Chapter 4
Cumulative Analysis

CHAPTER SUMMARY

This chapter evaluates the potential for the proposed Project or an alternative, together with other past, present, and reasonably foreseeable future projects in the cumulative geographic scope of each resource area, to make a cumulatively considerable contribution to a significant cumulative impact.

Chapter 4, Cumulative Analysis, provides the following:

- A description of existing environmental setting in the Port area;
- A description of applicable local, state, and federal regulations and policies that apply to the cumulative impact analysis;
- A description of the past, present and foreseeable future projects in the surrounding area;
- An impact analysis of both the cumulative impacts related to the proposed Project and alternatives; and,
- A description of any mitigation measures proposed to reduce any potential impacts and residual cumulative impacts, as applicable.

Key Points of Chapter 4:

The proposed Project would expand an existing container terminal, and its operations would be consistent with other uses and container terminals in the Project area.

The proposed Project would make a cumulatively considerable contribution to a significant cumulative impact in the following resource areas under CEQA and NEPA:

- Aesthetics;
- Air Quality, Meteorology, and Greenhouse Gases (also referred to as Air Quality);
- Biological Resources; and
- Noise.

Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant cumulative impact in the same resource areas as the proposed Project to varying degrees under CEQA and NEPA. Alternative 1 would contribute to fewer cumulatively considerable impacts than the proposed Project under CEQA (Alternative 1 is not applicable to NEPA), and Alternative 2 would contribute to fewer cumulatively considerable impacts than the proposed Project under CEQA and NEPA.

4.1 Introduction

This chapter presents CEQA and NEPA requirements for a cumulative impact analysis and analyzes the potential for the proposed Project or an alternative to contribute to a cumulatively considerable effect when combined with other past, present, and reasonably foreseeable future projects. Following the presentation of the requirements related to the cumulative impact analyses and a description of the related projects (Sections 4.1.1 and 4.1.2, respectively), the analysis in Section 4.2 addresses each of the resource areas for which the proposed Project or alternative may make a contribution to a cumulatively considerable impact, when combined with other reasonably foreseeable projects in the area.

4.1.1 Requirements for Cumulative Impact Analysis

NEPA (40 CFR Section 1508.7 and 40 CFR Section 1508.25[a][2]) and the state CEQA Guidelines (14 California Code of Regulations [CCR] 15130) require a reasonable analysis of the cumulatively considerable 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" (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 changes 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 Section 1508.7 and CEQA Guidelines, Section 15355[b]).

Furthermore, according to 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 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 Corps, as part of its cumulative impacts analysis, has to identify area(s) in which the effects of the proposed action will be felt; the effects that are expected in the area(s) 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 impact(s) 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 or alternative make a cumulatively considerable contribution to a significant cumulative impact within the context of impacts caused by other past, present, or future projects. The cumulative impact scenario considers other projects proposed within the area defined for each resource that would have the potential to contribute to cumulatively considerable impacts.

For this Draft 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 below. The list of related projects is provided in Section 4.1.2 below.

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 2007 Air Quality Management Plan and the 2008 *Multiple Air Toxics Exposure Study* (MATES-III) (SCAQMB, 2007 and 2008). The Traffic/Circulation cumulative analysis uses future traffic growth forecasts for the area from the Southern California Association of Governments (SCAG) Regional Travel Demand Forecasting Model and the Port Travel Demand Model, which are described in Section 3.6. The cumulative analysis of noise impacts uses a hybrid approach, as it relies on both the annual regional growth rates utilized for traffic (because traffic is an important contributor to noise impacts) and the list of related projects documented in Section 4.1.2.

4.1.2 Projects Considered in the Cumulative Analysis

4.1.2.1 Past Projects

The below discussions describe the past projects that have contributed to potential cumulative impacts related to the proposed project.

History of the Port of Los Angeles

The Port is located in the San Pedro Bay at the southernmost point of Los Angeles County, approximately 20 miles from downtown Los Angeles. Because of its proximity to the Pacific Ocean, the Port 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-ft section of the breakwater was completed, and the Main Channel was widened to 800 ft and dredged to a depth of 30 ft 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, the Los Angeles Harbor District launched a broad restoration program. Many of the facilities in the Harbor required maintenance that had been delayed during the war years. In recent years, 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 (container size and shape driven) configurations, 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 and creating land (through in-water fill) land to expand terminals, and replacing older wharves that could not bear the increased weight of newer containers.

History of the Project Area

As described in Chapter 2, Section 2.3.1, the Port Master Plan (PMP) identified development of the area surrounding and including the Project site (Area 9: Terminal Island/Seaward Extension) as being "of critical importance to the planning and use of virtually all other planning areas in the Harbor District," and targeted this area for dry bulk cargoes, rail loops, receiving, storage, and shipping facilities, with deep-water berths (POLA, 1979). Later planning efforts confirmed the necessity of developing the Pier 300 area to its maximum potential. Much of the main landform that makes up Pier 300 (the location of the current APL Terminal) was created by a 190-acre landfill (Master Planning Amendment Area 9), which was constructed in the early 1980s with material dredged from the inner and outer Los Angeles harbors during the Los Angeles Harbor Deepening Project (USACE and LAHD, 1980). The existing APL Terminal is operating on Pier 300, which includes this 190-acre portion.

Following the creation of the main 190-acre landform, a narrow 1.4-acre landfill was approved in 1994 (Master Planning Amendment 13) as a turnaround area for truck loading and unloading of containers from the fourth ship berth, which was constructed with materials dredged from the Deep Draft Navigation Project (USACE and LAHD, 1992).

In February 2002, the Pier 300 Expansion Site (Master Planning Amendment 21) created approximately 41 acres of fill adjacent to the existing APL Terminal (behind the 1.4-acre

landfill and proposed Berth 306) from approximately 1.6 million cy of dredge material from the Channel Deepening Project approved in 2000 (USACE and LAHD, 2000). The approximate 41-acre site has remained undeveloped and unused since its creation.

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

4.1.2.2 Current and Future Projects

A total of 146 present or reasonably foreseeable future projects (approved or proposed) were identified within the general vicinity of the Project that could contribute to cumulative impacts. The locations of these projects are shown in Figure 4-1. A corresponding list of the cumulative projects is provided in Table 4-1 compiled from sources that include LAHD, the Port of Long Beach, LADOT, and the City of Los Angeles and other local jurisdictions. 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 Draft EIS/EIR, the timeframe of current or reasonably anticipated projects extends from 2009 to 2027, and the vicinity is defined as the area over which effects of the proposed Project or an alternative 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.

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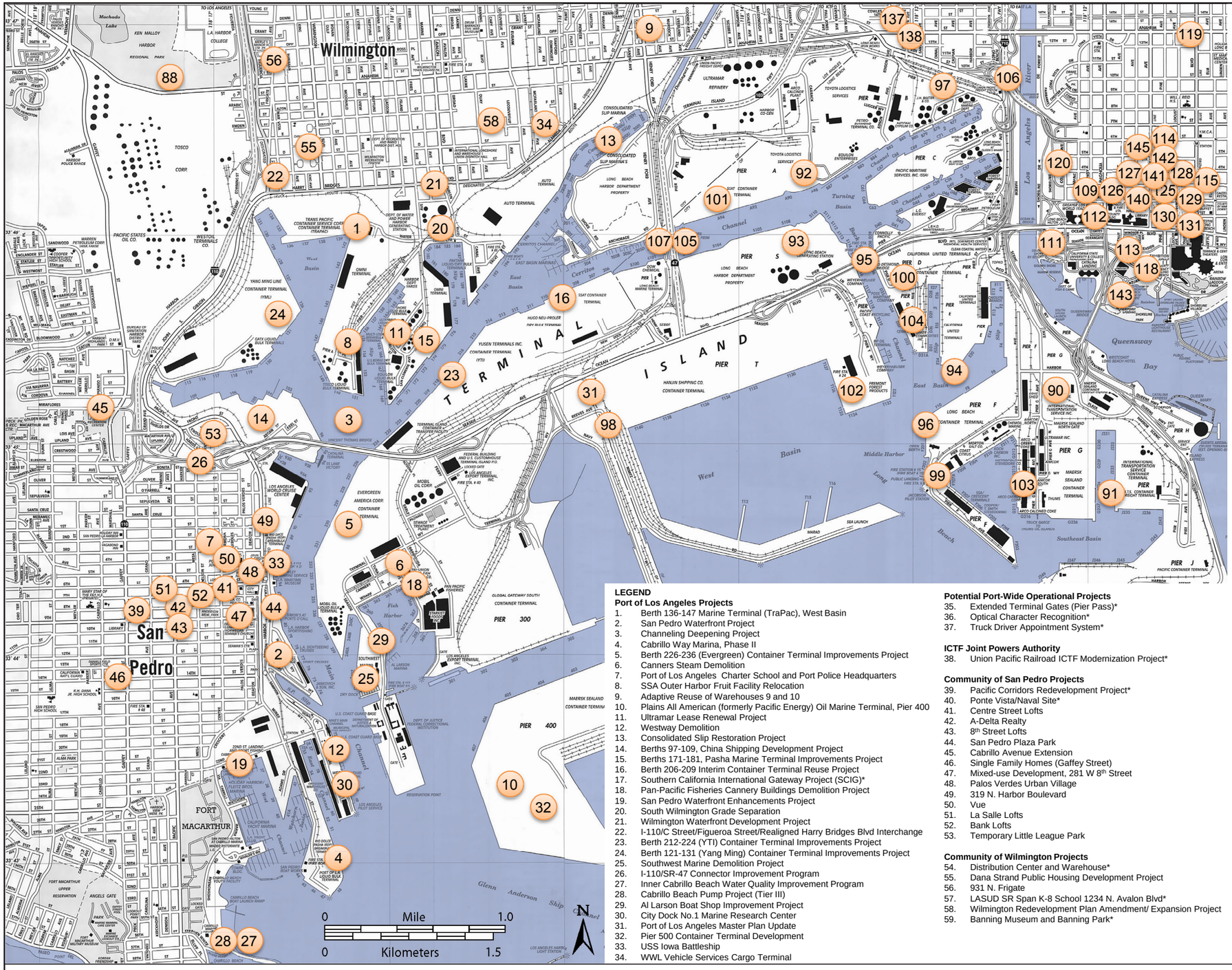

