid bulk facility to vulnerable resources (i.e., Ports O'Call and the proposed waterfront promenade) would result in a land use inconsistency and would be inconsistent with the PMP RMP. In addition, this physical land use inconsistency would be inconsistent with the long-range land use plan of the PMP for PA 2. These land use inconsistencies would result in significant cumulative impacts under CEQA for Alternative 5 (no NEPA impact for Alternative 5).

Alternative 6 would also not require a general plan amendment for Berth 240 because this alternative would not require any in-water work. Mike's fueling station would remain in its current location; however, no vulnerable resources (i.e., a waterfront promenade with recreating public) would be introduced adjacent to it. Therefore, there would be no land use consistency impact as it relates to Mike's fueling station under Alternative 6. Jankovich fueling station would also remain in its current location near Ports O'Call. The continued operation of the Jankovich fueling station would not differ from existing baseline conditions; however, continued operation of

the facility would not comply with applicable policies guiding development within the Port, specifically the PMP and LAHD's RMP. However, since Jankovich fueling station would remain as it currently exists under Alternative 6, there is no difference between the CEQA baseline and Alternative 6. Since the CEQA baseline and Alternative 6 are the same, impacts would not occur. Therefore, Alternative 6, when considered with past, present and reasonably foreseeable future project, would not be cumulatively considerable (no NEPA impact for Alternative 6).

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure MM RISK-1 would reduce impacts from the proposed Project or Alternatives 1 through 4 to less than significant. Therefore, residual cumulative impacts would be less than significant.

Implementation of Mitigation Measures MM RISK-1 and RISK-2 would reduce impacts from Alternative 5 to less than significant. Therefore, residual cumulative impacts would be less than significant (no NEPA impact for Alternatives 5 and 6).

4.2.8.3 Cumulative Impact LU-2: The proposed Project would be consistent with the General Plan or adopted environmental goals or policies contained in other applicable plans—less than cumulatively considerable.

Cumulative Impact LU-2 represents the potential of the proposed Project along with other cumulative projects to result in development that would be inconsistent with environmental objectives and policies delineated in land use plans that govern within the proposed project area.

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 Port of Los Angeles Plan. The City-approved Port of Los Angeles Plan is the City's governing document that regulates the continued development and operation of the Port and is consistent with the PMP. Over the years, LAHD has developed, consistent with the Port of Los Angeles Plan, objectives that give priority to water-dependent developments to ensure the Port is maintained as an important local, regional, and national resource, as well coordinating development of the Port and adjacent communities as stipulated in the San Pedro Community Plan. Similarly, present projects within the PMP area have been developed to ensure proposed developments are consistent with the Port of Los Angeles Plan and PMP objectives and policies. Construction and operation associated with present and future projects would be modified during the project

review process to ensure consistency with the Port of Los Angeles Plan and PMP objectives and policies. Therefore, past, present and foreseeable future projects have not resulted in significant cumulative impacts.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As stated in Section 3.8.4.3.1 (Impact LU-1), the proposed Project or Alternatives 1 through 6 would be consistent with the adopted objectives and policies identified in the Port of Los Angeles Plan and other plans including SCAG RCPG, the San Pedro Community Plan, and the San Pedro Coastal Specific Plan. Proposed redevelopment is consistent with the 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 coastal zone environment and public views of and access to the coastal resource. Specifically, a component of the proposed Project is a promenade that allows visitors to better enjoy the Port and its recreational facilities.

However, the proposed Project or Alternatives 1 through 4 would result in an inconsistency with the PMP Risk Management Plan overall objective. The purpose and overall objective of the PMP Risk Management Plan is to essentially minimize and reduce the physical association between vulnerable populations and hazardous facilities. Mike's fueling station is defined as a hazardous facility by the RMP, and the proposed Project and Alternatives 1 through 4 would locate the proposed waterfront promenade adjacent to Mike's fueling station. This location would be in direct contradiction to the overall objective of the PMP Risk Management Plan. Furthermore, this policy inconsistency could result in direct physical environmental impacts should Mike's fueling station have an accidental release, spill, or explosion of hazardous materials during the public's use of the waterfront promenade. Therefore, this policy inconsistency would be significant. Consequently, the proposed Project or Alternatives 1 through 4 would result in cumulatively considerable impacts. Implementation of Mitigation Measure MM RISK-1 would reduce the impacts to less-than-significant.

The impacts associated with Alternative 5 for Cumulative Impact LU-2 are similar to those of the proposed Project or Alternative 1 through 4, with the exception that Jankovich fueling station would also remain adjacent to the proposed expansion of Ports O'Call. The close proximity of these two hazardous liquid bulk facilities to vulnerable resources (i.e., Ports O'Call and the proposed waterfront promenade) would result in an inconsistency with the overall objective of the PMP Risk Management Plan. Just as with the proposed Project, this inconsistency could result in a physical environmental impact. This policy inconsistency would be significant under CEQA for Alternative 5. Therefore, Alternative 5, when considered with past, present and reasonably foreseeable future projects would be cumulatively considerable under CEQA (no NEPA impact for Alternative 5).

The impacts of Alternative 6 for LU-2 are similar to the impacts discussed for Alternative 6 under Cumulative Impact LU-1 above. Since the CEQA baseline and Alternative 6 are the same, impacts would not occur. Therefore, Alternative 6, when considered with past, present and reasonably foreseeable future projects, would not be cumulatively considerable (no NEPA impact for Alternative 6).

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure MM RISK-1 would reduce impacts from the proposed Project or Alternatives 1 through 4, to less than significant. Therefore, residual cumulative impacts would be less than significant.

Implementation of Mitigation Measure MM RISK-1 and RISK-2 would reduce impacts from Alternative 5 to less than significant. Therefore, residual cumulative impacts would be less than significant (no NEPA impact for Alternatives 5 and 6).

4.2.8.4 Cumulative Impact LU-3: The proposed Project would not physically disrupt, divide, or isolate existing neighborhoods, communities, or land uses—less than cumulatively considerable.

Cumulative Impact LU-3 represents the potential of the proposed Project along with other cumulative projects to physically disrupt, divide, or isolate existing neighborhoods, communities, or land uses.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past and present projects within the project vicinity have resulted in acquisition of new property by the Port that has been attributed to the encroachment of Port-related industrial uses into surrounding communities including Wilmington and San Pedro. Several other development projects are currently under construction, are planned, or have recently been completed within the Port, including container terminal developments, pleasure-craft marinas, industrial developments, and waterfront plans and enhancements.

Construction and operation associated with present and future container terminal projects, including but not limited to the Pier 400 Container Terminal and Transportation Corridor Project (Project 1), TraPac (Project 2), the Channel Deepening Project (Project 4), the Evergreen Container Terminal Expansion (Project 7), and Berths 97–109 China Shipping Development (Project 15),(Project 15), would be subject to the recent controls and limitations implemented by the City of Los Angeles on container storage in Wilmington. These projects would contribute to increased truck traffic in surrounding residential areas and indirectly contribute to the

proliferation and use of offsite container storage facilities. Therefore, past, present, and reasonably foreseeable future projects would result in significant cumulative impacts.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project is adjacent to two communities—San Pedro and Wilmington—and it would not divide or isolate the communities. Construction activities, rerouting of trucks during construction, and enhancements to Harbor Boulevard and Sampson Way would cause disruption to San Pedro and Wilmington communities. Ultimately, the improvements to Harbor Boulevard and Sampson Way would serve to streamline vehicular traffic into and out of the Port and away from adjacent communities. The majority of traffic would be limited to Harbor Boulevard and routed down to the expanded Sampson Way, rather than expanding Harbor Boulevard adjacent to the community. Sampson Way is situated farther away from the residential communities, and expansion of Sampson Way as opposed to Harbor Boulevard would result in less impact and potential to physically divide the community. Further, the Waterfront Red Car Line extension and realignment would better serve to connect the communities to the Port and allow residents and visitors to better access the coastal resources including the promenade, recreational opportunities, open space, commercial, retail, restaurants, and marinas/harbors. Additional opportunities for vehicle and pedestrian access to the waterfront would be provided as part of the proposed Project or alternatives. Additionally, the development of visitor-serving commercial and recreation uses rather than industrial uses would greatly reduce truck traffic adjacent to communities. Neither the proposed Project nor any alternative would result in cumulatively considerable impacts related to the physical disruption, division, and isolation of neighborhoods under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternative would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

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: west of Harbor Boulevard, east of Centre Street between and including the I-110 Freeway and 22nd Street, south of the Vincent Thomas Bridge, and north of the Federal Breakwater. When considering the cumulative impacts resulting from the interaction of the noise due to the San Pedro Waterfront Project in combination with

noise that originates from other projects that would be taking place in the vicinity of the proposed Project, not all of the other projects are close enough to make an impact, so they can be ruled out from further consideration. Projects are considered to be too far away when the impacts that they would have on the cumulative noise level are too small to cause a significant increase in the cumulative noise level. As a guideline in determining which projects can be ignored, any project that is over 0.25 mile from the San Pedro project site would be too far away to generate a sufficient amount of noise to combine with noise from the proposed Project and cause a cumulative significant impact. Such projects would be considered distant projects as opposed to adjacent projects (i.e., those projects that are not greater than .025 mile away from the proposed project site).

The noise level that results from distant projects is diminished by geometric spreading and ground attenuation. Other factors such as line of sight obstructions and louder and closer noise sources may also further diminish the noise impacts associated with these other projects. The proposed Project is bounded by the Vincent Thomas Bridge on the north side. The noise measurements of the proposed project area showed that the noisiest area within the proposed project site is located near the Vincent Thomas Bridge. Any other projects that are within 0.25 mile north of the Vincent Thomas Bridge would produce much less noise within the proposed project area than what is produced by vehicular traffic crossing the bridge. Therefore, all projects north of the Vincent Thomas Bridge would have a negligible effect on altering the noise level within the proposed Project and need not be considered further. All projects that would be located east of Terminal Island are more than 0.25 mile away from sensitive land uses with the project area, so they are eliminated from consideration.

This analysis assesses the potential of the proposed Project or any of the alternatives along with other past, present, and probable future projects to contribute to cumulative increases in noise, and the proposed Project's contribution to the overall cumulative impacts as a result of proposed project construction activities and operational activities (including onsite operations, increased traffic noise, and increased Waterfront Red Car Line noise). It should be noted that construction noise impacts and operational noise impacts can occur simultaneously, and noise impacts from multiple operational sources can also occur simultaneously.

The significance criteria used for the cumulative analysis are the generally the same as those used for the proposed Project in Section 3.9, "Noise." The significance criteria are the same for both CEQA and NEPA impact analyses.

The cumulative analysis of noise impacts uses a hybrid approach because 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 Table 4-1. The noise generated by increases in traffic takes into account the trip generation and distribution patterns used in the traffic impact study, which accounts for the list of cumulative projects, plus an ambient growth in traffic of 0.65% per year to adjust the existing base year traffic volumes to reflect the effects of regional growth and development for the 2015 buildout year and 2037 horizon year. This annual adjustment was applied to the base year 2007 traffic volume data, resulting in

an estimated ambient growth of 5.2% by 2015 and 19.5% by 2037 (See Section 3.11.4.1.1). Past projects have resulted in increases in ambient noise conditions as a result of increases in passenger vehicle and truck traffic, increased operational noise from container terminal operations, increased rail operations, and concurrent construction activities, among other smaller contributing noise generating activities.

To determine the past, present, and probable future noise impacts due to the proposed Project or alternatives, the following methodology was used. A list of all projects that would be expected to occur or are presently occurring within 0.25 mile of the proposed Project was examined. These projects are independent and separate from the proposed Project, and so they would occur regardless of whether or not the proposed Project itself occurs. The noise level around the geographic area of the proposed Project that would exist if the proposed Project were not to occur would then be due to these other independent projects plus whatever ambient noise level that exists in the absence of any projects. The noise level due to all of these noise sources would represent the expected present and probable future noise level that would exist in the absence of the proposed Project. In terms of evaluating impacts due to other projects, all projects that were not within 0.25 mile of the proposed Project were excluded from further consideration because only projects within 0.25 mile would be sufficiently close to the geographic area of the proposed Project to have the potential to cause a significant change in total noise level. For each of the projects that were not excluded, a noise estimate was determined based upon the loudest expected noise generated by the project and the distance of the project to the locations being examined. The noise energy levels of all adjacent projects were added to the ambient noise energy level to obtain the probable future noise energy level. Implicit in the addition of these energy levels is the assumption that all of the projects are occurring simultaneously. The noise level thus obtained would be a worst-case noise level for the cumulative effect of all projects.

4.2.9.2 Cumulative Impact NOI-1: The proposed Project would cumulatively exceed construction noise standards—cumulatively considerable and unavoidable.

Cumulative Impact NOI-1 represents the potential of construction activities of the proposed Project along with other cumulative projects to cause a substantial increase in ambient noise levels at sensitive receivers within the cumulative geographic scope.