LEGEND

Port of Los Angeles Projects

1. Berth 136-147 Marine Terminal (TraPac), West Basin
2. San Pedro Waterfront Project
3. Channeling Deepening Project
4. Cabrillo Way Marina, Phase II
5. Berth 226-236 (Evergreen) Container Terminal Improvements Project
6. Canners Steam Demolition
7. Port of Los Angeles Charter School and Port Police Headquarters
8. SSA Outer Harbor Fruit Facility Relocation
9. Adaptive Reuse of Warehouses 9 and 10
10. Plains All American (formerly Pacific Energy) Oil Marine Terminal, Pier 400
11. Ultramar Lease Renewal Project
12. Westway Demolition
13. Consolidated Slip Restoration Project
14. Berths 97-109, China Shipping Development Project
15. Berths 171-181, Pasha Marine Terminal Improvements Project
16. Berth 206-209 Interim Container Terminal Reuse Project
17. Southern California International Gateway Project (SCIG)*
18. Pan-Pacific Fisheries Cannery Buildings Demolition Project
19. San Pedro Waterfront Enhancements Project
20. South Wilmington Grade Separation
21. Wilmington Waterfront Development Project
22. I-110/C Street/Figueroa Street/Realigned Harry Bridges Blvd Interchange
23. Berth 212-224 (YTI) Container Terminal Improvements Project
24. Berth 121-131 (Yang Ming) Container Terminal Improvements Project
25. Southwest Marine Demolition Project
26. I-110/SR-47 Connector Improvement Program
27. Inner Cabrillo Beach Water Quality Improvement Program
28. Cabrillo Beach Pump Project (Tier III)
29. Al Larson Boat Shop Improvement Project
30. City Dock No.1 Marine Research Center
31. Port of Los Angeles Master Plan Update
32. Pier 500 Container Terminal Development
33. USS Iowa Battleship
34. WWL Vehicle Services Cargo Terminal

Potential Port-Wide Operational Projects

35. Extended Terminal Gates (Pier Pass)*
36. Optical Character Recognition*
37. Truck Driver Appointment System*

ICTF Joint Powers Authority

38. Union Pacific Railroad ICTF Modernization Project*

Community of San Pedro Projects

39. Pacific Corridors Redevelopment Project*
40. Ponte Vista/Naval Site*
41. Centre Street Lofts
42. A-Delta Realty
43. 8th Street Lofts
44. San Pedro Plaza Park
45. Cabrillo Avenue Extension
46. Single Family Homes (Gaffey Street)
47. Mixed-use Development, 281 W 8th Street
48. Palos Verdes Urban Village
49. 319 N. Harbor Boulevard
50. Vue
51. La Salle Lofts
52. Bank Lofts
53. Temporary Little League Park

Community of Wilmington Projects

54. Distribution Center and Warehouse*
55. Dana Strand Public Housing Development Project
56. 931 N. Frigate
57. LASUD SR Span K-8 School 1234 N. Avalon Blvd*
58. Wilmington Redevelopment Plan Amendment/ Expansion Project
59. Banning Museum and Banning Park*

Projects in Harbor City, Lomita, and Torrance

60. Harbor City Child Development Center*
61. Kaiser Permanente South Bay Master Plan*
62. Ponte Vista, 26900 Western Avenue (near Green Hills Park), Lomita*
63. 2244 Pacific Coast Highway (new address: 25820 Lucille), Lomita*
64. 25316 Ebony Lane, Lomita*
65. 25819-25 Eshelman Avenue, Lomita*
66. 262nd/Western, Lomita*
67. 25829-25837 Eshelman Ave., Lomita*
68. Sepulveda Industrial Park, Torrance*
69. Hasan Ud-Din Hashmi 1918 Artesia Blvd.,Torrance*
70. Dan Withee 24510 Hawthorne Blvd., Torrance*
71. Sunrise Senior Living 25535 Hawthorne Blvd., Torrance*
72. Capellino & Associates 1104 Sartori Ave., Torrance*
73. Linda Francis 18900 Hawthorne Blvd., Torrance*
74. Dean & Jan Thomas 3525 Maricopa St, Torrance*
75. Dave O. Roberts 435 Maples Ave., Torrance*
76. Imperial Investment & Development 2433 Moreton St., Torrance*
77. Torrance RF, L.L.C. 18203 Western Avenue, Torrance*
78. Continental Development Corp. 23248 Hawthorne Blvd., Torrance*
79. Charles Belak-Berger 3720 Pacific Coast Highway, Torrance*
80. BP West Coast Products 18180 Prairie Avenue, Torrance*
81. Graceway Church 431 Madrid Avenue, Torrance*
82. Providence Health System 5215 Torrance Blvd., Torrance*
83. Torrance Memorial Medical Center, 3330 Lomita Blvd, Torrance*
84. Chuck Stringfield 19701 Mariner Ave., Torrance*
85. Gospel Venture International Church 17811 Western Avenue, Torrance*
86. Continental Development 2843 Lomita Boulevard, Torrance*
87. Mark Sachs 2909 Pacific Coast Hwy. Torrance*
88. Wilmington Drain Multi-Use and Machado Lake Ecosystem Rehabilitation Project, Harbor City/Lomita
89. Rockefeller Group Professional Center Development*

Port of Long Beach Projects

90. Middle Harbor Terminal Redevelopment, Port of Long Beach
91. Piers G & J Terminal Redevelopment Project, Port of Long Beach
92. Pier A East, Port of Long Beach
93. Pier S Marine Terminal, Port of Long Beach
94. Administration Building and Maintenance Facility Replacement Project
95. Gerald Desmond Bridge Replacement Project, Port of Long Beach and Caltrans/FHWA
96. Chemoil Marine Terminal, Tank Installation, Port of Long Beach
97. Pier B Rail Yard Expansion
98. Terminal Island Rail Projects
99. Mitsubishi Cement Corporation Facility Modifications
100. Polaris Aggregate Terminal
101. Pier A West Remediation Project
102. Total Terminal International Grain Export Terminal Installation Project
103. Sulex Demolition Project
104. Cemera Long Beach Aggregate Terminal

ACTA and Caltrans Projects

105. Schuyler Heim Bridge Replacement and State Route (SR) 47 Terminal Island Expressway
106. I-710 (Long Beach Freeway) Major Corridor Study
107. Cerritos Channel Bridge

City of Long Beach Projects

108. Shoreline Gateway Project*
109. West Gateway Redevelopment Project
110. 2nd+PCH*
111. Golden Shore Master Plan
112. Press-Telegram Mixed Use Development
113. Sierra Hotel Project
114. Long Beach Downtown Plan
115. Art Exchange
116. North Village Center*
117. Kroc Community Center*
118. Hotel Sierra, 290 Bay St
119. 1235 Long Beach Blvd. Mixed-Use Project
120. Douglas Park Rezone Project*
121. Ocean Blvd. Project*
122. Drake/Chavez Park Expansion*
123. Poly Gateway Project, Pacific Coast Highway and Martin Luther King Jr. Avenue*
124. 15th Street and Alamitos Avenue Open Space Development and Intersection Improvements*
125. WPA Mosaic Open Space Development
126. Lyon West Gateway Residential Development, Broadway at Magnolia Avenue and 3rd Street
127. Pine – Pacific, bounded by Pine and Pacific Avenues, and 3rd and 4th Streets
128. Lofts at 3rd and Promenade
129. Broadway Block Development, Broadway, Long Beach Boulevard, 3rd street, and Elm Avenue
130. Long Beach Transit/Visitor Information Center, downtown Long Beach
131. Hotel Esterel, Promenade at Broadway
132. Promenade Master Plan, between Shoreline Drive and 5th Stre
133. Admiral Kidd Park Expansion Site, Santa Fe at Willard*
134. Pacific Coast Highway Streetscape Improvement*
135. Everbright Paper Recycling Center*
136. Redbarn Pet Products*
137. Smith-Co Construction
138. J.C.D.S Properties – Sudduth Tire
139. Westside Storm Drain Improvement Project*
140. 250 Pacific Avenue
141. Acres of Books
142. 495 The Promenade North
143. 100 Aquarium Way
144. 2010 Ocean Blvd.*
145. 433 Pine Ave.
146. 600 E. Broadway*

* Project not shown on figure because it is located beyond the extent of the map.
Base map source: California State Automobile Association 2005.

CDM

Port of Los Angeles
Berths 302 - 306 [APL]
Container Terminal Project
Related and Cumulative Projects
Figure 4-1

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Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
Port of Los Angeles Projects			
1	Berth 136-147 Marine Terminal, West Basin	Element of the West Basin Transportation Improvement Projects. Expansion and redevelopment of the TraPac Marine Terminal to 243 acres, including improvement of Harry Bridges Boulevard and a 30-acre landscaped area, relocation of an existing railyard and construction of a new on-dock railyard, and reconfiguration of wharves and backlands (includes filling of the Northwest Slip, dredging, and construction of new wharves).	The LAHC certified the EIR and approved the project on December 6, 2007. Construction started in 2009 and ongoing through 2015.
2	San Pedro Waterfront Project	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 Promenade, construction of a Downtown Harbor Promenade, construction of a Downtown Water Feature, enhancements to the existing John S. Gibson Park, construction of a Town Square at the foot of 6th Street, construction of a 7th Street Pier, construction of a Ports O' Call Promenade, development of California Coastal Trail along the waterfront, construction of additional cruise terminal facilities, construction of a Ralph J. Scott Historic Fireboat Display, relocation of the SS Lane Victory, extension of the Red Car line, and related parking improvements.	The LAHC certified the EIR and approved the project on September 29, 2009. Construction expected 2012-2020.
3	Channel Deepening Project	Dredging and sediment disposal. This project deepened the Port of Los Angeles Main Channel 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 3 million cubic yards of additional disposal capacity needed to complete the Channel Deepening Project and maximize beneficial use of dredged material by constructing lands for eventual terminal development and provide environmental enhancements at various locations in the Port of Los Angeles.	The LAHC certified the EIR and approved the project on April 29, 2009. Construction expected 2010-2012. Completion set for 2013.
4	Cabrillo Way Marina, Phase II,	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 complete.
5	Berth 226-236 (Evergreen)	Proposed redevelopment of existing container terminal, including improvements to wharves, adjacent backland, crane rails, lighting, utilities, new gate complex,	On hold.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	Container Terminal Improvements Project	grade crossings and modification of adjacent roadways and railroad tracks.	
6	Canners Steam Remediation	Remediation of the former Canner's Steam Plant in the Fish Harbor area of the Port of Los Angeles.	On hold.
7	Port of Los Angeles Charter School and Port Police Headquarters, San Pedro	Proposal to lease property for the Port of Los Angeles Charter School and to construct a Port Police Headquarters and office. 330 S. Centre Street, San Pedro.	Completed.
8	SSA Outer Harbor Fruit Facility Relocation	Proposal to relocate the existing fruit import facility at 22nd and Miner to Berth 153.	On hold.
9	Adaptive Reuse of Warehouses 9 and 10	Adaptive reuse of Warehouses 9 and 10 for visitor-serving uses to complement recreational activity at adjacent 22nd Street Park. Proposal to lease property to Crafted at the Port of Los Angeles.	Addendum to San Pedro Waterfront EIR completed. Construction expected 2012- 2013.
10	Plains All American (formerly Pacific Energy) Oil Marine Terminal, Pier 400	Proposal to construct a Crude Oil Receiving Facility on Pier 400 with tanks on Terminal Island and other locations on Port property, with the preferred location being the former LAXT terminal, as well as construct new pipelines between Berth 408, storage tanks, and existing pipeline systems.	The LAHC certified the EIR and approved the project on November 20, 2008. Construction expected 2012-2014.
11	Ultramar Lease Renewal Project	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.	On hold.
12	Westway Demolition	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. Surface demolition will start in 2012.
13	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 USEPA.
14	Berths 97-109, China Shipping	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, landfill and terminal construction and backland development.	The LAHC certified the EIR and approved the project on December