A cumulative construction noise impact would be found if construction activities necessary to implement the proposed Project, including the combination of individual proposed project elements, in combination with one or more of the related and cumulative projects, would contribute to a substantial short-term increase in noise at a sensitive receiver location and the proposed project contribution would be considered cumulatively considerable. A substantial increase resulting in a cumulatively considerable impact would occur if the proposed Project or alternatives cause existing ambient exterior noise levels to increase by 5 dBA (L_{eq}) or more at a noise sensitive use (see Section 3.9.4.2).

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 past, present, and reasonably foreseeable future projects could, in combination with the proposed Project, cause a cumulative construction noise impact. As discussed above, the noise levels due to construction of the cumulative projects that are in the vicinity of the proposed project area have been accounted for in the cumulative analysis, and represent the basis for determining cumulatively considerable impacts from the proposed Project or any of the alternatives.

Past projects have resulted in increases in ambient noise conditions as a result of concurrent construction activities. The Channel Deepening Project (Project 4) would be located throughout the channel immediately east of the proposed San Pedro Waterfront 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 a detailed assessment of construction noise levels that could result from this related project has not been completed, it is likely that construction activities and associated noise levels for both projects would be similar. The similarity in the noise levels is due to the similarities of the type of construction equipment that would be expected to be used for both the Channel Deepening Project and the proposed Project and the fact that the Channel Deepening Project is adjacent to the geographic area covered by the proposed Project. The San Pedro Waterfront Enhancement Project (Project 21) is located primarily in the northern portion of the proposed Project. The Waterfront Enhancement Project is scheduled to be completed in 2009, so there may be some overlap with elements of the proposed Project. While a detailed assessment of construction noise levels that could result from this related project has 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 receivers within the cumulative geographic scope. The Palos Verdes Urban Village (Project 53) is scheduled for construction in 2011 and is located on 5th Street adjacent to sensitive receivers. Other development projects near residential areas that have potential cumulative impact include the Vue Condominiums (Project 87), Specialty Retail Condominiums (Project 90), La Salle Lofts (Project 92), Ocean View Landing (Project 93), Toberman Village (Project 95), Harborside Terrace (Project 96), Cabrillo Marine Aquarium Expansion (Project 44), and Inner Cabrillo Beach Water Quality Improvement Program (Project 32). Construction of one or more of these projects could potentially overlap with construction activities occurring for the proposed Project. Therefore, the construction of past, present, and reasonably foreseeable future projects would have significant cumulative noise impacts on sensitive receivers.

Contribution of the Proposed Project (Prior to Mitigation)

Construction of the various elements of the proposed Project has been identified as causing a significant noise impact under CEQA and NEPA along the Harbor Boulevard residential area. There would be a substantial increase in noise, as identified in Section 3.9.4.3. Because of the close proximity of the Channel Deepening Project and the San Pedro Waterfront Enhancements Project, the likelihood that construction of these projects could be concurrent with the construction activities required for the proposed Project, and the proximity of other related and cumulative projects in the vicinity of the Harbor Boulevard neighborhood, there would be significant cumulative construction noise impacts upon this neighborhood. Under a worst-case scenario, even if all three projects (San Pedro Waterfront Project, Channel Deepening Project, and San Pedro Waterfront Enhancements Project) contributed noise levels as high as that due to the San Pedro Waterfront Project alone, the cumulative noise increase due to all three projects would be no more than 4.8 dB higher than due to just the proposed Project. The noise contributions at affected uses within the boundary of the proposed Project due to noise generated from both the Channel Deepening Project and the San Pedro Waterfront Enhancements Project are expected to be less than the noise from the proposed Project, so the cumulative noise increase that would result if those two other projects (San Pedro Waterfront Project and Channel Deepening Project) were under construction concurrent with the proposed Project would be less than 4.8 dB.

A variety of development projects are planned (see list in preceding subsection) that could be under construction concurrent with the proposed Project. There would be significant construction noise impacts in the Harbor Boulevard neighborhood due to the combination of the development projects and elements of the San Pedro Waterfront Project. The proposed Project would result in an increase of more than 5 dBA, thereby resulting in a cumulatively considerable impact.

Contribution of Alternatives

Most of the project alternatives would be similar in scope to that of the proposed Project in terms of construction noise. For Alternatives 1 through 4, these differences would not be sufficient to alter the conclusions that were drawn for the proposed Project. Alternative 1 through 4 would be expected to produce roughly the same construction impacts under CEQA and NEPA as the proposed Project with minor exceptions. Under Alternative 5, only those proposed project elements that do not require Federal approval would be constructed, so there would be no impact under NEPA. Because pile driving is the noisiest construction that would take place under the proposed Project and because Alternative 5 would not involve pile driving, the impacts under Alternative 5 would be significantly less than for the proposed Project. Under Alternative 6, no proposed project elements would be constructed, so there would be no impact under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures MM NOI-1a (Limit Construction Hours), MM NOI-1b (Limit Construction Days), MM NOI-1c (Temporary Noise Barriers), 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 help to reduce impacts during construction. However, considering the distances between the construction noise sources and receivers, 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 under CEQA and NEPA (although there would be no NEPA impact for Alternatives 5 and 6). The impacts to the Harbor Boulevard residents would remain cumulatively considerable with mitigation.

4.2.9.3 Cumulative Impact NOI-2: Construction activities for the proposed Project would not exceed the ambient noise level by 5 dBA at a noise sensitive use 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—no cumulative impact.

Cumulative Impact NOI-2 represents the potential of the proposed Project along with other cumulative projects to cause a substantial increase in construction noise at night. 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, either in the uplands or in the water; consequently, no impacts under CEQA or NEPA would occur. No mitigation is required.

4.2.9.4 Cumulative Impact NOI-3: The proposed Project would cause cumulatively considerable noise from operations measured at the property line of affected uses to increase by 3 dBA in CNEL, to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase—cumulatively considerable and unavoidable.

Cumulative Impact NOI-3 represents the potential of the proposed Project or any of the alternatives along with other cumulative projects to cause a substantial permanent

increase in ambient noise levels at sensitive receivers within the geographic scope of the proposed Project.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Onsite operations at the Port of Los Angeles and traffic on the roadway network along major roadways in the study area, including Harbor Boulevard, I-110, and local streets in the San Pedro areas, are the dominant sources of community noise and noise sensitive receivers within the geographic scope of the proposed Project. Virtually all of the cumulative projects in Table 4-1, with the exception of 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 foreseeable future projects would result in significant cumulative operational noise at the Port.

Contribution of the Proposed Project (Prior to Mitigation)

NOI-3a. Roadway Traffic Noise

The future traffic volumes for some of the streets in the study area would change significantly. The change in traffic between the years 2006 and 2037 varies for each roadway segment, but has an average increase of about 70%. The cumulative base traffic forecasts include the effects of cumulative development projects expected to be built in the vicinity of the proposed project site by the buildout date of the proposed Project (2014). The traffic noise impacts identified in Section 3.9.4.3 are worsened by the cumulative traffic generated by the area-wide growth and development projects in the area.

Operation of the proposed Project would cause an increase in traffic and a significant cumulatively considerable increase in noise on portions of Harbor Boulevard from the I-110 Freeway to Swinford Street, Harbor Boulevard from Beacon Street to Crescent Avenue, and Miner Street south of 22nd Street. These street segments would experience a significant cumulative impact of 11.8 dB over existing conditions, primarily resulting from the proposed Project. See Table 3.9-7 for impacts related to roadway traffic noise for all roadway segments. This increase represents a cumulatively considerable impact from vehicular noise.

NOI-3b. Railway Corridor Noise

The major railroad corridors transporting cargo into and out of the Port would not be adversely affected by the proposed Project. However, rail traffic associated with Westway operations that use the rail line along Harbor Boulevard within the proposed project area would be eliminated by February 2009 and would cease before operation of the proposed Project. The proposed Project would extend and increase the Waterfront Red Car operations, but would not contribute to a cumulative impact

with other railway operations. The noise generated by the Waterfront Red Car would be negligible within the ambient conditions that it would not contribute to the overall cumulative noise impacts.

NOI-3c. Cruise Ship Operations Noise

Noise from activities associated with cruise ship operations for the proposed Project is presented in Section 3.9.4. Noise due to cruise ship operations is determined primarily by the noise emitted from the cruise ships themselves, and not by any other activity such as roadway traffic which has been covered separately.

In general, the average noise level due to a sound generator is primarily determined by the intensity of the noise emitted from the sound generator, the closeness of the sound generator, and the duration of the sound emitted by the sound generator. Whenever there is more than one sound generator contributing noise to a given area, it is these three factors that determine the effectiveness of one sound generator to determine the cumulative noise level in comparison to the other sound generators. The sound generator that is closest, loudest, and produces a sound of long duration will have more effect on determining the total noise level at a given location than a sound generator that is far away, quiet, and produces a sound of short duration. In addition, the decibel scale is logarithmic, so any sound that is even a few dB higher than the next highest sound level would almost completely determine the cumulative noise level.

The ability of the cruise ship operations that are due to the proposed Project to significantly impact affected uses depends upon the proximity of the proposed Project related cruise ship operations to the affected uses. As part of their operations, cruise ships would travel up and down the Main Channel from the Inner Harbor in the north to the Outer Harbor in the south, with the 7th Street Harbor and Ports O'Call in between, or they could be docked at one of the main harbors. Therefore, cruise ship operations would generate noise from any of these locations. Any affected use that is in close proximity to the Los Angeles Harbor could potentially be impacted by the noise generated by cruise ships as they travel along the Los Angeles Harbor. Since cruise ships are already traveling along the Main Channel, it is not the total cruise ship noise that would determine the increase, but instead the change in cruise ship noise due to the proposed Project that would determine the increase.

Analyses of onsite cruise ship noise data that was taken within the proposed Project area show that the intensity of the noise generated by a docked cruise ship is such that the L_{eq} at 180 feet from a cruise ship is less than 65 dBA. Cruise ships that are moving through the water would spend less time in close proximity to a given location and would be less effective in generating an L_{eq} of 65 dBA, even if the closest approach of the cruise ship was 180 feet. Horn blowing on the cruise ship failed to significantly increase average noise levels.

Affected use areas west of Harbor Boulevard would be sufficiently far from the Los Angeles Harbor as to not be impacted from cruise ship operations noise because the ability of the cruise ship noise to increase the average noise level would be diminished in comparison to louder, more continuous noise sources that are closer to

the affected use areas. At those areas, the noise level due to cruise ship operations would be below ambient baseline noise levels. An example of this is Ports O'Call. The ambient noise levels at the nearest residences, which are located west of Harbor Boulevard, is caused mostly by motor vehicle traffic on the local roadways near the residences, including the traffic traveling along Harbor Boulevard. Because of the close proximity of the residences to Harbor Boulevard as compared to Ports O'Call, any noise that is generated by a moving cruise ship as it passes Ports O'Call would be small in comparison to that which is due to Harbor Boulevard traffic, and the resulting increase in noise due to the cruise ship at the affected use would also be small.

Other areas within the proposed project boundary would be similarly affected by the local noise source. Because the noise levels resulting from onsite activities would not contribute measurably to the CNEL noise levels, increased noise from activities in the proposed Project would not make a cumulatively considerable contribution to cumulative noise levels and would not cause noise levels to increase by 3 dBA or more. Noise levels from the proposed project elements would continue to be intermittently audible during quiet periods, but would also continue to be indistinguishable from existing sources of community noise at the Port and on the surrounding roadways. Therefore, the proposed Project would not result in cumulatively considerable onsite noise impacts.

Contribution of the Alternatives

Most of the project alternatives would be similar in scope to that of the proposed Project, so the railroad, traffic, and cruise ship operations noise would also be similar, although there would be some differences as described below.

NOI-3a. Roadway Impacts

Alternatives 1 through 3 would experience significant impacts along Miner Street, south of 22nd Street. This is the same as for the proposed Project. Alternative 2 would also experience significant impacts along 22nd Street, from Signal Place to Miner Street, and on Harbor Boulevard, from 6th Street to 7th Street. Alternatives 4 and 5 would experience no significant traffic related noise impacts (there would be no NEPA impact for Alternative 5).

NOI-3b. Railway Impacts

Like the proposed Project, there would be no cumulatively significant railway noise impacts for Alternatives 1 through 6 (there would be no NEPA impact for Alternative 5).

NOI-3c. Cruise Ship Impacts

Like the proposed Project, there would be no cumulatively significant cruise ship noise impacts for Alternatives 1 through 6 (there would be no NEPA impact for Alternative 5).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are available, and the proposed Project or any of the alternatives would contribute to significant and unavoidable cumulatively considerable impacts under CEQA and NEPA, except there would be no NEPA impact for Alternatives 5 and 6 and no CEQA impact for Alternative 6.

4.2.10 Recreation

4.2.10.1 Scope of Analysis

The geographic scope for cumulative impacts on recreation is the Port of Los Angeles and surrounding communities of San Pedro and Wilmington and the greater Los Angeles area for regional recreational opportunities.

The temporal scope to identify past, present, and future projects that contribute to the cumulative effects analysis on recreation spans historic Port activities dating back to the early 1900s, when people may have been using Cabrillo Beach as a recreating location after part of the Federal Breakwater was built, through to future projects and conditions in 2037. The CEQA baseline for determining the significance of potential impacts under CEQA is December 2006, and this year has been used to identify the project's contribution.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.10. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.10.2 Cumulative Impact REC-1: The proposed Project would result in a cumulatively considerable loss or diminished quality of recreational, educational, or visitor-oriented opportunities, facilities, or resources—cumulatively considerable and unavoidable.

Cumulative Impact REC-1 represents the potential of the proposed Project or alternatives along with other cumulatively considerable projects to result in a loss or diminished quality of recreational, educational, or visitor-oriented opportunities, facilities, or resources.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and operation of past projects has resulted in existing demands for recreational resources that are accommodated by the various recreational, educational, and visitor-oriented opportunities in the Port area. Related present and reasonably foreseeable future projects in the proposed project area are predominantly berth and terminal expansion or traffic circulation improvements undertaken by the Ports of Los Angeles and Long Beach. These projects include Pier 400 Container Terminal and Transportation Corridor Project (Project 1), Berths 136–147 Marine Terminal (Project 2), Evergreen Improvements Project (Project 7), Pacific LA Marine Terminal (Project 11), Berths 97–109 China Shipping Development Project (Project 15), Berths 171–181 Pasha Marine Terminal Improvements (Project 16), Berths 302–305 APL Container Terminal (Project 23), Berths 121–131 Yang Ming Container Terminal (Project 29), Middle Harbor Terminal Redevelopment (Project 66), Pier A East (Project 69), Pier T TTI Terminal Phase III (Project 70), and Pier S Marine Terminal (Project 71). These actions represent expansion or intensification of existing commercial and industrial uses and would not result in significant cumulative impacts on recreation.

There are a number of present and reasonably foreseeable future projects in the proposed project area that would result in intensification of residential uses, and therefore may increase the population in the vicinity of the Port. These projects are growth-inducing, and their cumulative effect would 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.

Existing and proposed projects in the vicinity of the proposed Project that would provide new open space and recreation resources for the public include San Pedro Waterfront Enhancements Project (Project 21), Wilmington Waterfront Master Plan (Avalon Blvd. Corridor Project) (Project 25), Cabrillo Marine Aquarium Expansion (Project 44), East Wilmington Greenbelt Community Center (Project 56), and Queensway Bay Master Plan (Project 83). The addition of these projects would result in a significant increase in recreational opportunities in the area, and may benefit existing recreational resources in the proposed project vicinity by reducing the number of visitors to those recreational resources.

The construction of the cumulative projects would result in a temporary substantial loss or diminished quality of recreational, educational, or visitor-oriented opportunities, facilities, or resources on land and water throughout the Port. Although temporary, construction of the projects listed above would cause adverse significant impacts to many recreational resources in the vicinity of the proposed Project, thereby resulting in a substantial loss or significantly reduced quality of recreational experience.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Construction Impacts to Existing On-Land Recreational Opportunities

Construction activities that would affect on-land recreational opportunities within the vicinity of the proposed Project include demolition of existing structures, construction of new buildings and rail lines, filling, and construction of new upland facilities and wharves. These activities would temporarily remove or degrade existing on-land recreational opportunities within the proposed project vicinity (Impact REC-1a). Additionally, proposed Project-related construction along and east of Harbor Boulevard would result in significant impacts to existing recreational resources in this area for the duration of construction.

Alternatives 1 through 5 would involve a similar scale of construction equipment and duration as the proposed Project, which would also remove or degrade existing on-land recreational opportunities within the vicinity of the proposed Project for the duration of construction, although there would be no NEPA impact for Alternative 5. Alternative 6, the No-Project Alternative, would not involve any construction, and therefore would not result in impacts to on-land recreational resources within the vicinity of the proposed Project under CEQA and NEPA.

The construction of the proposed Project or alternatives would result in a temporary substantial loss or diminished quality of on-land recreational, educational, or visitor-oriented opportunities, facilities, or resources. Although temporary, construction of the proposed Project or alternatives would cause adverse significant impacts to many on-land recreational resources in the proposed project vicinity and would result in a substantial loss or significantly reduced quality of recreational experience. Therefore, construction impacts to on-land recreational opportunities from the proposed Project or alternatives would be cumulatively considerable under CEQA and NEPA, except there would be no NEPA impact for Alternatives 5 and 6.

Construction Impacts to Existing Water-Related Recreational Opportunities

Construction activities that would affect water-related recreational opportunities within the vicinity of the proposed Project include dredging, filling, and construction of new upland facilities and wharves. These activities would temporarily remove or degrade existing water-related recreational opportunities within the proposed project vicinity, including the recreational use of the Los Angeles Harbor waters. Furthermore, in-water construction activities of the proposed Project or alternatives would interfere with vessel traffic lanes in the Main Channel, creating additional hazards for private recreational watercraft for the duration of construction.

Alternatives 1 and 2 would involve a similar scale of construction equipment and duration as the proposed Project, which would also remove or degrade existing water-related recreational opportunities within the vicinity of the proposed Project for the duration of construction. Construction of Alternatives 3 and 4 would significantly impact water-related recreational opportunities within the proposed

project vicinity, but would result in less impact to recreational fishermen and recreational boating access than would the proposed Project. Alternative 5, the No-Federal Action Alternative, would not involve any construction within a federal jurisdiction, which includes the waters of the Los Angeles Harbor. Under this alternative, impacts to some water-related recreational resources would still be significant under CEQA; however, recreational access and use of the Los Angeles Harbor, wharves, and docking spaces within the proposed project vicinity would not be affected. Alternative 6, the No-Project Alternative, would not involve any construction and therefore would not result in impacts under CEQA or NEPA to water-related recreational resources within the vicinity of the proposed Project.

The construction of the proposed Project or alternatives would result in a temporary substantial loss or diminished quality of recreational, educational, or visitor-oriented opportunities, facilities, or resources. Although temporary, construction of the proposed Project or Alternatives 1 through 5 would cause adverse significant impacts to many water-related recreational resources in the proposed project vicinity, and would result in a substantial loss or significantly reduced quality of recreational experience for the duration of construction. Therefore, construction impacts to water-related recreational opportunities from the proposed Project or Alternatives 1 through 4 would be cumulatively considerable under CEQA or NEPA, except there would be no NEPA impact for Alternatives 5 and 6.

Operational Impacts to Existing On-Land Recreational Opportunities

Operation of the proposed Project or any alternative would not result in adverse significant impacts to on-land recreational opportunities within the vicinity of the proposed Project. Furthermore, buildout and operation of the proposed Project or Alternatives 1 through 5 would result in beneficial impacts with the addition of multiple on-land recreational resources and may even benefit existing recreational resources in the proposed project vicinity by reducing the impact of increased population (Impact REC-1b). Beneficial operational impacts vary between alternatives as discussed below.

Similar to the proposed Project, Alternatives 1 through 3 would provide a beneficial impact by adding additional on-land recreational opportunities, including pedestrian walkways, parks, and open space. Alternative 4 would also be beneficial, sharing many elements with the proposed Project that would provide additional on-land recreational opportunities. However, Alternative 4 does not propose constructing the North Harbor element; therefore, it would not provide recreational opportunities in the form of an enhanced California Coastal Trail through the North Harbor area. Buildout and operation of Alternative 5 would be beneficial, but would provide less on-land recreational opportunities than the proposed Project, particularly an enhanced promenade that could be utilized by bicyclists and pedestrians. Alternative 6 would have no proposed project construction, and therefore it would not provide any of the beneficial impacts to on-land recreational opportunities within the proposed project vicinity.

Upon buildout and operation of the proposed Project or Alternatives 1 through 5, there would be enhanced access to the waterfront as well as the addition of new parks

and open space. As discussed above, operation of the proposed Project or Alternatives 1 through 5 would create beneficial impacts. Alternative 6 would not create a significant adverse impact. As such, operation of the proposed Project or any alternative would not have a cumulatively considerable impact to on-land recreational resources under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

Operational Impacts to Existing Water-Related Recreational Opportunities

Similar to the discussion above under on-land recreational opportunities, operation of the proposed Project or any of the alternatives would not result in adverse significant impacts to water-related recreational opportunities within the vicinity of the proposed Project. In fact, buildout and operation of the proposed Project or Alternatives 1 through 4 would result in beneficial impacts with the addition of multiple water-related recreational resources (Impact REC-1b). Beneficial operational impacts vary between alternatives as discussed below.

Alternatives 1 through 4 would provide a beneficial impact by adding additional water-related recreational opportunities, including new harbors and wharves. Because Alternative 5 does not include the elements of the proposed Project that require in-water construction (i.e., no federal action), it would not create any additional water-related recreational opportunities. Alternative 6 would have no proposed project construction, and therefore would not provide any of the beneficial impacts to water-related recreational opportunities within the proposed project vicinity.

Upon buildout and operation of the proposed Project or Alternatives 1 through 4, there would be enhanced access to the waterfront as well as the addition of new harbors and wharves. As discussed above, operation of the proposed Project or Alternatives 1 through 4 would create beneficial impacts, and Alternative 5 and 6 would not create significant adverse impacts. As such, operation of the proposed Project or any alternative would not have a cumulatively considerable adverse impact under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

Mitigation Measures MM REC-1 through MM REC-7 and MM NOI-1 (see Section 3.9, “Noise”) would reduce adverse significant impacts during construction of the proposed Project or any of the alternatives. However, due to the length of time during which construction would occur and the proximity to recreational resources in the proposed project vicinity, unavoidable adverse and significant impacts would occur as a result of construction activities in spite of the implementation of all mitigation measures. Therefore, construction impacts associated with the proposed Project or Alternatives 1 through 4 would remain cumulatively considerable and unavoidable under CEQA and NEPA, and would remain cumulatively considerable for Alternative 5 under CEQA (no NEPA impact for Alternatives 5 and 6).

4.2.11 Transportation and Circulation (Ground)

4.2.11.1 Scope of Analysis

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 San Pedro Waterfront. The streets most likely to be impacted by cumulative project-related automobile and truck traffic are listed in Table 3.11-1. The 36 analysis intersections, identified in consultation with LADOT on the basis of their location in relation to the proposed Project and the potential for 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).

All analysis of roadway impacts presented in Section 3.11 reflects cumulative conditions. This means that future 2015 and 2037 conditions projected with the proposed Project include traffic from other regional development that is expected to occur regardless of whether or not the proposed Project is implemented. This provides for a more realistic projection of traffic under future conditions. If land use under the proposed Project or alternative 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).

As all traffic analyses completed for this EIS/EIR represent cumulative conditions, no additional cumulative analysis is needed. The following sections summarize the construction and operational roadway impacts that were identified in the surface transportation analyses presented in Section 3.11.

4.2.11.2 Cumulative Impact TC-1: Construction of the proposed Project would not result in a cumulatively considerable short-term, temporary increase in construction-related truck and auto traffic, decreases in roadway capacity, and disruption of vehicular and nonmotorized travel—less than cumulatively considerable with mitigation.

Cumulative Impact TC-1 represents the potential of the proposed Project or alternatives in combination with other cumulative projects to result in impacts to 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Potential cumulative construction effects from past, present, and reasonably foreseeable future projects on roadway operations 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 lane 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 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 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.

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 from the proposed Project.

- 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 is considered significant under CEQA and NEPA.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

Construction-related traffic due to the proposed Project would add to overall traffic congestion in the area, with most proposed project construction occurring between 2009 and 2014. The exact trip generation expected from construction would be determined as part of the detailed construction phasing plans that are prepared for the proposed Project or alternatives. At that time, traffic and/or road closures or narrowings that are expected from other concurrent construction activities would 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 or any of the alternatives, except for Alternatives 5 and 6, would result in temporary increases in traffic from construction worker commutes, deliveries and hauling of materials, roadway or lane closures, parking demands, sidewalk or bicycle path impacts, and slow-moving construction vehicles, which would result in a significant impact. Similar construction impacts identified for past, present, and reasonably foreseeable future projects, when combined with cumulative projects, the cumulative effects would be considerable.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure MM TC-1 (Develop and implement a Traffic Control Plan throughout proposed project construction) would reduce the contribution of the proposed Project or alternatives to cumulative construction impacts to less than cumulatively considerable levels. This mitigation would account for other construction activities occurring within the proposed project area (i.e., Waterfront Enhancements Project) and would coordinate schedules and activities to minimize effects of traffic disturbances and delays. This may include scheduling lane closures for non-peak traffic hours, providing detours for vehicles and pedestrians/bicyclists, and traffic controls such as signage and flag personnel. Access at driveways would be maintained, along with access for emergency vehicles, and adequate off-street parking areas would be provided on Port property to minimize disruption in surrounding neighborhoods. With this measure in place, residual impacts would be less than cumulatively considerable under CEQA or NEPA, except there would be no NEPA impact for Alternatives 5 and 6.

4.2.11.3 Cumulative Impact TC-2a: Proposed project operations would cumulatively increase traffic volumes and degrade LOS at intersections within

the proposed project vicinity—cumulatively considerable and unavoidable.

Cumulative Impact TC-2 represents the potential of the proposed Project, in combination with other cumulative projects, to result in significant increases in traffic volumes or degradation of level of service (LOS) as people travel to and from expanded commercial, recreational, and other waterfront facilities.