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	Development Project		8, 2009. Construction started in 2009 and ongoing through 2013.
15	Berths 171-181, Pasha Marine Terminal Improvements Project	Redevelopment of existing facilities at Berths 171-181 as an omni (multi-use) facility.	Project EIR on hold.
16	Berth 206-209 Interim Container Terminal Reuse Project	Proposal to allow interim reuse of former Matson Terminal as a medium-density container and breakbulk terminal. The terminal would accommodate one vessel and utilize four cranes.	Draft EIS/EIR pending. Construction anticipated in 2013 - 2014.
17	Southern California International Gateway Project (SCIG)	Construction and operation of a 157-acre dock railyard intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.	DEIR released September 2011. Construction anticipated 2013-2015.
18	Pan-Pacific Fisheries Cannery Buildings Demolition Project,	Demolition of two unused buildings and other small accessory structures at the former Pan-Pacific Cannery in the Fish Harbor area of the Port of Los Angeles (POLA).	NOP released October 2005. Draft EIR released July 2006. Final EIR on hold.
19	San Pedro Waterfront Enhancements Project	Project includes creation of 16 acres of public open space at 22nd Street Park, pedestrian and landscaping improvements at Cabrillo Beach, and pedestrian access, landscaping and public art at the SP Slip.	MND approved in April 2006. Construction from 2007 to 2012.
20	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 railyard. 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.	Construction anticipated 2012 – 2014.
21	Wilmington Waterfront Development Project	Project includes light-industrial, commercial, and public open space uses within a 90-acre site. Features include a 10-acre elevated park over active rail lines, 250-foot observation tower, and a Wilmington waterfront promenade near Banning's Landing.	The LAHC certified the EIR and approved the project on June 18, 2009. Construction expected 2016-2020.
22	I-110/C Street/ Figueroa Street/	Consolidation of the following intersections: I-110/C Street/Figueroa Street interchange intersection and the intersection of Harry Bridges Boulevard-Alameda	MND under preparation. Construction expected 2013-2016.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	Realigned Harry Bridges Blvd Interchange	Street/John S. Gibson Boulevard/Figueroa Street. Construction of a new, northbound I-110 off-ramp with a direct connector ramp to eastbound Harry Bridges Boulevard-Alameda Street (i.e., a new, free-flow, northbound off-ramp to eastbound Harry Bridges-Alameda Street).	
23	Berth 212-224 (YTI) Container Terminal Improvements Project	Wharf modifications at the YTI Marine Terminal Project involves wharf upgrades and backland reconfiguration, including new buildings.	EIR/EIS on hold.
24	Berth 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.
25	Southwest Marine Demolition Project	Demolition of buildings and other small accessory structures at the Southwest Marine Shipyard.	Draft EIR released September 2006. Final EIR on hold.
26	I-110/SR-47 Connector Improvement Project	This project will eliminate an existing weaving condition of slow uphill moving trucks and fast downhill moving vehicles with the addition of a lane on the westbound to northbound SR 47/I-110 connector. This additional lane will continue through the I-110 Off-Ramp at John S. Gibson Boulevard where the intersection will be widened to better facilitate truck turning movements and accommodate additional southbound left turn and northbound right turn lanes.	MND released August 2011. Construction expected 2013-2016.
27	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, and bird excluders.	Construction complete.
28	Cabrillo Beach Pump Project (Tier III)	Phased improvements at Cabrillo Beach to reduce the wet and dry weather high concentrations of bacteria circulation improvements.	On hold.
29	Al Larson Boat Shop Improvement Project	Redevelopment and expansion of the Al Larson Boat Shop (Berth 258).	EIR under preparation. Construction anticipated 2012-2014.
30	City Dock No. 1 Marine Research Center	Adaptive reuse of warehouses at Berths 57 and Berths 58-60 on a 28-acre site for use as an urban marine research center. Includes future develop of the Westways terminal, including construction of a 50,000 sf building and a 80,000 sf seawater wave tank.	EIR under preparation. Construction anticipated 2013-2025.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
31	Port of Los Angeles Master Plan Update	Redevelopment of Fish Harbor, redevelopment of Terminal Island and consideration of on-dock rail expansion, and consolidation of San Pedro and Wilmington Waterfront districts.	Conceptual planning
32	Pier 500 Container Terminal Development	Creation of up to 200-acre fill to support backland and new wharfs for the operation of a new container terminal.	Conceptual planning
33	USS Iowa Battleship	Permanent mooring of USS Iowa Navy Battleship at Berth 87 and construction of landside museum and surface parking to support 371,000 annual visitors.	NOP/Initial Study released August 2011.
34	WWL Vehicle Services Cargo Terminal	Expansion of vehicle offloading processing and operations, including cargo increase up to 220,000 vehicles per year and construction of two additional rail loading tracks.	Conceptual planning
Various	Maintenance Dredging	Maintenance dredging is the routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches, and port facilities. This is conducted regularly for navigational purposes (at least once every five years).	Continuous, but intermittent on average every 3-5 years.
Eight cargo terminals and World Cruise Center	Alternative Maritime Power (AMP™)	AMP™ systems (also known as "cold-ironing) at the Port include a shore side power source, a conversion process to transform the shore side power voltage to match the vessel power systems, and a container vessel that is fitted with the appropriate technology to utilize electrical power while at dock.	Construction anticipated to be complete by 2014.
Port of Los Angeles and/or Port of Long Beach Potential Port-Wide Operational Projects			
35	Extended Terminal Gates (Pier Pass)	POLA and POLB program to use economic incentives to encourage cargo owners to use terminal gates during off-peak hours.	Program in Progress
36	Optical Character Recognition	Ports 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.	Conceptual planning.
37	Truck Driver Appointment System	Appointment system that provides a pre-notification to terminals regarding which containers are planned to be picked up.	Implemented.
ICTF Joint Powers Authority			
38	Union Pacific	UP proposal to modernize existing intermodal yard four miles from the Port.	Project EIR under preparation.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	Railroad ICTF Modernization Project		DEIR expected Spring 2012.
Community of San Pedro Projects			
39	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.
40	Ponte Vista/Naval Site	Construct 1,135 residential units, including single family homes, apartments, and condominiums, and open space.	NOP released in October 2010.
41	Centre Street Lofts	Construct residential units and ground floor commercial at 285 W. 6th Street	Construction Completed
42	A-Delta Realty	Artist's Lofts and retail space at 731-741 S. Pacific Ave.	Construction completed.
43	8th Street Lofts	Loft apartments at southeast corner of 8th Street and Pacific Ave.	Construction completed.
44	San Pedro Plaza Park	Outdoor improvements including minor grading, hillside slope repair, small retaining walls, view deck, fencing, gates, security lighting, seating areas, signage, landscaping, and irrigation.	Construction is expected to begin in June 2012, and to be completed by June 2013.
45	Cabrillo Avenue Extension	This project will widen Cabrillo Avenue to 36-ft of roadway and 9-ft of sidewalk from Miraflores Avenue to existing alley. It will also widen the existing alley to 25-ft and connect it to Channel Street by acquiring right-of-way.	Construction is expected to begin in January 2012, and to be completed by June 2012.
46	Single Family Homes (Gaffey Street)	Construct 135 single-family homes. About 2 acres. 1427 N. Gaffey Street (at Basin Street), San Pedro.	Project approved; construction pending.
47	Mixed-use development, 281 W 8th Street	Construct 72 condominiums and 7,000-ft^2 retail. 281 West 8th Street (near Centre Street), San Pedro.	Under construction according to City of Los Angeles Zoning Information and Map Access System (ZIMAS).
48	Palos Verdes Urban Village	Construct 251 condominiums and 4,000-ft^2 retail space. 550 South Palos Verdes Street, San Pedro.	No construction has started.
49	319 N. Harbor Blvd	Construction of 94 unit residential condominiums.	Construction has not started according to LADOT Planning Department.
50	Vue	Construct 220 housing unit apartments. 255 5th Street, San Pedro (near Centre Street).	Construction completed.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
51	La Salle Lofts	Construct 26 units with ground floor commercial at 255 W. 7th Street	Construction completed.
52	Bank Lofts	89-unit apartment complex with ground floor commercial, 407th 7th Street	Construction completed.
53	Temporary Little League Park	Construction of temporary baseball fields for the Eastview Little League at Knoll Hill.	Construction completed
Community of Wilmington Projects			
54	Distribution center and warehouse	A 135,000-ft^2 distribution center and warehouse on 240,000-ft^2 lot w/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.
55	Dana Strand Public Housing Redevelopment Project	413 units of mixed-income affordable housing to be constructed in four phases: Phase I - 120 rental units; Phase II - 116 rental units; Phase III - 100 senior units; Phase IV - 77 single family homes. The plans also include a day care center, lifelong learning center, parks and landscaped open space.	Phases I and II have been completed and are being leased Phases III and IV are currently under development.
56	931 N. Frigate	Private school expansion for 72 student increase for a total of 350 students.	Construction has not started according to LADOT Planning Department.
57	LASUD SR Span K-8 School. 1234 N. Avalon Blvd	Construction of 1278 student elementary school	Construction has not started according to LADOT Planning Department.
58	Wilmington Redevelopment Plan Amendment/ Expansion Project, Wilmington	The existing Wilmington Industrial Park would be expanded by an additional 2,487 acres, for a total of approximately 2,719 acres. Under the probable maximum level of development, the overall project area could support up approximately 7,326 residential units (primarily multi-family; zone changes under the Plan would permit multi-use and higher density residential development). In addition to the residential development, the Project could accommodate up to approximately 207 acres (9 million sf) of commercial development and up to 333 acres (14.5 million sf) of industrial development.	NOP for Program EIR out for public review August 2010. Currently on hold.
59	Banning Museum and Banning Park	*Banning Museum:* Refurbishment of museum buildings and improvements to the open space/garden, including waterproofing Banning Museum, relocating an existing LADWP Transformer, rehabilitating the walkways, and Rose garden and museum landscaping.	Construction began in November 2010 and is expected to be completed by December 2012.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
		Banning Park: Improvements to Athletic Fields, Recreation Center and Walking Paths, including: rooftop HVAC replacement to recreation center; walkway resurfacing around the entire park (except within the Banning Residence Museum's perimeter wrought iron fencing); and door replacement to the recreation center; and, reconstruct the existing baseball field.	
Projects in Harbor City, Lomita, and Torrance			
60	Harbor City Child Development Center	Conditional use permit to open 50-student preschool at existing church building (25000 South Normandie Avenue, Harbor City, at Lomita Boulevard).	Construction has not started according to LADOT Planning Department.
61	Kaiser Permanente South Bay Master Plan	Construct 303,000-ft^2 medical office building, 42,500-ft^2 records center/office/ warehouse, 260 hospital beds. 25825 Vermont Street, Harbor City (at Pacific Coast Highway).	In construction.
62	Ponte Vista, 26900 Western Avenue (near Green Hills Park), Lomita	Construct 1,950-unit for-sale stacked townhomes and condominiums including senior housing. Approximately 40 percent of the Project's post-development acreage would consist of landscaped common area. Rolling Hills Prep School being developed in an adjacent lot.	FEIR issued June 2008. LADOT Planning Department reports estimated 2012 completion year.
63	2244 Pacific Coast Highway (new address: 25820 Lucille), Lomita	A request for a Site Plan Review to construct a new retail commercial building.	In plan check as of November 2009.
64	25316 Ebony Lane, Lomita	A request to construct 16 detached senior housing units.	In plan check.
65	25819-25 Eshelman Avenue, Lomita	Proposed 20-unit senior housing development .	In plan check.
66	262nd/Western, Lomita	Construct an 11,100-square ft. office building on the southeast corner of Western Avenue and 262nd Street.	Construction pending.
67	25829-25837 Eshelman Ave., Lomita	Construct 16 new condominium units.	In plan check.
68	Sepulveda Industrial Park, Torrance	Construct 154,105-sqft industrial park (6 lots). Sepulveda Industrial Park (TT65665) 1309 Sepulveda Boulevard, Torrance (near Normandie Avenue).	No construction started. LADOT Planning Department has no

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
			estimated completion year.
69	Hasan Ud-Din Hashmi 1918 Artesia Blvd.,Torrance	Remodel/demolition of certain existing structures and the construction of a new 23,914 sq ft worship building, covered patio & outdoor covered lobby	Construction underway (soil contamination issues).
70	Dan Withee 24510 Hawthorne Blvd., Torrance	Construction of mixed-use development consisting of two-story commercial office, restaurant building, and 14 attached residential condominium units	Under construction.
71	Sunrise Senior Living 25535 Hawthorne Blvd., Torrance	Operation of an assisted living facility	Building permit issued on March 2008.
72	Capellino & Associates 1104 Sartori Ave., Torrance	Construction of professional office condominium development	Under construction.
73	Linda Francis 18900 Hawthorne Blvd., Torrance	Operation of new automobile sales & repair facility (MINI Cooper)	Under construction.
74	Dean & Jan Thomas 3525 Maricopa St, Torrance	Construction of 12 attached condominium Units	Construction pending
75	Dave O. Roberts 435 Maple Ave., Torrance	Construction of two, one-story industrial buildings exceeding 15,000 sq ft	Construction pending.
76	Imperial Investment & Development 2433 Moreton St., Torrance	Construction and operation of 27,000 sq ft full-service spa	Construction pending.
77	Torrance RF, L.L.C. 18203 Western Avenue, Torrance	Construction of new restaurant/retail/commercial building	Construction pending.
78	Continental Development Corp.	Construction of a new retail store	Construction pending.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	23248 Hawthorne Blvd., Torrance		
79	Charles Belak-Berger 3720 Pacific Coast Highway, Torrance	Construction of new 20,300 sq ft and commercial center with 18,688 sq ft subterranean parking structure	Construction pending.
80	BP West Coast Products, LLC 18180 Prairie Avenue, Torrance	Construction of new service station and 2,300 sq ft convenience store with off-sale beer & wine	Construction pending.
81	Graceway Church 431 Madrid Avenue, Torrance	Conversion of an industrial building for the operation of a church with shared parking	Construction pending.
82	Providence Health System 5215 Torrance Blvd. , Torrance	Construction of 2, 3-story medical office buildings & 2, 3-story parking structures	Construction pending.
83	Torrance Memorial Medical Center, 3330 Lomita Blvd, Torrance	Construction of a new 7-story hospital tower & the removal of an existing medical office condominium building	Construction pending
84	Chuck Stringfield 19701 Mariner Ave., Torrance	Conversion of two industrial buildings to industrial condominiums	Construction pending.
85	Gospel Venture International Church 17811 Western Avenue, Torrance	Conversion of existing industrial building for operation as a church	Construction pending.
86	Continental Development 2843 Lomita Boulevard, Torrance	Construction of 25,000 sq ft medical office building to replace existing manufacturing building	Construction pending.
87	Mark Sachs 2909 Pacific Coast Hwy. Torrance	Construction of a new 16,978 sq ft automobile dealership showroom facility	Application approved on November 2009.
88	Wilmington Drain Multi-Use and	The project consists of two components: 1) Wilmington Drain Multi-Use; and, 2) Machado Lake Ecosystem Rehabilitation. Wilmington Drain improvements	Notice of Determination was filed in September 28, 2010.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	Machado Lake Ecosystem Rehabilitation Project, Harbor City/Lomita	include dredging, channel and bank stabilization, habitat and park design, and site-design and structural BMPs. Improvements to Machado Lake (and Harbor Regional Park) would include habitat and park design enhancements, site-design and structural BMPs, lake rehabilitation (i.e., water quality enhancements), and miscellaneous recreational improvements.	Construction is expected to begin late 2011 and through 2014.
89	Rockefeller Group Professional Center Development	Construction of a 351,200-sf medical/office and professional building, and light industrial condominium buildings. The project would be constructed over two phases.	FEIR completed February 2010. Phase I construction is completed, and Phase II is expected to be completed by late 2011.
Port of Long Beach Projects			
90	Middle Harbor Terminal Redevelopment, Port of Long Beach	The project consolidates two existing container terminals into one 345-acre terminal. Construction includes approximately 54.6 acres of landfill, dredging, and wharf construction; construction of an intermodal railyard; and reconstruction of terminal buildings.	Approved project. Construction underway 2010-2019.
91	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine container terminals into one terminal in the Southeast Harbor Planning District area. The project will develop a marine terminal of up to 315 acres by consolidating portions of 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.	Approved project. Construction underway (2005-2015).
92	Pier A East, Port of Long Beach	Redevelopment of 32 acres of existing auto storage area into container terminal uses.	Conceptual planning.
93	Pier S Marine Terminal, Port of Long Beach	Development of a 150-acre container terminal on Pier S and construction of navigational safety improvements to the Back Channel.	EIS/EIR released September 2011.
94	Administration Building Replacement Project, Port of Long Beach	Replacement of the existing Port Administration Building and Maintenance Facility with a new facility on an adjacent site on Pier G.	Approved project. Construction underway 2009-2012.
95	Gerald Desmond Bridge Replacement Project, Port of Long Beach	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.	Final EIR/EA certified in July 2010. Construction anticipated to being in 2012.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	and Caltrans/FHWA		
96	Chemoil Marine Terminal, Tank Installation, Port of Long Beach	Construction of two petroleum storage tanks and associated relocation of utilities and reconfiguration of adjoining marine terminal uses between Berths F210 and F211 on Pier F.	EIR on hold.
97	Pier B Railyard Expansion	Expansion of the existing Pier B Railyard in two phases, including realignment of the adjacent Pier B Street and utility relocation.	EIR being prepared.
98	Terminal Island Rail Projects	Construct rail improvements on Terminal Island, including a grade separation at Reeves Avenue and additional storage tracks.	EIR being prepared (2012-2015).
99	Mitsubishi Cement Corporation Facility Modifications	Facility modification, including the addition of a catalytic control system, construction of four additional cement storage silos, and upgrading existing cement unloading equipment on Pier F.	NOP/IS released in August 2011.
100	Polaris Aggregate Terminal	Construction and operation of a sand, gravel, and aggregate receiving, storage, and distribution terminal on Pier D.	NOP being prepared.
101	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.	Cleanup complete (2008-2009).
102	Total Terminal International Grain Export Terminal Installation Project	Construction and operation of a grain transloading facility on a vacant 10-acre site on Pier T adjacent to the existing Hanjin container terminal. It would utilize existing infrastructure to the extent feasible and require no changes to shipping vessel operations.	NOP/IS released in August 2011.
103	Sulex Demolition Project	Demolition of a sulfur export facility on Pier G to fulfill the conditions of lease termination. No future use for the site is identified.	NOP/IS released in December 2010.
104	Cemera Long Beach Aggregate Terminal	Construction and operation of a sand, gravel, and aggregate receiving, storage, and distribution terminal on Pier D.	EIR on hold.
Alameda Corridor Transportation Authority and Caltrans Projects			
105	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).	EIR/EIS approved; construction delayed/start date undetermined.
106	I-710 (Long Beach Freeway) Major	Develop multi-modal, timely, cost-effective transportation solutions to traffic congestion and other mobility problems along approximately 18 miles of the I-	NOP/NOI released August 2008. DEIR/EIS under preparation.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	Corridor Study	710, between the Port Complex ports and State Route 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 Boulevard Interchange and Atlantic/Bandini Interchange.	
107	Cerritos Channel Bridge	New rail bridge adjacent to existing Badger Avenue Rail Bridge	Project delayed - start date undetermined.
City of Long Beach Projects			
108	Shoreline Gateway Project	Mixed-use development of a 22-story residential tower with retail, commercial, and office uses located north of Ocean Boulevard, between Atlantic Avenue and Alamitos Avenue, a 15- to 19-story stepped slab building west of the existing Lime Avenue and Ocean Boulevard intersection, and a 10-story building.	Final EIR certified in September 2006. Entitlements granted. City Planning Department has no estimated construction start and completion year.
109	West Gateway Redevelopment Project	Redevelop nine existing parcels, including apartments, condominiums, and retail, on Broadway between Chestnut and Maine.	Under construction.
110	2nd+PCH	The proposed project located at 6400 East Pacific Coast Highway would include the demolition of existing on-site uses and would provide new residential, office, retail, and potential hotel uses, along with associated parking and open space.	DEIR was released on April 19, 2010. In process for entitlement. City Planning Department has no estimated construction start and completion year.
111	Golden Shore Master Plan	The proposed project would provide new residential, office, retail, and potential hotel uses, along with associated parking and open space.	Final EIR was released on January 2010. In process for entitlement. City Planning Department has no estimated construction start and completion year.
112	Press-Telegram Mixed Use Development	Construction of two high-rise buildings on the 2.5-acre (1-ha) Press-Telegram site. Each building would be 22 stories and 250 ft (76 m) in height. The project would be a mixed-use development with 542 residential units, and 32,300 square feet (3,000 square meters) of office and institutional space.	Draft EIR prepared August 2006.
113	Sierra Hotel Project	Development of a 91,304-square–foot (8,482-square-meter), 7-story hotel	EIR certified December 2005.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
		structure with 140 rooms. Parking will be provided in the multi-level parking structure located across the street at the southwest corner of Cedar Avenue and Seaside Way.	
114	Long Beach Downtown Plan	Development standards and design guidelines for an expected increase in the density and intensity of existing Downtown land uses by allowing up to: (1) approximately 5,000 new residential units; (2) 1.5 million square feet of new office, civic, cultural, and similar uses; (3) 384,000 square feet of new retail; (4) 96,000 square feet of restaurants; and (5) 800 new hotel rooms.	Draft EIR released December 2010
115	Art Exchange	Project components include artist studios, multipurpose/classroom space, hot shop for glass and ceramics production, a centrally located open courtyard, gallery space, office, and service areas.	Draft EIR was released in December 2009. City Planning Department has no estimated construction start and completion year.
116	North Village Center	The proposed project involves the redevelopment of an approximately 6.3-acre site in the City of Long Beach with a mixed-use "village center" project.	Final EIR was released in November 2009. In process for entitlement. City Planning Department has no estimated construction start and completion year.
117	Kroc Community Center	The reformation of up to 19 acres of land designated by the Salvation Army, through a grant from the Kroc Foundation, for the location of a new recreation and community center.	Final EIR was released in June 2009. Entitlements granted. City Planning Department has no estimated construction start and completion year.
118	Hotel Sierra, 290 Bay St	This project consists of a new 5-story 125-room hotel with approximately 15,000 square feet of ground floor retail space.	EIR Addendum was released in May 2009. City Planning Department has no estimated construction start and completion year.
119	1235 Long Beach Blvd. Mixed-Use Project	The proposed project would include demolition of existing on-site uses and construction of a mixed-use (transit oriented) development that includes the construction of 3 buildings consisting of 170 residential condominium units, 186 senior (age-restricted) apartment units, and 42,000 sq. ft. of retail/restaurant floor area.	EIR Addendum was released in January 2008. Entitlements granted. City Planning Department has no estimated construction start and completion year.
120	Douglas Park Rezone	The project consists of development of 1,400 residential units along with 3.3	Construction is underway.