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 of the proposed Project, 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. A total of 25 cumulative projects were identified in the study area. They are listed in Table 6 of the traffic study in Appendix M.1.

Table 3.11-7 summarizes the trip generation projections that were completed for no-project conditions, as well as the alternatives. Traffic estimated under Alternative 5 (NEPA baseline) and Alternative 6 (CEQA baseline) reflect trips generated by other planned regional development. Projections under the proposed Project and alternatives reflect the trips contributed by the proposed Project and alternatives (net increase in trips over relevant baseline). Without mitigation, the impact of cumulative increases in traffic volume and decreased LOS is significant under CEQA and NEPA.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

The proposed Project or Alternatives 1 through 5 would increase traffic volumes and degrade LOS at intersections within the proposed project vicinity. Because the impacts from the proposed Project and alternatives are compared to the baseline that includes cumulative projects, the contribution from the proposed Project and alternatives would be cumulatively considerable for a number of intersections in 2015 and 2037. Tables 4-2 and 4-3 show the significant cumulative impacts in 2015 and 2037 for the proposed Project and alternatives under CEQA and NEPA.

Table 4-2. Summary of Significant Cumulative Impacts under CEQA (without Mitigation)

Intersection	*Proposed Project*	*Alt 1*	*Alt 2*	*Alt 3*	*Alt 4*	*Alt 5*

	2015	*2037*	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*
5. Gaffey Street/9th Street	X	X		X	X	X		X		X		X
6. Gaffey Street/7th Street		X				X						
7. Gaffey Street/6th Street	X	X	X	X	X	X		X		X		X
8. Gaffey Street/5th Street	X	X		X	X	X						
9. Gaffey Street/1st Street	X	X	X	X	X	X	X	X	X	X	X	X
20. Miner Street/22nd Street		X				X						
21. Harbor Boulevard/Miner Street/Crescent Avenue		X	X	X	X	X	X	X				
22. Harbor Boulevard/7th Street	X	X	X	X	X	X	X	X	X	X	X	X
23. Harbor Boulevard/6th Street		X				X						
24. Harbor Boulevard/5th Street	X	X	X	X	X	X	X	X	X	X	X	X
25. Harbor Boulevard/1st Street	X	X	X	X	X	X	X	X	X	X	X	X
26. Harbor Boulevard/Swinford Street/SR-47 eastbound ramps	X	X			X	X						
27. Harbor Boulevard/SR-47 westbound on-ramp		X		X		X						
28. Harbor Boulevard/Gulch Road			X	X	X	X	X	X				
29. Harbor Boulevard/O'Farrell Street	X	X	X	X	X	X	X	X	X	X	X	X
30. Harbor Boulevard/3rd Street	X	X	X	X	X	X	X	X	X	X	X	X
34. Gaffey Street /13th Street		X				X						

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Table 4-3. Summary of Significant Cumulative Impacts under NEPA (without Mitigation)

	Proposed Project		*Alt 1*		*Alt 2*		*Alt 3*	
Intersection	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*
5. Gaffey Street/9th Street		X				X		
6. Gaffey Street/7th Street								
7. Gaffey Street/6th Street	X	X			X	X		
8. Gaffey Street/5th Street		X			X	X		
9. Gaffey Street/1st Street		X				X		
20. Miner Street/22nd Street		X				X		
21. Harbor Boulevard/Miner Street/Crescent Avenue		X	X	X	X	X	X	X
22. Harbor Boulevard/7th Street	X	X	X	X	X	X	X	X
23. Harbor Boulevard/6th Street		X				X		
24. Harbor Boulevard/5th Street	X	X		X	X	X		
25. Harbor Boulevard/1st Street	X	X	X	X	X	X		X
26. Harbor Boulevard/Swinford Street/SR-47 eastbound ramps	X	X		X	X	X		X
27. Harbor Boulevard/SR-47 westbound on-ramp		X		X		X		X
28. Harbor Boulevard/Gulch Road			X	X	X	X	X	X
29. Harbor Boulevard/O'Farrell Street	X	X	X	X	X	X		
30. Harbor Boulevard/3rd Street	X	X	X	X	X	X	X	X
34. Gaffey Street/13th Street		X				X		

Notes:

There are no significant unavoidable NEPA impacts for Alternative 4

Alternatives 5 (No Federal Action) and 6 (CEQA No Project) would have no impact under NEPA

In addition, an impact is identified under CEQA on one neighborhood street, W 17th Street between Centre and Palos Verdes by 2037, which would be cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

Mitigation measures would be implemented to address intersection impacts identified through 2015 and 2037 (MM TC-2 through MM TC-14). Mitigation measures would fully mitigate some impacts to less-than-cumulatively considerable levels in 2015

and 2037, but for the remaining intersections, no feasible measures were identified that would fully mitigate the impact to due to existing physical constraints at those locations. Tables 4-4 and 4-5 show the cumulatively significant and unavoidable impacts in 2015 and 2037 for the proposed Project and alternatives under CEQA and NEPA.

Table 4-4. Summary of Cumulatively Significant Unavoidable Impacts under CEQA (after Mitigation)

	Proposed Project		*Alt 1*		*Alt 2*		*Alt 3*		*Alt 4*		*Alt 5*	
Intersection	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*
5. Gaffey Street/ 9th Street	X	X		X	X	X		X		X		X
6. Gaffey Street/ 7th Street		X				X						
8. Gaffey Street/ 5th Street		X		X		X						
9. Gaffey Street/ 1st Street	X	X	X	X	X	X	X	X	X	X	X	X
21. Harbor Boulevard/Miner Street/Crescent Avenue		X	X	X	X	X	X	X				
22. Harbor Boulevard/7th Street	X	X		X		X	X	X		X		X
23. Harbor Boulevard/6th Street						X						
24. Harbor Boulevard/5th Street		X				X						
25. Harbor Boulevard/1st Street		X				X						
27. Harbor Boulevard/SR-47 westbound on-ramp		X		X		X						
28. Harbor Boulevard/Gulch Road			X	X	X	X	X	X				

Table 4-5. Summary of Cumulatively Significant Unavoidable Impacts under NEPA (after Mitigation)

	Proposed Project		*Alt 1*		*Alt 2*		*Alt 3*	
Intersection	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*	*2015*	*2037*

Intersection	Proposed Project		Alt 1		Alt 2		Alt 3	
	2015	2037	2015	2037	2015	2037	2015	2037
5. Gaffey Street/9th Street		X				X		
6. Gaffey Street/7th Street								
8. Gaffey Street/5th Street								
9. Gaffey Street/1st Street		X				X		
21. Harbor Boulevard/Miner Street/Crescent Avenue		X	X	X	X	X	X	X
22. Harbor Boulevard/7th Street	X	X		X		X	X	X
23. Harbor Boulevard/6th Street						X		
24. Harbor Boulevard/5th Street		X				X		
25. Harbor Boulevard/1st Street		X						
26. Harbor Boulevard/Swinford Street/SR-47 eastbound ramps		X				X		
27. Harbor Boulevard/SR-47 westbound on-ramp		X		X		X		X
28. Harbor Boulevard/Gulch Road			X	X	X	X	X	X

Notes:

There are no significant unavoidable NEPA impacts for Alternative 4

Alternatives 5 (No Federal Action) and 6 (CEQA No Project) would have no impact under NEPA

The proposed Project, Alternative 1, and Alternative 2 would also result in cumulatively significant unavoidable impacts under CEQA due to projected increases in traffic on neighborhood streets, specifically on West 17th Street between Centre and Palos Verdes, under 2015 and 2037 conditions. No feasible mitigation is identified to address these impacts. Short of the permanent closure of the affected street segment, which would not be acceptable since it serves adjacent land uses and carries substantial traffic volumes, no mitigation measures exist that would fully eliminate the addition of significant or adverse traffic volumes to this segment of 17th Street. No cumulatively considerable impacts to neighborhood streets would occur under CEQA for Alternatives 3 through 6, and no cumulatively considerable impacts would occur under NEPA.

4.2.11.4 Cumulative Impact TC-2b: Proposed project operations would cumulatively increase traffic volumes and degrade LOS along neighborhood

streets within the proposed project vicinity—cumulatively considerable and unavoidable.

Cumulative Impact TC-2b represents the potential of the proposed Project or alternatives in combination with other cumulative projects to result in significant increases in traffic volumes or degradation of LOS along neighborhood streets as people travel to and from expanded commercial, recreational, and other waterfront facilities.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Increases in traffic volumes on neighborhood streets due to cumulative new development would degrade LOS on neighborhood streets. The neighborhood street impact analysis was derived from the same list of related projects as the intersection analysis described above. The cumulative projects that have the potential to contribute to cumulative neighborhood street impacts are primarily those located to the west of the Main Channel and east of Gaffey Street, and include, but are not limited to, Cabrillo Way Marina Phase II [Project 5], Port of Los Angeles Charter School and Port Police Headquarters [Project 8], San Pedro Waterfront Enhancements Project [Project 21], Pacific Corridors Redevelopment Project [Project 43], Cabrillo Marine Aquarium Expansion [Project 44], Mixed use development at 407 7th Street [Project 47], Pacific Trade Center [Project 49], and Mixed-Use Development at 281 W 8th Street [Project 51]. The cumulative effect from these cumulative projects has not resulted in significant cumulative impacts to neighborhood streets.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

The proposed Project and alternatives would increase the number of people traveling to and from the San Pedro Waterfront area. The resulting increase in traffic volumes would increase traffic volumes and degrade LOS on the surrounding neighborhood roadways when added to the traffic from the cumulative projects plus ambient growth conditions. Two neighborhood roadways were analyzed as part of the EIS/EIR for the proposed Project. As presented in Section 3.11, the proposed Project would result in cumulatively considerable impacts to West 17th Street between Centre and Palos Verdes under CEQA by 2037. Additionally, Alternatives 1 and 2 would result in cumulatively considerable impacts to West 17th Street between Centre and Palos Verdes in both 2015 and 2037. Alternatives 3, 4, and 5 would not result in cumulatively considerable impacts to any neighborhood roadway segments. No cumulatively considerable impacts would occur under NEPA for the proposed Project or any of the alternatives.

Mitigation Measures and Residual Cumulative Impacts

No feasible mitigation is identified to address the cumulatively considerable impacts due to traffic on West 17th Street between Centre and Palos Verdes under 2015 and 2037 conditions. Short of the permanent closure of the affected street segment, which would not be acceptable since it serves adjacent land uses and carries substantial traffic volumes, no mitigation measures exist that would fully eliminate the addition of cumulatively considerable traffic volumes to this segment of 17th Street. Impacts would be cumulatively considerable under CEQA. No cumulatively considerable impacts would occur under NEPA for the proposed Project or any of the alternatives.

4.2.11.5 Cumulative Impact TC-2c: Proposed project operations would not cumulatively increase traffic volumes and degrade operations on CMP facilities within the proposed Project vicinity—less than cumulatively considerable.

Cumulative Impact TC-2c represents the potential of the proposed Project or alternatives in combination with other cumulative projects to degrade operations on CMP facilities within the proposed project vicinity.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Increases in traffic volumes due to cumulative new development would degrade LOS on CMP facilities. As presented in Table 3.11-13, a number of CMP facilities are impacted under baseline conditions (future with cumulative projects and ambient growth). Specifically, the following CMP monitoring stations are projected to operate at LOS E or F during baseline conditions:

- I-110 at Manchester Boulevard (northbound/westbound)—2015 PM,
- I-110 at Manchester Boulevard (southbound/eastbound)—2015 AM/PM,
- I-405 south of I-110 at Carson Scales (northbound/westbound)—2015 AM,
- I-405 north of Inglewood Boulevard (southbound/eastbound)—2015 PM,
- I-110 at Manchester Boulevard (northbound/westbound)—2037 AM/PM,
- I-110 at Manchester Boulevard (southbound/eastbound)—2037 AM/PM,
- I-405 south of I-110 at Carson Scales (northbound/westbound)—2037 AM/PM,
- I-405 south of I-110 at Carson Scales (southbound/eastbound)—2037 AM/PM,
- I-405 north of Inglewood Boulevard (northbound/westbound)—2037 AM, and

- I-405 north of Inglewood Boulevard (southbound/eastbound)—2037 PM.

These impacts have occurred over time as a result of other cumulative developments within the Ports of Los Angeles and Long Beach, as well as other surrounding communities.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

To determine whether significant impacts would occur on the CMP freeway facilities under CEQA and NEPA, the difference in V/C between cumulative-plus-project operating conditions and the no-project operating conditions were compared to the CMP thresholds. Even on the CMP facilities that are projected to operate at LOS F, the proposed Project or alternatives would result in a V/C change of less than 0.02. Therefore, operational impacts would be less than significant under CEQA and NEPA for the proposed Project or all alternatives. Impacts would be less than cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

No mitigation is required. Impacts would be less than cumulatively considerable under CEQA and NEPA.