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	Project	million square feet of mixed commercial and light industrial development (which included a maximum of 200,000 square feet of retail uses), 400 hotel rooms, and 10.5 acres of park space, with an additional 2.5 acres for view corridors/pedestrian easements and bicycle paths.	Entitlements granted.
121	Ocean Blvd. Project	The proposed project would include the demolition of existing structures, the development of 51 condominium units and the remodel of an existing building to maintain 11 motel units. The residential development would be four stories in height above street level and would have two levels of subterranean parking.	Notice of Intent to Adopt was released in August 2009. Entitlements granted. City Planning Department has no estimated construction start and completion year.
122	Drake/Chavez Park Expansion	Developing new and expanding existing open space opportunities in the Drake/Chavez Park.	Project in progress.
123	Poly Gateway Project, Pacific Coast Highway and Martin Luther King Jr. Avenue	Development of passive open space that will serve as a gateway to Poly High School, located directly behind the site.	Construction was expected to begin in 3rd Quarter 2008. Construction status unknown.
124	15th Street and Alamitos Avenue Open Space Development and Intersection Improvements	Passive park to include pedestrian hardscape, landscape lighting, light poles and planting areas.	Construction underway.
125	WPA Mosaic Open Space Development	Relocation of historic mural to an open space development at the south end of CityPlace.	Construction is expected to start in 2010.
126	Lyon West Gateway Residential Development, Broadway at Magnolia Avenue and 3rd Street	Mixed-use project consisting of 291 rental apartments (265 market rate and 26 affordable) and 15,000 square feet of commercial space .	Construction underway.
127	Pine – Pacific, bounded by Pine and Pacific Avenues, and 3rd and 4th Streets	Phase 1 will consist of a 5-story residential project with 175 living units and 7,280 square feet of retail space. Phase 2 is slated as a 12-story mid-rise residential development with 186 units and 18,670 square feet of retail.	Approved project. Construction pending

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
128	Lofts at 3rd and Promenade	This is a mixed-use development project that consists of 104 rental homes and 13,550 square feet of first-floor retail space.	Construction underway.
129	Broadway Block Development, Broadway, Long Beach Boulevard, 3rd street, and Elm Avenue	Mixed-use project consisting of an art center, residential units and commercial space.	Conceptual project.
130	Long Beach Transit/Visitor Information Center, downtown Long Beach	1,900 square-foot transit customer service and visitor information center.	Construction underway.
131	Hotel Esterel, Promenade at Broadway	Seven-story, 165-room hotel with 8,875 square feet of retail space and 3,000 square feet of meeting space.	Construction underway.
132	Promenade Master Plan, between Shoreline Drive and 5th Street	Improvement, expansion and redesign of The Promenade. The Master Plan encompasses the gateways, hardscape, landscape, furniture, lighting and public art plazas along the three blocks between Ocean Boulevard and 3rd Street, as well as renovation of the amphitheater.	Construction underway.
133	Admiral Kidd Park Expansion Site, Santa Fe at Willard	The Admiral Kidd Park Expansion Site consists of the acquisition and development of industrial property for a 120,000-square-foot park expansion.	The site has been acquired and cleared. Construction underway.
134	Pacific Coast Highway Streetscape Improvement Project	This project involves the design and construction of new street medians, sidewalk landscaping, public art and refurbishment of existing bus shelters.	Approved project. Construction pending.
135	Everbright Paper Recycling Center	This is a development of a bulk paper recycling and processing center	Construction start date was expected to be in 3rd Quarter 2008, and completion date was expected to be in 2nd Quarter 2009. Construction status unknown.
136	Redbarn Pet Products	Upgrade with the development of an office and warehouse for use in the manufacturing and distribution of their pet food products.	Approved project. Construction pending.
137	Smith-Co	The Smith-Co Construction project consists of a plan to develop Agency-owned	Construction start date was expected

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
	Construction	property into a two-story, 6,100-square-foot office and warehouse facility for Smith-Co Construction.	to be in 3rd Quarter 2005, and completion date was expected to be in 4th Quarter 2008. Construction status unknown.
138	J.C.D.S Properties – Sudduth Tire	J.C.D.S Properties – Sudduth Tire is a new development consisting of a two-story office building and shop area as well as a storage facility for local businesses.	Construction start date was expected to be in 3rd Quarter 2005, and completion date was expected to be in 4th Quarter 2007. Construction status unknown.
139	Westside Storm Drain Improvement Project	The Agency, along with developer DMJM Harris/ AECOM plans to improve and update existing storm drains in an effort to remedy street flooding.	Construction start date was expected to be in 1st Quarter 2006, and completion date is to be determined. Construction status unknown.
140	250 Pacific Avenue	Conversion of AMC Pine Square movie theaters to 74 residential units.	In process for entitlement. City Planning Department has no estimated construction start and completion year.
141	Acres of Books	Construction of 11,000 sq. ft. collaborative art center including the partial reuse of an historic structure (240 Long Beach Blvd.)	In process for entitlement. City Planning Department has no estimated construction start and completion year.
142	495 The Promenade North	Construction of 35,000 sq. ft., 5-story mixed-use development including 6,000 sq. ft. of ground floor commercial area and 21 residential units.	In process for entitlement. City Planning Department has no estimated construction start and completion year.
143	100 Aquarium Way	23,300 sq. ft. expansion to the Aquarium of the Pacific.	In process for entitlement. City Planning Department has no estimated construction start and completion year.
144	2010 Ocean Blvd.	Construction of 56 residential condominiums units with 40 hotel rooms.	Entitlements granted. City Planning Department has no estimated construction start and completion year.
145	433 Pine Ave.	Mixed use development of 28 residential units with 15,000 square feet of	Under construction

Table 4-1: Related and Cumulative Projects

No. in Fig. 4-1	Project Title and Location	Project Description	Project Status[a]
		commercial (Newberry's Department Store)	
146	600 E. Broadway	48,000 sq. ft. Vons Market w/128 rooftop parking spaces development	Under construction

Notes:
[a] Construction date for the Port projects based on an assumption that the project would be approved by the LAHD.

References:
(1) City of Los Angeles Zoning Information and Map Access System (ZIMAS) http://zimas.lacity.org/
(2) City of Torrance Community Development Department's Major Project Report July 1, 2009 – December 31, 2009 http://torranceca.gov/PDF/July_1_2009_thru_Dec_31_2009.pdf
(3) City of Long Beach Department of Development Services – Major Project List – April 2010.
(4) http://www.lbds.info/planning/environmental_planning/environmental_reports.asp
(5) http://www.lbds.info/projects/default.asp
(6) City of Lomita Current Projects List, January 2011.
(7) City of Los Angeles, Community of San Pedro Projects List, January 2011.

4.2 Cumulative Impact Analysis

The following sections analyze the cumulative impacts identified for each resource area relative to the proposed Project and the list of related projects identified in Table 4-1. The six alternatives, listed below are also analyzed relative to the related projects under CEQA and five alternatives (Alternatives 2 through 6) are analyzed relative to NEPA.

Alternative 1 – No Project

Alternative 2 – No Federal Action

Alternative 3 – Reduced Project: Four New Cranes

Alternative 4 – Reduced Project: No New Wharf

Alternative 5 – Reduced Project: No Space Assignment

Alternative 6 – Proposed Project with Expanded On-Dock Railyard

4.2.1 Aesthetics and Visual Resources

4.2.1.1 Scope of Analysis

The geographic scope of analysis for cumulative impacts on aesthetics and visual resources to which the proposed Project may contribute is the set of viewing areas from which the proposed Project has the potential to be seen, either as part of a single view or a series of related views (i.e., a scenic route). Outside of this set of points, the proposed Project would not be within public views and therefore would not have the potential to contribute to cumulative aesthetic and visual resource impacts.

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

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.1.4.3. The criteria for AES-1, AES-2, AES-3 and AES-4 apply to CEQA analyses, while the criterion for AES-5 applies to the NEPA analysis.

4.2.1.2 Cumulative Impact AES-1: The proposed Project would not contribute to a cumulatively considerable adverse effect on a scenic vista from a designated scenic resource due to obstruction of views – Less than Cumulatively Considerable

Cumulative Impact AES-1 represents the potential of the proposed Project or alternatives along with related projects to result in significant impacts on a scenic vista within the cumulative study area from a designated scenic resource. A cumulatively considerable 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 projects,

would result in significant impacts to such scenic vistas. Cumulatively considerable impacts would include substantial or total blockage of views from a designated scenic view vantage point.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Scenic views that encompass the project site are primarily available from the higher elevations to the west in San Pedro and the Palos Verdes Peninsula. Views towards the project site from these locations encompass the Port as well as intervening development and, if high enough elevations, the ocean and horizons beyond.

The visual changes that would be brought about by the proposed Project would be taking place in the distinctive landscape region created by the Port Complex, which collectively constitute one of the largest port complexes in the world. In this area, over the course of the past century, the construction of breakwaters, the dredging of channels, filling for creation of berths and terminals, and construction of the infrastructure required to support Port operations have completely transformed the original natural setting to create a landscape that is highly engineered, nearly entirely altered, and visually dominated by large-scale man-made features. Past, present, and future projects at the Port have contributed, and will contribute, to the 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 visible development. For example, development of the Pier 400 Container Terminal and Transportation Corridor Project (completed in 2005) reduced open-water views from hillside areas in San Pedro. The combined development of projects such as, the TraPac Marine Terminal [#1], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], and China Shipping Development Project [#14], and Pier 500 Container Terminal Development [#32] would increase the concentration of large-scale developed facilities within the Port.

As a result, the existing visual quality from many of the scenic points with views into the Port is low to moderately low due to the prominent visibility of intensive shipping and industrial operations. There are specific sites that provide higher quality views, either due to existence of open water, views of the horizon and Pacific Ocean, or other features of interest.

The space within the Port has already been graded and developed. Therefore, present, and reasonably foreseeable future projects visible at the Port would generally be built on previously developed land within the existing Port boundaries, would be consistent with the existing operations and uses, and would not need to be integrated into the aesthetics of the site through special design techniques. As presented in Table 4-1, the cumulative related projects identified within the Port consist primarily of redevelopment or expansion projects, including container terminal and wharf improvements, construction of new facilities, and roadway modifications. As a result, these cumulative projects would result in construction of features that would be similar to existing development and would not contrast with existing visual conditions from scenic view points. Further, while the present, and reasonably foreseeable future projects would increase the level of development visible from the scenic viewpoints, they would not obstruct available views of the working port and horizon beyond. Therefore, given the existing working port setting, the cumulative impacts of past, present, and reasonably foreseeable future projects combined would not result in a significant impact under CEQA.

Contribution of the Proposed Project

The proposed Project would not remove or demolish any features that substantially contribute to the scenic value of the area. As discussed in detail in Section 3.1.4.3.1, the proposed Project site is located within a highly industrialized area within the Port and views from surrounding view points, including scenic routes and scenic vantage points, are often fleeting, distant, and/or obstructed by intervening topography and development. Further, the new cranes, structures, and backland facilities would be consistent with the existing features of the Port landscape region, and would not contrast with the surrounding viewscape. The overall effect of the Project would be to increase the level of development on Pier 300 and add to the complex scene in the middleground zone of most views. The new cranes, which at some locations would be the only new visible feature, would be consistent in scale with other elements of the view; and the proposed Project would be visually compatible with the overall character of the view as a working port environment. Should the 41-acre backland be automated, the automated equipment/system would be similar in visual presence as the equipment used for traditional operations and thus not change the visual quality of the site. While some equipment (i.e., electric automated stacking cranes [ASCs]) may be wider and taller and sized to stack a higher number of containers compared to traditional operations, an automated 41-acre backlands would continue to be consistent with other elements of the view and visually compatible with the overall character of the view as a working port environment. Furthermore, the new cranes and berthed vessels would not result in blockages of views of the Vincent Thomas Bridge from sensitive viewing areas.

Therefore, the proposed Project would not substantially alter or interfere with the public's visual access to existing views (would not interrupt or block the view) and, consequently, would cause no significant impact under Impact AES-1. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to scenic vistas under CEQA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to scenic vistas. Cumulative Impact AES-1is not a NEPA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Therefore, no mitigation measures would be required. Cumulative Impact AES-1 is not a NEPA issue of concern.

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

Cumulative Impact AES-2 represents the potential for the proposed Project, along with related cumulative projects, to result in significant impacts on the cumulative study area

to scenic resources within a state scenic highway. This criterion is related to the CEQA Guidelines Appendix G Aesthetics checklist questions "Would the Project have a substantial adverse effect on a scenic vista?" and "Would the Project substantially damage scenic resources, including, but not limited to trees, rock outcroppings and historic buildings within a state scenic highway?" and the *L.A. CEQA Thresholds Guide* factors for determining significance under the Obstruction of Views visual element (City of Los Angeles, 2006).

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

There are no designated state scenic highways within the proposed Project area; however, the City of Los Angles has city-designated scenic highways that are for local planning and development decisions and considerations. As discussed in Section 3.1.2.3, John S. Gibson Boulevard, Pacific Avenue, Front Street, and Harbor Boulevard are City-designated scenic highways because they afford views of the Port and the Vincent Thomas Bridge. The designated roadways are scenic in acknowledgment of the views of Harbor activities and the Vincent Thomas Bridge.

The characterization of views from John S. Gibson Boulevard, Harbor Boulevard, and Front Street toward the Project area is of a busy working port and transportation infrastructure. The features of these views from the local scenic highways in the Project area that are most vivid are undoubtedly the existing tall cranes, container-laden ships at container terminals such as TraPac Marine Terminal [#1], Evergreen Container Terminal [#5], China Shipping Development Project [#14], YTI Container Terminal [#23], and Yang Ming Container Terminal [#24], as well as Pier 300 and Pier 400, and the partial, oblique-view glimpses of the towers and suspension cables of the Vincent Thomas Bridge.

The Vincent Thomas Bridge is an important landmark in the region, and its visual importance has been recognized by its designation as the official welcoming monument of the City of Los Angeles, and by a recent project that entailed installation of distinctive lighting to outline the bridge's nighttime profile. Past Port projects in the vicinity of the proposed Project have had the effect of substantially degrading important views toward the Vincent Thomas Bridge.