4.2.11.6 Cumulative Impact TC-3: Proposed project operations would not cause cumulatively considerable increases in 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 or alternatives in combination with other cumulative projects to increase demand for transit service beyond the supply of such services.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

None of the cumulative projects would adversely impact transit service. However, a number of cumulative projects have the potential to increase demand for transit, including, but not limited to, Cabrillo Way Marina Phase II [Project 5], Port of Los Angeles Charter School and Port Police Headquarters [Project 8], San Pedro Waterfront Enhancements Project [Project 21], Pacific Corridors Redevelopment Project [Project 43], Cabrillo Marine Aquarium Expansion [Project 44], Mixed Use

Development at 407 7th Street [Project 47], Pacific Trade Center [Project 49], and Mixed-Use Development at 281 W 8th Street [Project 51]. The cumulative effect from these projects has not resulted in significant cumulative impacts to transit service. Section 3.11.2.5 describes existing transit service in the proposed project area, which is served by bus transit lines operated by Metro, LADOT, MAX, and PVPTA. LAHD also operates the San Pedro Electric Trolley, a rubber-tired trolley, and the Waterfront Red Car Line, a vintage rail trolley line.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

As described in Section 3.11, the proposed Project or alternatives would generate a maximum of approximately 30 new transit person trips in the AM peak hour and 58 new transit person trips in the PM peak hour to the transit lines providing service in the vicinity of the proposed project site (assuming the 3.5% transit mode split suggested in the CMP). This results in an average of approximately three person trips per bus in the AM peak hour and five person trips per bus in the PM peak hour in 2015 and 2037. At this minimal level of activity, impacts to the regional transit system resulting from the proposed Project or alternatives would be considered less than cumulatively considerable under CEQA and NEPA.

Mitigation Measures and Residual Cumulative Impacts

No mitigation is required. Impacts would be less than cumulatively considerable under CEQA and NEPA.

4.2.11.7 Cumulative Impact TC-4: Proposed project operations would not result in a violation of the City's adopted parking policies and parking demand would not exceed supply—less than cumulatively considerable.

Cumulative Impact TC-4 represents the potential of the proposed Project or alternatives in combination with other cumulative projects to result in a parking demand that would exceed proposed supply.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Impacts related to parking demand are primarily site specific because each cumulative project is expected to provide adequate supply to meet their respective demands. Because impacts related to inadequate parking only occur within a short

distance from the destination, the cumulative projects that have the potential to contribute to cumulative impacts is limited to those within the immediate area, including Cabrillo Way Marina Phase II [Project 5], Port of Los Angeles Charter School and Port Police Headquarters [Project 8], San Pedro Waterfront Enhancements Project [Project 21], and Cabrillo Marine Aquarium Expansion [Project 44]. Each of these projects has provided sufficient parking, either constructed or planned, to meet projected demand. Therefore, the cumulative effect from these cumulative projects would not result in significant cumulative impacts to parking supply.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

The proposed Project would increase parking demand at the waterfront facilities. A detailed parking analysis has been prepared for the proposed Project and alternatives, comparing the proposed parking supply to the demand and to the requirements set forth in the City of Los Angeles Municipal Code. Proposed parking supply would exceed code requirements as well as accommodate projected parking demand through 2015 and 2037 for the proposed Project or Alternative 2 under CEQA. However, the alignment of the Waterfront Red Car expansion could result in loss of available parking within the parking lot serving the Cabrillo Marine Aquarium and Cabrillo Beach. Alternatives 1, 3, 4, and 5 would not accommodate parking demand in 2037 under CEQA for the cruise terminal facilities. Additionally, the alignment of the Waterfront Red Car expansion could result in loss of available parking for Alternatives 1, 3, 4, and 5 under CEQA. Thus, operational impacts of the proposed Project to parking would be cumulatively considerable under CEQA. Operational impacts to parking would not occur under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures MM TC-15a, MM TC-15b, or MM TC-15c would reduce impacts from the proposed Project and Alternative 2 to less than cumulatively considerable levels. Additionally, Mitigation Measures MM TC-15a, MM TC-15b, or MM TC-15c, plus Mitigation Measures TC-28 (for Alternative 3), TC-29 (for Alternative 4), and TC-30 (for Alternative 5) would reduce impacts to less than cumulatively considerable levels for Alternatives 1, 3, 4, and 5. Therefore, operational impacts of the proposed Project to parking would be less than cumulatively considerable under CEQA. Cumulative operational impacts to parking would not occur under NEPA.

4.2.11.8 Cumulative Impact TC-5a: The alignment of the Waterfront Red Car expansion for the proposed Project would not increase potential conflict with

vehicles at cross streets—less than cumulatively considerable.

Cumulative Impact TC-5a represents the potential of the proposed Project and alternatives in combination with other cumulative projects to result in conflict with vehicles at cross streets due to the Waterfront Red Car expansion.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Cumulative impacts related to potential conflicts with vehicles at cross streets due to the Waterfront Red Car expansion would be limited to cumulative projects within the vicinity of the proposed alignment. The cumulative projects that have the potential to contribute to cumulative impacts are limited to those within the immediate area and include Cabrillo Way Marina Phase II [Project 5], San Pedro Waterfront Enhancements Project [Project 21], and Cabrillo Marine Aquarium Expansion [Project 44]. The realignment and extension of the Waterfront Red Car would create numerous new grade crossings where vehicular traffic and pedestrians would mix, resulting in potential safety hazards. The cumulative projects would contribute to vehicle trips and pedestrians along roadways that cross the proposed Waterfront Red Car tracks, but the vehicular and pedestrian safety hazards associated with the Waterfront Red Car expansion of these cumulative projects at cross street locations would not be cumulatively significant.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

As discussed in Section 3.11, the realignment and extension of the Waterfront Red Car would create numerous new grade crossings where vehicular traffic and pedestrians would mix, resulting in potential safety hazards. The proposed alignment would be crossed by both existing and proposed driveways serving adjacent uses. Vehicular and pedestrian safety hazards associated with the Waterfront Red Car expansion at cross street locations are considered cumulatively considerable under CEQA for the proposed Project or Alternatives 1 through 5. No cumulative impacts would occur under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures MM TC-16 through MM TC-21 would reduce impacts to less than cumulatively considerable levels for the proposed Project or Alternatives 1 through 5. No cumulative impacts would occur under NEPA.

4.2.11.9 Cumulative Impact TC-5b: The alignment of the Waterfront Red Car expansion for the proposed Project would not increase potential conflict at track crossovers where the rail would transition between center-running and side-running—less than cumulatively considerable.

Cumulative Impact TC-5b represents the potential of the proposed Project or alternatives in combination with other cumulative projects to result in conflict at track crossovers where the rail would transition between center-running and side-running due to the Waterfront Red Car expansion.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Cumulative impacts related to potential conflicts from track crossovers where the rail would transition between center-running and side-running due to the Waterfront Red Car expansion would be limited to cumulative projects within the vicinity of the proposed alignment. The cumulative projects that have the potential to contribute to cumulative impacts is limited to those within the immediate area, including Cabrillo Way Marina Phase II [Project 5], San Pedro Waterfront Enhancements Project [Project 21], and Cabrillo Marine Aquarium Expansion [Project 44]. The proposed Waterfront Red Car alignment includes several locations where the tracks would cross over the adjoining streets. In addition to these in-street track crossovers, the proposed alignment of the Cabrillo Beach/Marina extension would run through an existing parking lot at its southern terminus, resulting in potential safety hazards. The cumulative projects would contribute to vehicle trips and pedestrians along roadways that cross the proposed Waterfront Red Car tracks. Vehicular and pedestrian safety hazards associated with the Waterfront Red Car expansion at cross street locations of these cumulative projects would not be cumulatively significant.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

As discussed in Section 3.11, the proposed Waterfront Red Car alignment includes several locations where the tracks would cross over the adjoining streets. In addition to these in-street track crossovers, the proposed alignment of the Cabrillo Beach/Marina extension would run through an existing parking lot at its southern terminus. Vehicular and pedestrian safety hazards associated with the Waterfront Red Car expansion at cross street locations are considered cumulatively considerable under CEQA for the proposed Project or Alternatives 1 through 5. No cumulative impacts would occur under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures MM TC-22 and MM TC-23 would reduce impacts to less than cumulatively considerable levels for the proposed Project or Alternatives 1 through 5. No cumulative impacts would occur under NEPA.

4.2.11.10 Cumulative Impact TC-5c: The Waterfront Red Car expansion for the proposed Project would not result in increased pedestrian conflicts at stations—less than cumulatively considerable.

Cumulative Impact TC-5c represents the potential of the proposed Project and alternatives in combination with other cumulative projects to result in increased pedestrian conflicts at stations due to the Waterfront Red Car expansion.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Cumulative impacts related to potential pedestrian conflicts at stations due to the Waterfront Red Car expansion would be limited to cumulative projects within the vicinity of the proposed alignment. The cumulative projects that have the potential to contribute to cumulative impacts is limited to those within the immediate area, including Cabrillo Way Marina Phase II [Project 5], San Pedro Waterfront Enhancements Project [Project 21], and Cabrillo Marine Aquarium Expansion [Project 44]. The cumulative projects would contribute to additional ridership on the Waterfront Red Car, thereby increasing pedestrian conflicts at stations. These pedestrian safety hazards associated with the Waterfront Red Car expansion at stations for the cumulative projects would not be cumulatively significant.

Contribution of the Proposed Project and Alternatives (Prior to Mitigation)

As discussed in Section 3.11, the proposed Waterfront Red Car projects ridership of approximately 2,000 passengers per day system-wide, or an average of approximately 125 passengers per day per station. An increased number of stations and level of pedestrian activity associated with the stations and the new pedestrian bridge also increases the number of places where pedestrians and vehicles may mix and thus increases potential safety conflict points for pedestrians. Pedestrian safety hazards associated with the Waterfront Red Car stations are considered cumulatively considerable under CEQA for the proposed Project or Alternatives 1 through 5. No cumulative impacts would occur under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measures MM TC-24 through MM TC-26 would reduce impacts to less than cumulatively considerable levels for the proposed Project or Alternatives 1 through 5. No cumulative impacts would occur under NEPA.

4.2.12 Transportation and Navigation (Marine)

4.2.12.1 Scope of Analysis

The proposed Project would allow a greater number of larger cruise vessels to call at the Port both at the Inner and Outer Harbor. Like all commercial vessels, these ships would follow designated traffic channels (also used by other vessels) when approaching and leaving the Los Angeles Harbor. Similarly, dredging and in-water construction activities associated with the proposed Project would occur within the Port's existing federal channel limits (i.e., channel and berthing areas). 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 Los Angeles Harbor, Main Channel, and precautionary areas.

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

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.12. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.12.2 Cumulative Impact VT-1: The proposed Project would not cumulatively interfere with 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—less than cumulatively considerable.

Cumulative Impact VT-1 represents the potential of the proposed Project along with other cumulative projects to increase traffic congestion or reduce the existing level of safety for vessels navigating the Los Angeles Harbor, Main Channel, West Basin, and/or precautionary areas. This includes construction and operation phase impacts.

As reported in Section 3.12.3, vessel traffic levels are highly regulated by the U.S. Coast Guard (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 Los Angeles Harbor 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 Los Angeles Harbor; 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 Los Angeles Harbor 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 Los Angeles Harbor.

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 Los Angeles 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 could result in marine vessel safety impacts if they introduce construction equipment to the Los Angeles Harbor, Main Channel, West Basin, or precautionary areas, or if they 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 Project (Project 1), Berths 136–147 Terminal Project (Project 2), Channel Deepening Project (Project 4), Cabrillo Way Marina Project (Project 5), San Pedro Breakwater Artificial Reef Project (Project 6), Berth 226–236 (Evergreen) Container Terminal Improvements Project (Project 7), SSA Outer Harbor Fruit Facility Relocation Project (Project 9), Pacific LA Marine Terminal (Project 11), Westway Decommissioning (Project 13), Consolidated Slip Restoration Project (Project 14), Berths 97–109 China Shipping Development Project (Project 15), Berths 171–181 Pasha Marine Terminal Improvements Project (Project 16), Berth 302–305 (APL) Container Terminal Improvements Project (Project 23), Wilmington Waterfront Master Plan (Project 25), Berths 212–224 (YTI) Container Terminal Improvements Project (Project 28), and the Berths 121–131 (Yang Ming) Container Terminal Improvements Project (Project 29). Construction activities would introduce construction equipment into the Main Channel. The Port utilizes standard safety precautions in piloting these vessels through Los Angeles Harbor waters, and standard measures including compliance with LAHD standards for construction and dredging safety. USACE permit requirements would also apply. While overall vessel traffic would increase from past, present, and foreseeable future projects, this increase would not create significant cumulative impacts.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The construction phase of the proposed Project would involve the use of construction vessels and equipment to conduct fill, dredge, and wharf, dock, and promenade construction and rehabilitation activities within the Los Angeles Harbor, Main Channel, West Basin, and precautionary areas. These types of activities are routinely conducted in the Los Angeles Harbor, and contractors performing in-water or over-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts and USACE permits. LAHD would utilize standard safety precautions in piloting these vessels through Los Angeles Harbor waters, and standard measures including compliance with LAHD standards for construction and dredging safety and USACE permit requirements would also apply. Thus, the short-term presence of supply barges/support boats in the Los Angeles Harbor, Main Channel, and precautionary areas would not reduce the existing level of safety for vessel navigation in the Los Angeles Harbor. Thus, construction of the proposed Project or alternatives would not result in cumulatively considerable impacts on navigation and marine transportation.

During operations, the proposed Project or alternatives are expected to attract increased levels of recreational vessel traffic to the Los Angeles Harbor, Main Channel, and precautionary areas. The proposed Project or Alternative 2 operations would also result in an additional 17 cruise vessel calls per year in 2015 and an additional 29 cruise vessel calls per year, compared with the 2006 CEQA baseline of 258 annual cruise vessels calls. Compared to the NEPA baseline of 275, the proposed Project would result in an increase of 12 annual vessel calls in 2037 (see Table 3.12-7). Operations and increased vessel calls under Alternatives 1 and 3 would be less than the proposed Project (only 17 additional calls in 2037 compared to the CEQA baseline, and no additional calls compared to the NEPA baseline). Alternative 4 and 5 impacts would be the same as the proposed Project under CEQA, but there would be no operational impacts or vessel increases under NEPA.

The cumulative increase in Port recreational vessel and cruise ship 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 Los Angeles 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 with other vessels, collisions with stationary objects or structures, and groundings) in the Los Angeles Harbor is relatively low (0.0038% probability, see Section 3.12.2.2.1 for additional information) compared to vessel traffic volumes within the Los Angeles Harbor.

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.

Given the continued use of standard practices and implementation of COTP uniform procedures, the projected cumulative increase in annual vessel calls would not significantly decrease the margin of safety for marine vessels within the cumulative area impacted by the proposed Project or alternatives.

These practices and procedures ensure safe transit of vessels operating within as well as to and from the proposed project area. Therefore, the proposed Project or alternatives considered together with other present and reasonably foreseeable future projects in the proposed project area would result in less-than-significant impacts and would not be cumulative considerable regarding vessel transportation safety under CEQA and NEPA.

Mitigation Measures and Residual Cumulative Impacts

Because the proposed Project or alternatives would have less than cumulatively considerable impacts on marine transportation, no mitigation measures would be required. Impacts would remain less than cumulatively considerable under CEQA and NEPA.

4.2.13 Utilities and Public Services

4.2.13.1 Scope of Analysis

Cumulative impacts on utilities and public services (i.e., police and fire protection, water supply, landfill and wastewater treatment capacities, and energy) can result from the combined demand of the proposed Project or alternatives along with past, present, and reasonably foreseeable future related projects. The geographic scope depends on the service area of the individual public service or utility provider and the jurisdiction over which increased demand for services from the proposed Project or alternatives 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 communities of San Pedro and 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 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 or alternatives serve only the Port and Los Angeles Harbor area. Direct impacts of the proposed Project or alternatives would be localized to the Port area, but indirect impacts could extend further within the City. For storm water, the geographic scope includes the Promenade, Ports O'Call, and immediately adjacent lands within the Los Angeles Harbor's subwatershed because this represents the drainage area that would be influenced by the proposed Project or alternatives. The service areas of the Bureau of Sanitation (wastewater), Los Angeles County Sanitation Districts and Browning Ferris Industries (BFI) (solid waste), and Los Angeles Department of Water and Power (LADWP) (water and electricity) encompass the City of Los Angeles. The

Southern California Gas Company (SCG) (natural gas) serves most of central and Southern California. However, the analysis region for cumulative utilities impacts focuses on the Port and Los Angeles Harbor area because the infrastructure immediately serving the proposed Project or alternatives is located within this service area, and service subareas of utility providers are sufficiently separated such that increased service demands from the proposed Project or alternatives would not threaten such provisions in other areas.

For the purposes of this EIS/EIR, the timeframe of current or reasonably anticipated projects extends from 2003 through to 2037, and the vicinity is defined as the area over which effects of the proposed Project or alternatives could contribute to cumulative effects (the PMP area).

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project or alternatives in Section 3.13. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.12.2 Cumulative Impact PS-1: The proposed Project would not burden existing USCG, LAPD, or Port Police staff levels and facilities such that USCG, LAPD, or Port Police would not be able to maintain an adequate level of service without requiring construction of additional facilities that could cause cumulatively considerable environmental impacts—less than cumulatively considerable.

Cumulative Impact PS-1 represents the potential of the proposed Project or alternatives along with other cumulative projects to increase the demand for additional law enforcement officers and/or facilities such that the USCG, LAPD, or Port Police would not be able to maintain an adequate level of service without additional facilities.

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 circumstance (as described in Section 3.13.2.1.1); therefore, cumulative Port development would directly affect only the Port Police. Construction and operation of past projects has created an existing demand for police protection that is adequately accommodated by the Port Police and LAPD. The Port Police has continuously increased staffing levels in conjunction with past Port development in order to maintain adequate service levels. The Port Police are estimated to have 223 additional positions authorized for the fiscal year of 2007–2008, which includes 142 total sworn officers (recently approved

to grow to 212). The Port Police can adequately provide for the proposed Project or alternatives and would be able to accommodate Port growth and development as it proceeds. (Kirwan and Provinchain pers. comm. 2008.)

Many of the present and reasonably foreseeable future cumulative projects described in Table 4-1 involve the relocation, and in some cases expansion of facilities, which could result in increased demand for public services. Several of the projects would increase the demand for local police by increasing the amount of Port land used for operations. Specifically, the Pier 400 Container Terminal and Transportation Corridor Project (Project 1), the Berth 136–147 Project (Project 2), Evergreen Improvements Project (Project 7), Middle Harbor Terminal Redevelopment (Project 66), Berth 171–181 Pasha Marine Terminal Improvements (Project 16), the Berth 302–305 APL Container Terminal (Project 23), and the Berth 121–131 Project (Project 29) would generate increased on-land terminal operations. However, similar to the proposed Project or alternatives, and pursuant to the Watch Manual, these projects would be required 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. Additionally, these projects would be required to implement Maritime Transportation Security Act (MTSA) mandated security features, including terminal security personnel, gated entrances, perimeter fencing, terminal and backlands lighting, and camera systems, that would reduce the demand for law enforcement personnel. Additionally, the Port Police would continue to increase staffing and facility upgrades in conjunction with future development in order to ensure that adequate service would be provided to all future project sites. Specifically, the Port Police are in the process of building a new headquarters at 330 S. Centre Street (between 3rd and 5th Streets), noted in Table 4-1 as Port of Los Angeles Charter School and Port Police Headquarters (Project 8). It is projected that the new station will be completed in 2010, including in-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 center, and a Port Police dive and in-water training center. (Kirwan pers. comm. 2008.)

The USCG determines response times based on the distance that is required to travel to the various Port facilities. Development due to the proposed Project and other reasonably foreseeable projects would not affect USCG response times because projects would be located within the same operating distance of other facilities within the jurisdiction of the Ports of Los Angeles and Long Beach. Because all of the projects would be constructed in locations that USCG can adequately respond to, response time would not increase, and USCG would not have to add additional response resources. (Gooding 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 project would not result in significant cumulative impacts related to the demand for law enforcement.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project or alternatives would not substantially increase the demand for police protection services. At no time would construction of the proposed project or alternative impact response times for USCG, LAPD, or the Port Police. Proposed project or alternative 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, MTSA mandated security features, including terminal security personnel, gated entrances, perimeter fencing, terminal and backlands lighting, and camera systems, would be implemented at the proposed project site and would reduce the demand for law enforcement personnel. Additionally, LAHD would be required, pursuant to the Watch Manual, to coordinate with law enforcement agencies during construction of all roadway improvements to establish emergency vehicular access, ensuring continuous law enforcement access to surrounding areas. The Port Police are adequately staffed with sworn personnel to provide for the activities of the Port, and this is not estimated to change with increased development. The proposed Project or alternatives would be located within the same operating distance of other facilities served by the USCG and would therefore not increase emergency response times. Therefore, the proposed Project or alternative would have no adverse effects on police protection or USCG services and would result in less than cumulatively considerable impacts under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternatives would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.12.3 Cumulative Impact PS-2: The proposed Project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing facility to maintain service—less than cumulatively considerable.

Cumulative Impact PS-2 represents the potential of the proposed Project or alternatives along with other cumulative projects to require the addition of a new fire station or the expansion, consolidation, or relocation of an existing facility to maintain service.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and operation of past projects has created an existing demand for fire protection that can be accommodated by the LAFD because emergency response times to the Port 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. Because required response times are 9 minutes by land and 14 minutes by water, these response times are considered adequate. (Roupoli pers. comm. 2007.) Many of the present and reasonably foreseeable future cumulative projects described in Table 4-1 involve the relocation and in some cases expansion of existing facilities within the Port and vicinity; therefore, an increased demand on fire protection could result from their development. Several of the projects would increase the demand for local fire protection by increasing the amount of Port land used for operations. Specifically, the Pier 400 Container Terminal and Transportation Corridor Project (Project 1), the Berth 136–147 Project (Project 2), Evergreen Improvements Project (Project 7), Middle Harbor Terminal Redevelopment (POLB) (Project 66), Berth 171–181 Pasha Marine Terminal Improvements (Project 16), the Berth 302–305 APL Container Terminal (Project 23), and the Berth 121–131 Project (Project 29) would generate increased on-land terminal operations. However, 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 future cumulative projects would be required, similar to the proposed Project or alternatives, and pursuant to the Watch Manual 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. As a consequence, past, present, and reasonable foreseeable future projects would not result in significant cumulative impacts to fire protection services.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project or alternatives would not substantially increase the demand for fire protection services. As described under Impact PS-2, the proposed Project or alternatives 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. Any site access alterations would be reviewed and approved by the LAFD. During proposed project or alternative operations, pursuant to the Watch Manual, LAHD would coordinate with LAFD during construction of all roadway improvements to establish emergency vehicular access, ensuring continuous law enforcement access to

surrounding areas. Because fire protection services would be incorporated in to the proposed project site and emergency response times would not increase, the proposed Project or alternatives would have no adverse effect of fire protection services and would not make a cumulatively considerable contribution to a significant cumulative impact to fire protection services under CEQA or NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternatives would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.12.4 Cumulative Impact PS-3: The proposed Project would not require or result in the construction or expansion of utility lines that would cause cumulatively considerable environmental effects—less than cumulatively considerable.

Cumulative Impact PS-3 represents the potential of the proposed Project or alternatives along with other cumulative projects to result in significant environmental effects from the construction and/or expansion utility lines in order to support new development.

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 pers. comm.). The LADWP has installed numerous water lines to supply water throughout the Port, and these water lines have sufficient capacity. The LADWP Water Services Organization implement a Capital Improvement Program (CIP) (LADWP 2003) on a 10-year planning basis that focuses on installing or replacing existing components of the water system to ensure the provision of a reliable and high-quality water supply to all the citizens of Los Angeles. The focus of the CIP is to develop a 10-year capital budget to program funds for capital improvements to the water system. The CIP is updated periodically to serve as a continuous planning and budgeting tool. Because LADWP will continue to update the CIP and provide water services for its customers, the past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts on water distribution lines.

The TITP is currently operating at 55% of its capacity of 30 million gallons per day; therefore, it is able to adequately accommodate current wastewater generation that area a result of past projects. Wastewater in the TITP service area is conveyed to TITP through the conveyance system that is designed and sized to accommodate TITP capacity. Wastewater flows are substantially below the plant's capacity and capacity of the conveyance system. The City projects that by 2020, wastewater flows in the TITP service area will grow to 19.9 mgd (City of Los Angeles 2006b); 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 the substantial remaining capacity at TITP beyond 2020, which, based on the wastewater flow growth rate projected between 2006 and 2020, is estimated to adequately handle 2037 wastewater flow demands. Similarly, conveyance system capacity would accommodate wastewater flows from the related projects. Consequently, the past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts to wastewater conveyance capacity.

Many of the projects identified in Table 4-1 involve relocation and in some cases expansion of existing facilities within the Port and vicinity. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional demand on utilities and service systems. These projects include the Pier 400 Container Terminal and Transportation Corridor Project (Project 1), the Berth 136–147 Project (Project 2), Berth 171–181 Pasha Marine Terminal Improvements (Project 16), the Berth 302–305 APL Container Terminal (Project 23), Ponte Vista (Project 63), and Dana Strand (Project 58). The related projects would likely require construction or installation of water, wastewater, and storm drain utility systems on their respective sites, and may have to connect with nearby supply utility lines (usually in streets or other public rights-of-way). However, because the water, wastewater, and storm drain utility lines have adequate capacity, past, present, and reasonably foreseeable future projects would not result in significant cumulative environmental impacts.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project's or alternatives' increased water demands, wastewater generations, and storm runoff would not exceed the capacity of existing facilities. However, upgrades and relocation of utility lines would be required to support proposed project or alternative construction and development. All 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. Additionally, any upgrades and relocations associated with the proposed Project or alternatives would simply be to accommodate the location of the proposed Project or alternative and aging infrastructure, rather than to satisfy any substantial increase in utility demands that would result in the construction and/or expansion of water, wastewater, or storm drain lines in order to support new development. Therefore, the proposed Project or alternative would not

result in a cumulatively considerable impact to utility lines that would cause environmental effects (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are required because the contribution of the proposed Project or alternatives would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.12.5 Cumulative Impact PS-4: The proposed Project would not exceed water or wastewater requirements, require new wastewater treatment facilities, require new landfills, or exceed existing landfill capacities—less than cumulatively considerable with mitigation.

Cumulative Impact PS-4 represents the potential of the proposed Project or alternatives along with other cumulative projects to generate substantial solid waste, water, and/or wastewater demands that would exceed the capacity of existing facilities.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and 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, or 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, it is assumed that water supply and availability are adequate and are assumed in the ponding Water Supply Assessment created for the proposed Project, expected by the end of 2008. Together with local groundwater sources, the Los Angeles-Owens River Aqueduct, purchases from the MWD, and recycled water,

[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/. As discussed above, the 2005 LADWP UWMP relies, in part, on water supply purchases from MWD. Section A.3 of the 2005 MWD UWMP provides justifications for its supply projections including existing supplies, historical supplies, and contracts for future supplies.

LADWP estimates that it will have adequate supply for future projects (LADWP 2007).

The TITP wastewater treatment plant is currently operating at 55% of its daily capacity of 30 million gallons per day, treating between 16 mgd and 17 mgd (City of Los Angeles Bureau of Sanitation 2004). This results in an available capacity of 13 to 14 million gallons of additional wastewater flow per day. The City projects that by 2020, wastewater flows in the TITP service area will grow to 19.9 mgd (City of Los Angeles 2006b); 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 the substantial remaining capacity at TITP beyond 2020, which, based on the growth rate of the wastewater flow projected between 2006 and 2020, is estimated to adequately handle 2037 wastewater flow demands. 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 City/County Landfill. Sunshine Canyon SLF Landfill has a daily throughput capacity of 12,100 tons allotted for City use and is expected to accommodate demands until 2037 (CIWMB 2008). 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. Currently, there is a citywide diversion rate of 62%, and a goal of 70% by 2015, 90% by 2025, and an ultimate goal of zero waste by 2030. (Pereira pers. comm. 2007).

Additionally, the City of Industry approved 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. (City of Industry 2007). With the remaining capacity of Sunshine Canyon City/County Landfill, along with the proposed intermodal system and anticipated recycle diversion rates for the area, solid waste removal and disposal would be adequately provided for past, current, and future projects, and cumulative considerable impacts would be less than significant.

Many of the projects identified in Table 4-1 are Port redevelopment projects within the proposed project vicinity; some may require expansion of facilities. Several of the projects involve new or expanded land uses or throughput operations that may result in additional utility demands. These projects include the Pier 400 Container Terminal and Transportation Corridor Project (Project 1), the Berth 136–147 Project (Project 2), Evergreen Improvements Project (Project 7), Middle Harbor Terminal Redevelopment (Project 66), Berth 171–181 Pasha Marine Terminal Improvements (Project 16), the Berth 302–305 APL Container Terminal (Project 23), Berth 121–131 Project (Project 29), Pone Vista (Project 63), and Dana Strand (Project 58). The number of related projects would increase the demands for water as well as generation

of wastewater and solid waste. The past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact on the provision of water, would not result in a significant cumulative impact on wastewater treatment capacity, and would not result in a significant cumulative impact to solid waste capacity.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project or alternative would result in increased water demands, wastewater, and solid waste generation that would not exceed the capacity of existing facilities.

The proposed Project or alternatives would operate at full capacity in 2037 and would generate a maximum water demand of approximately 705.54 acre-feet per year. This project has not been planned for within the LADWP 2005 UWMP; as such, amendments to the general plan would be required to achieve consistency. However, water supply and availability are assumed in the pending Water Supply Assessment created for the proposed Project; this document is expected by the end of 2008. Additionally, because the LADWP provides water to the Port and has planned for water usage through 2030, and because ongoing water supply planning would continue to occur via new or updated UWMPs in the future, the proposed Project or alternatives would not result in significant impacts and would not make a cumulatively considerable contribution to a significant cumulative impact related to water supply under CEQA or NEPA (no NEPA impact for Alternatives 5 and 6).

Wastewater generation would contribute 1.1% of the TITP daily capacity. Because the TITP currently operates at 55% capacity, these increases would be considered negligible. The amount of increased wastewater generated by proposed project construction and operations 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 2037), as described above. Therefore, impacts to the TITP wastewater treatment facility would be less than significant, and the proposed Project would not make a cumulatively considerable contribution to a significant impact to wastewater capacity under CEQA or NEPA (no NEPA impact for Alternatives 5 and 6).

The proposed Project or alternatives would generate 9.64 tons of solid waste per day. With the current recycle diversion rate of 62%, the amount of solid waste that would go the Sunshine Canyon City/County landfill represents 0.03% of the permitted daily throughput of 12,100 tons. If the goal of a 70% diversion rate is achieved by 2015, that amount would reduce to 0.02%. Finally, if the goal of a 100% diversion rate is achieved by 2030, the amount of solid waste sent to Sunshine Canyon City/County Landfill would be 0% for the project horizon date of 2037. Because these are minimal amounts of solid waste and because Sunshine Canyon City/County landfill will remain open through the project horizon date of 2037, the solid waste generated would not represent a significant cumulative impact to landfill capacity (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

Mitigation Measures MM PS-2 through MM PS-5, as described in Section 3.13.4.3.1, further reduce impacts to solid waste and water demand. Impacts would be less than cumulatively considerable under CEQA or NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.12.6 Cumulative Impact PS-5: The proposed Project would not require new, offsite energy supply and distribution infrastructure, or capacity-enhancing alterations to existing facilities that are not anticipated by adopted plans or programs—less than cumulatively considerable

Cumulative Impact PS-5 represents the potential of the proposed Project along with other cumulative projects to generate increases in energy demands such that the construction of new energy supply facilities and distribution infrastructure would be required.

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 SCG. LADWP has a total generating capacity of approximately 7,000 megawatts per day to serve a peak Los Angeles demand of about 5,600 megawatts per day. 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. Through the IRP and the LADWP's current generating capacity, there is adequate generation to serve the current customer load. (Holloway pers. comm.) Natural gas service to the proposed project site would be supplied by SCG. As a public utility, SCG is under the jurisdiction of the state Public Utilities Commission (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 at this time based on current supply and demand projections. (SCG 2007.)

Several of the projects identified in Table 4-1 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 (Project 1), Evergreen Improvements Project (Project 7), Berths 121–131 Yang Ming Container Terminal (Project 29), Middle Harbor Terminal Redevelopment (Project 69), Berths 97–109 China Shipping Terminal Development Project (Project 15), Berths

171–181 Pasha marine Terminal Improvements (Project 16), and Berths 302–305 APL Container Terminal Expansion (Project 23). These related projects would place an additional demand on electricity and natural gas. As there is only a finite supply of these resources, reasonably foreseeable development may require the construction and/or expansion of energy utility infrastructure. Therefore, past, present, and reasonably foreseeable future projects would have a significant cumulatively impact under CEQA and NEPA.

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 habitats. As a consequence, LADWP is charged with maintaining sufficient capability to provide its customers with a reliable supply of power. The LADWP prepared an IRP in 2006 to provide a framework to assure that future energy needs of LADWP customer are reliably met at the least cost and are consistent with the City commitment to environmental excellence (City of Los Angeles 2006b). The IRP provide objectives and recommendations to reliably supply LADWP customers with power and to meet a 20% renewable energy goal by 2010.

The 2006 IRP includes 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, electricity resource and reserves at LADWP will adequately provide electricity for the Port, including past, present, and reasonably foreseeable future projects. 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 offsite power station or facility. As a result, past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact related to the provision of energy under CEQA and NEPA.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project or alternatives would result in minimal increased demands for electricity and natural gas. The increase in electricity demands associated with proposed project or alternative operations 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 management programs to meet load requirements for future customers. Furthermore, the proposed Project or alternatives 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.

Energy expenditures during construction would be short term in duration, occurring periodically during each of the proposed project or alternative 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.[2] Additionally, construction of modern buildings and structures incorporates energy-efficient designs that are mandated by current building codes. Currently, LAHD has the goal for the Outer Harbor Cruise Terminals to be built with Silver Standard LEED Certification.

Project-related natural gas demands (space and water heating) would not be substantial. Natural gas demands for the proposed Project or alternatives (space heating and water heating) would not exceed available supplies because the increase in square footage is a small increase compared to the existing square footage. Because the proposed Project or alternatives would not generate substantial new energy demands to support operations, impacts would not be cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

Implementation of Mitigation Measure MM PS-6 (Energy Conservation) would further reduce impacts to energy infrastructure and supply. Impacts would be less than cumulatively considerable.

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 includes all lands that constitute the watershed for the LA/LB Harbor as well as the LA/LB Harbor itself. The joint LA/LB Harbor, rather than just the Los Angeles Harbor, must be included because the Federal Breakwater shelters the two harbors as a unit and water circulates within the harbor complex. The watersheds contributing flows to the LA/LB Harbor must be included because these lands produce all runoff that flows to the LA/LB Harbor; therefore, activities performed on these lands have the potential to affect water quality and sediment quality in the LA/LB Harbor. Stormwater flows from these lands also have the potential to affect water flows and flooding in and immediately adjacent to the LA/LB Harbor.

2 The Port of Los Angeles, Environmental Programs. Updated: Unknown. Available: http://www.portoflosangeles.org/environment_mit.htm. Accessed: March 19, 2008

The temporal scope to identify past, present, and reasonably foreseeable future projects that contribute to the cumulative effects analysis on water quality, sediments, and oceanography spans Port activities from the early history of the proposed project area (described in Section 4.1.2.1) through to future projects and conditions in 2037. The CEQA baseline for determining the significance of potential impacts under CEQA is December 2006, 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. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.14.2 Cumulative Impact WQ-1: The proposed Project would not 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—less than cumulatively considerable.

Cumulative Impact WQ-1 addresses the potential of the proposed Project along with other cumulative 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

As discussed in Section 3.14, portions of the proposed Project and adjacent areas of the Port are within the 100-year flood zone. Generally, the areas within the 100-year flood zone include areas within 100 to 200 feet of the water's edge, with more extensive areas (up to 500 feet from the water's edge) along the shoreline from the south end of the Cabrillo Marina to the breakwater. The remainder of the proposed project area is not 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 (relative to both the CEQA and NEPA baselines) 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. Generally, most of the projects listed in Table 4-1 involve redevelopment of existing impervious or mixed pervious and impervious areas (i.e., the Port is primarily an industrial area). 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 would not result in significant cumulative impacts under CEQA or NEPA.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

As discussed in Section 3.14, new onsite storm drains installed for the proposed Project or alternatives (other than Alternative 6, no action) 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 or alternatives, but construction of harbors under the proposed Project or Alternatives 1 through 4 would decrease the land surface area upon which precipitation would fall. This change would not occur under Alternatives 5 and 6. Also, under the proposed Project or Alternatives 1 through 5, there would be a slight decrease in impervious surface in the proposed project area due to creation of parks, primarily at the Outer Harbor cruise ship terminal, San Pedro Park, and Fisherman's Park. Site grading and the storm drain system would be adequate to convey runoff to the LA/LB Harbor without the risk of flooding under most conditions. Runoff associated with a 50-year 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 or alternatives would not substantially increase the risk of harmful flooding, and impacts would not be cumulatively considerable relative to both the CEQA and NEPA baselines (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are needed because the contribution of the proposed Project or alternatives to cumulative impacts would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.14.3 Cumulative Impact WQ-2: The proposed Project would not cumulatively reduce or increase the amount of surface water in a water body—less than cumulatively considerable.

Cumulative Impact WQ-2 represents the potential for the proposed Project along with other cumulative projects to substantially reduce or increase the amount of surface water in a water body. Such a change can be evaluated as a change in the surface

area of the water body or a change in the volume of the water body; both types of changes affect the amount of surface water in the water body.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The site of the proposed Project or alternatives is within a commercial harbor environment that has been highly modified by past dredging, filling, and shoreline development in support of the 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 dredged areas, changes to surface area and volume persist to the present day. Many of the cumulative projects would or have added fill, totaling over 700 acres, of which about 600 acres are completed or under construction. Other cumulative projects with a dredging component, such as Channel Deepening (Project 4), have removed watershed-derived sediments that accumulated in navigational channels and new project areas. The largest such project, Channel Deepening (Project 4), is removing between 3.94 and 8.5 million cubic yards of fill with a comparable increase in the volume of water in the Los Angeles Harbor. These cumulative projects have caused a cumulatively significant reduction in the surface area of the LA/LB Harbor, although it is not clear if the projects have cumulatively increased or decreased the volume of water in the LA/LB Harbor.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

Construction of the proposed Project or any of the alternatives would result in a minimal change in the surface area and volume of the Los Angeles Harbor. The proposed Project or Alternatives 1 to 4 would result in a small increase in the surface area and volume of the Los Angeles Harbor from excavation of up to three harbors: the North Harbor, Downtown Harbor, and the 7th Street Harbor. The resulting surface area net increase of up to 6.82 acres represents only 4% of the total area of the Main Channel in the proposed project area and an even smaller proportion of the entire LA/LB Harbor and its volume. No change at all would occur under Alternatives 5 and 6. Therefore, the proposed Project or alternatives would not result in a cumulatively considerable contribution to impacts associated with the amount of surface water in a water body.

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are needed because the contribution of the proposed Project or alternatives to cumulative impacts would be less than cumulatively considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.14.4 Cumulative Impact WQ-3: The proposed Project would not result in a permanent, cumulative adverse change to the movement of surface water sufficient to produce a substantial change in the velocity or direction of water flow—less than cumulatively considerable.

Cumulative Impact WQ-3 addresses the potential of the proposed Project along with other cumulative projects to permanently alter surface water movements sufficient to produce a substantial adverse change in the velocity or direction of water flow.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past dredging, filling, and shoreline development operations have altered surface water movement in the LA/LB Harbor. For example, water circulation patterns have been altered by the past, present, and future cumulative projects, which include dredging and/or placement of fill. Changes of this kind could affect water quality by inhibiting the exchange of waters between different portions of the LA/LB Harbor, which in turn could limit mixing and dilution of runoff. However, baseline studies and other routine monitoring efforts (e.g., MEC and Associates 2002) discussed in Section 3.14 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 LA/LB Harbor complex. This finding is consistent with expectations 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 LA/LB Harbor complex that are adequate to avoid stagnation.

Since water quality and other data do not indicate a cumulative adverse effect on surface water movement, the impacts of related projects are not cumulatively significant with respect to surface water movement. There is additionally no indication that present and reasonably foreseeable future projects would result in incremental impacts on surface water movement qualitatively different from those that have occurred in the past. Therefore, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts under CEQA or NEPA.

Contribution of the Proposed Project or Alternatives (Prior to Mitigation)

The proposed Project and Alternatives 1 through 3 would remove a small amount of fill (6.82 acres) to create three harbors off the Main channel. Alternative 4 would not

create North Harbor and so would remove a lesser amount of fill. Blind slip areas, such as these harbors, tend to be areas of lower circulation due to their morphology. However, because these harbors are all directly adjacent to the Main Channel, the principal tidal channel for the Inner Harbor, tidal current velocities and tidal range in the Main Channel are adequate to ensure that circulation through the proposed harbors would not result in stagnation or adversely affected water quality. In addition, the proposed Project or Alternatives 1 through 4 would all involve placement of pilings for new dock and wharf facilities. This would reduce water movement beneath the wharfs, but due to the distance between pilings and the continual tidal action in the Main Channel, this would not result in stagnation or cause adverse impacts to marine water quality. Alternatives 5 and 6, in contrast, would not entail in-water work and would not affect surface water movement in any way.

Cumulative impacts from dredged and fill areas on surface water movement would not be cumulatively significant, and the impacts of the proposed Project or Alternative would not be cumulatively considerable relative to both the CEQA and NEPA baselines (no NEPA impact for Alternatives 5 and 6).

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are needed because the contribution of the proposed Project or alternatives to cumulative impacts would be less than considerable under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6).

4.2.14.5 Cumulative Impact WQ-4: The proposed Project would result in cumulatively considerable discharges that create pollution, contamination, or nuisance as defined in Section 13050 of the CWC 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—cumulatively considerable and unavoidable.

Cumulative Impact WQ-4 represents the potential of the proposed Project along with other cumulative projects to create pollution, cause nuisances, or violate applicable standards as defined in Section 13050 of the California Water Code (CWC) 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Water and sediment quality within the geographic scope are affected by activities within the LA/LB Harbor (e.g., shipping and wastewater discharges from the Terminal Island Treatment Plant [TITP]), inputs from the watershed including aerial deposition of particulate pollutants, and effects from historical (legacy) inputs to the LA/LB Harbor. As discussed in Section 3.14, portions of the LA/LB Harbor complex are identified on the current Section 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 would be developed by the LARWQCB that would specify load allocations from the individual input sources, such that the cumulative loadings to the LA/LB 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 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 LA/LB Harbor (Anchor et al. 2005: p 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 to water quality that would be individually comparable to those associated with the proposed Project. Changes to water quality associated with in-water construction for the other cumulative projects would not persist for the same reasons discussed in Section 3.14. Therefore, cumulative impacts would occur only if both the temporal and spatial influences of concurrent projects overlapped. A number of cumulative projects are located in the vicinity of the proposed Project and involve in-water construction activities, including Berth 136–147 (Project 2), Channel Deepening (Project 4), Cabrillo Way Marina (Project 5), Berth 226–236 (Project 7), China Shipping Development (Project 15) and Berths 121–131 Development (Project 29). Dredging for Phase I of Project 15 has been completed, dredging for Project 4 is in progress, and Projects 2, 5, 7 and 29 are still in the planning phase with construction planned to begin within the next 5 years. A number of projects within the Port of Long Beach, including the Middle Harbor Development (Project 66), Piers G and J Redevelopment (Project 67), Pier T (Project 70), and Pier S (Project 71), would involve dredging and/or in-water construction. However, water quality effects from projects within the Port of Long Beach would be limited to the immediate dredging or construction area and would not affect the Main Channel. Currently, the timing and duration of dredging for these projects is not known. Assuming that the projects are distributed randomly in time within the next 5 to 10 years, and that dredging activities for each project would require a few months, it is plausible that as many as two or three of the projects named above could entail concurrent dredging activities. There is thus the potential for concurrent but temporary cumulative impacts from dredging. Each dredging project would be separately evaluated and would separately show that temporary effects on water quality due to dredging would be minimized. Therefore, it is unlikely that the cumulative impacts of only two or three concurrent dredging projects in the relatively large area represented by LA/LB Harbor would have a significant impact on water

quality, unless any of the projects were individually shown to have a significant impact attributable to the temporary effects of dredging. Therefore, the impacts on water quality associated with construction of past, present, and reasonably foreseeable future projects would not be cumulatively significant.

The LA/LB Harbor watershed is characterized primarily by urban and industrial land uses with a high proportion of paved surface. Therefore, soil loadings to the LA/LB Harbor are not excessive, and waters are not impaired by sedimentation. Cumulative projects such as Projects 1 through 3, 5, 15, 21, 29, and 42 through 53 have or are expected to disturb soils and make them subject to erosion by wind or runoff, with potential for subsequent transport into and accumulation in the LA/LB Harbor. Soils exposed by construction activities would be subject to erosion, transport off site, or deposition in the LA/LB Harbor. As with dredging, 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 again, 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. It is thus unlikely that the cumulative impacts of concurrent backland construction projects would have a significant impact on sedimentation, unless any of the projects were individually shown to have a significant impact attributable to sedimentation.

Operational projects would result in wastewater and 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. Therefore, the impacts on water quality associated with wastewater and stormwater discharges from past, present, and reasonably foreseeable future projects would not be cumulatively significant.

Cumulative projects associated with the development of Port facilities, including Projects 1, 2, 7, 11, 15, 23, 28, 29, 66, 67, 70, and 71, 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 LA/LB 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. As discussed in Section 3.14.4.3.1, the potential for accidental spills and illegal vessel discharges would likely increase in proportion to the increased vessel traffic; waste loadings to the LA/LB Harbor would also be expected to increase. The significance of the increased loadings related to these discharges would depend on the volumes and composition of the releases and the timing and effectiveness of spill response actions. However, as noted for the proposed Project (Section 3.14.4.3.1), there is no evidence that illegal

discharges for ships are causing widespread impacts to water quality in the LA/LB Harbor. Nonetheless, due to release of contaminants associated with anti-fouling paints, especially copper, into waters that are already water quality limited with respect to copper, the impacts on water quality associated with increased vessel traffic to past, present, and reasonably foreseeable future projects would be cumulatively significant under CEQA or NEPA.

Contribution of the Proposed Project or Alternative (Prior to Mitigation)

In-water construction activities, such as dredging and wharf construction, would suspend bottom sediments. While this would not constitute a discharge, disturbances of bottom sediments would alter some water quality parameters such as dissolved oxygen, nutrients, and turbidity. These changes are generally 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 under the proposed Project or Alternatives 1 through 4 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 CEQA and NEPA. Once the construction phase of the proposed Project or alternatives is completed, operations would not be expected to cause further disturbances to bottom sediments or contribute to cumulative impacts. No in-water construction would occur under Alternatives 5 and 6; therefore, no cumulative impacts due to in-water construction would occur for these alternatives.

The proposed Project or alternatives would not result in any direct discharge of wastewater to the LA/LB Harbor. However, stormwater runoff from the onshore portions of the proposed project area would flow into the LA/LB 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 CEQA and NEPA baselines, the proposed project or alternatives operations would contribute similar or lower volumes of runoff (due to the decreased surface area associated with excavation of new harbors and reduced impervious area due to park development) and no substantial differences in the chemical composition because the land uses would be essentially the same. While the inputs from the proposed Project or alternatives 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 LA/LB Harbor. Thus, impacts to water quality from the proposed Project or alternatives would be cumulatively considerable and unavoidable with mitigation under CEQA and NEPA (no NEPA impact for Alternatives 5 and 6 and no CEQA impact for Alternative 6).

The proposed Project or alternatives would result in an increased number of ship visits to the Ports of Los Angeles and Long Beach, which would contribute to higher

mass loadings of contaminants such as copper that are released from vessel hull anti-fouling paints and would also result in a proportionally higher potential for accidental spills and illegal vessel discharges within the LA/LB Harbor. Recent history seems to show improvements in water quality in spite of increased use of the LA/LB Harbor due to improved regulation and enforcement. However, a large volume spill or waste discharge directly to the LA/LB Harbor could result in significant impacts to water quality, and the proposed Project or Alternatives 1 through 4 would contribute to the cumulative risk of a significant spill or discharge. Portions of the LA/LB Harbor are listed as impaired under Section 303(d) of the Clean Water Act with respect to copper, and the proportional increase in leaching of contaminants such as copper from anti-fouling paint would add to the cumulative loading of these contaminants from other projects which also would increase ship traffic. Due to the potential for leaching of contaminants from anti-fouling paints, impacts to water quality from the proposed Project or Alternatives 1 through 4 and other projects would be cumulatively considerable and unavoidable under CEQA and NEPA. This impact would be less than significant under Alternative 5 or Alternative 6.

Mitigation Measures and Residual Cumulative Impacts

Mitigation for stormwater effects would occur under the proposed Project or Alternatives 1 through 5. Mitigation would not be required under Alternative 6 (no action).

Best management practices to prevent or minimize contaminant loadings to the LA/LB Harbor from stormwater runoff from past, present, and reasonably future projects, including the proposed Project or alternatives, are required by the Standard Urban Stormwater Mitigation Plan (SUSMP), which is incorporated into the Los Angeles County Urban Runoff and Stormwater NPDES Permit issued by the LARWQCB. SUSMP requirements must be incorporated into the 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 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 for the proposed Project or alternatives would reduce the residual cumulative impacts from runoff. Thus, the proposed Project's or alternatives' contribution to the cumulative impact would be less than considerable under CEQA and NEPA.

Mitigation measures to prevent or minimize contaminant loadings to the LA/LB Harbor due to increased cruise ship operations would be implemented under the proposed Project or Alternatives 1 through 4. Mitigation would not be required under Alternatives 5 and 6 because these alternatives would not result in increased cruise ship operations. Mitigation measures include measures to minimize contaminant loading from non-point sources (NPS) and measures designed specifically to reduce the risk of spills. Each tenant operating cruise ships in the project area would conform to applicable requirements of the NPS Pollution Control

Program. Accordingly, tenants are required to design all terminal facilities whose operations could result in the accidental release of toxic or hazardous substances (including sewage and liquid waste facilities, and solid and hazardous waste disposal facilities) in accordance with the state NPS Pollution Control Program administered by the SWRCB. While adopted BMPs vary by project, measures selected and implemented are required to use the Best Available Technology that is economically achievable and at a minimum must maintain relevant water quality criteria as outlined by the California Toxics Rule and Basin Plan, or in cases where ambient water quality exceeds these criteria, maintain discharges at or below ambient levels.

Each tenant that engages in fueling of vessels would develop an approved source control program (SCP) with the intent of preventing and remediating accidental fuel releases. Prior to construction, the tenant would develop an approved SCP in accordance with LAHD guidelines established in the General Marine Oil Terminal Lease Renewal Program. The SCP would address immediate leak detection, tank inspection, and tank repair. In addition, tenants would be required to submit to LAHD an annual compliance/performance audit in conformance with LAHD's standard compliance plan audit procedures.

As discussed in Section 3.14, safety measures specified in the Los Angeles Harbor District Risk Management Plan and in proposed project-specific SPCC plans minimize the risks of a large accidental spill from impacting the LA/LB Harbor. However, these plans cannot completely eliminate the risk of a spill. Consequently, the contribution to cumulative impact resulting from the proposed Project or Alternative 1 through 4 would be significant and unavoidable under CEQA and NEPA. Alternatives 5 and 6 would not produce cumulative impacts because those alternatives result in minimal increases in vessel traffic.