Several of the future projects would contribute to the broad array of images available from these locations, including the San Pedro Waterfront Project [#2], China Shipping Development Project [#14], Pasha Marine Terminal [#15], YTI Container Terminal [#23], Yang Ming Terminal [#24], I-110/SR-47 Connector Improvement Program [#26], and Pier 500 Container Terminal Development [#32]. The projects would add to the visual clutter and obstructing some views of the working Port and Vincent Thomas Bridge afforded from the locally designated scenic highway (i.e., the cruise terminal parking structures associated with the San Pedro Waterfront Project would block views of the Vincent Thomas Bridge). However, as discussed in Cumulative Impact AES-1, the present, and reasonably foreseeable future projects would be located within an urbanized area that has already been graded and developed, and would result in construction of features that would be similar to existing development. Additionally, the present, and reasonably foreseeable future related projects would not obstruct available views of the working port and horizon beyond. Therefore, the cumulative impacts of past, present, and reasonably foreseeable future projects would not be significant under CEQA.

Other Locations

Other viewpoints that afford views of the proposed Project include residential areas of San Pedro, South Beacon Street, the edge of the bluff in San Pedro Plaza Park, Friendship Park, and, as well as fleeting views available to motorist traveling on the Vincent Thomas Bridge. These locations offer panoramic views of the San Pedro waterfront, working Port, and ocean beyond (as described in detail in Section 3.4, the prominence of each features varies by location depending on elevation and distance). As discussed in Cumulative Impact AES-1, the present, and reasonably foreseeable future projects visible at the Port would be located within an industrial area that has already been graded and developed, and would result in construction of features that would be similar to existing development. Additionally, the past, present, and reasonably foreseeable future related projects would not obstruct available views of the working port and horizon beyond. Therefore, the cumulative impacts of past, present, and reasonably foreseeable future projects would not result in a significant impact under CEQA.

Contribution of the Proposed Project

The proposed Project's impact on views from locally designated scenic highways and other scenic viewpoints (i.e., residential areas of San Pedro, South Beacon Street, the edge of the bluff in San Pedro Plaza Park, Friendship Park, and the Harbor) is discussed in detail in Section 3.1.4.3.1 under Impact AES-2. As determined in the impact analysis, the proposed Project would not obstruct or detract from views available at any of the viewpoints, as the visual changes would be consistent with the overall Port setting of the Project and would not substantially change the views of the Project area or block scenic resources. Should the 41-acre backlands be automated, the equipment for electric automated operations would be similar in visual presence as the equipment used for traditional operations and thus not change view of the Project area. Therefore, there would be no proposed Project-specific impact, and thus, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to scenic resources under CEQA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to scenic resources. Cumulative Impact AES-2 is not a NEPA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Therefore, no mitigation measures would be required. Cumulative Impact AES-2 is not a NEPA issue of concern.

4.2.1.4 Cumulative Impact AES-3: The proposed Project would not contribute to a cumulatively considerable degradation of the existing visual character or quality of the site or its surroundings – No Impact

Cumulative Impact AES-3 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. This criterion is related to the CEQA Guidelines Appendix G Aesthetics checklist question "Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?" and the *L.A. CEQA Thresholds Guide* factors for determining significance under the Aesthetics and Shading visual elements. The *L.A. CEQA Thresholds Guide* (City of Los Angeles, 2006) specifies that:

> *A project impact would normally 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. Pacific Standard Time (between late October and early April) or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between early April and late October).*

The proposed Project's structures or equipment would not create shade or shadows on sensitive uses. Shading produced by cranes, containers, or other structures would be limited to within the Project site, and adjacent waterways and industrial uses.

Because there would be no proposed Project-specific impact, there would be no contribution to any cumulatively considerable impact from the proposed Project or alternatives under CEQA. Cumulative Impact AES-3 is not a NEPA issue of concern.

4.2.1.5 Cumulative Impact AES- 4: The proposed Project would make a cumulatively considerable contribution to a significant cumulative impact due to creating a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area –Cumulatively Considerable and Unavoidable

Cumulative Impact AES-4 represents the potential for the proposed Project and related cumulative projects to result in significant cumulative 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. This criterion is related to the CEQA Guidelines Appendix G Aesthetics checklist question "Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?" and the *L.A. CEQA Thresholds Guide* factors for determining significance under the Nighttime Illumination visual element (City of Los Angeles, 2006).

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The Port is a highly urbanized area with a substantial amount of existing nighttime illumination. The major sources of illumination at the Port are the hundreds of down lights and floodlights attached to the tops of the tall light standards, as well as the street and roadway lighting. Other sources include high-intensity boom lights located on top of cranes and floodlights attached to the bottom and sides of the crane that illuminate the crane, the vessel, and the immediately surrounding area during loading or unloading of vessels. Past projects at the Port have contributed to an increase in ambient illumination levels in nearby areas. Thus, the net effect of the past projects has been to create a significant cumulative impact. However, because of the standards that the Port 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 will be limited.

The related projects listed in Table 4-1 that have the capability of contributing the most light and glare through the use of cranes, light backlots, or other uses that need extra lighting include TraPac Marine Terminal [#1], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], Pasha Marine Terminal [#15], SCIG [#17], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32]. This new lighting would be required to comply with the new Port standards put in place to minimize the lighting impacts of new projects, including providing shielding and directing lights downward to minimize off-site spill over. Additionally, since the existing levels of ambient lighting in the area are already high, adding new light sources generally results in an incremental increase in ambient lighting conditions. However, the net effect of each of the past, present, and reasonably foreseeable future related projects would result in a significant cumulative impact related to light and glare.

Contribution of the Proposed Project

As documented in the analysis in Section 3.1.4.3.1 under AES-3, the incremental change in ambient lighting conditions associated with the proposed Project on the new 41-aces of backland and associated with the new cranes would not create a substantial change in existing levels of ambient light in sensitive areas in the Project vicinity. Additionally, the lighting has been designed in a way to minimize off-Project light spill, and because of the distance of the planned light fixtures from areas of potential sensitivity, the project lighting will not adversely affect nearby light-sensitive areas. Although it is not certain as to if or when use of an electric automated operation would commence, the proposed Project includes on-site lighting that would be used for either traditional or electric automated operations.

Since much of the area near the Project site consists of lands used for Port activities that are intensively illuminated, in most areas near the proposed Project and on the streets that serve them, the level of sensitivity to changes in nighttime lighting conditions brought about by the proposed Project is low. These measures would minimize and keep the project-level lighting impacts of the proposed Project below significance, however as the past, present, and reasonably foreseeable future related projects would result in a significant impact related to light and glare, the new backlands and crane lighting from the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact under CEQA.

Contribution of the Alternatives

No new lighting would be implemented under Alternatives 1 and 2, thus, Alternatives 1 and 2 would not contribute to a cumulatively significant impact related to light and glare under CEQA. For the same reasons as discussed for the proposed Project, Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant light and glare impact under CEQA. As with the proposed Project, design guidelines and regulations would minimize lighting effects and keep lighting impacts of Alternatives 3 through 6 below significance. However, because the cumulative context is significant, Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant impact under CEQA. Cumulative Impact AES-4 is not a NEPA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

As documented in Section 3.1.4.3, the design of the lighting proposed for the project site incorporates a range of measures to minimize off-site 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 3 through 6 would make a cumulatively considerable and unavoidable contribution to a significant impact under CEQA. There would be no CEQA contribution to Cumulative Impact AES-4 under Alternatives 1 and 2. Cumulative Impact AES-4 is not a NEPA issue of concern.

4.2.1.6 Cumulative Impact AES-5: The proposed Project would not contribute to negative changes to the overall visual character and quality of a landscape that have a cumulatively considerable effect on viewer response – Less than Cumulatively Considerable

Cumulative Impact AES-5 represents the potential of the proposed Project along with other cumulative projects to contribute to negative changes to the overall visual character and quality of the landscape. Factors considered in making this determination include the existing character and quality of important views toward the Project site as evaluated in terms of the variables used by the Federal visual resource analysis methods. It also includes the degree to which the proposed Project or alternative would change the character and quality of those views and the significance of those changes in light of the public's degree of sensitivity toward the views. Section 3.1.4.2.2 presents the methods and standards applied to make this determination.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

As described under Cumulative Impact AES-1, past and present projects at the Port and in the surrounding region have altered the character and quality of the views from many of the viewpoints used as the basis for this analysis, and future projects have the potential to bring about further changes to these views.

The views that were analyzed for the proposed Project include Local Scenic Routes (Front Street and Harbor Boulevard) and public viewpoints (i.e., the bluff in San Pedro Plaza Park and Friendship Park), residential neighbors in San Pedro, and fleeting views available to motorist traveling on the Vincent Thomas Bridge. As described in detail in Section 3.1.2.4, views from these locations include the busy working Port, and the San Pedro waterfront and ocean to varying degrees, depending on elevation and distance.

As discussed in AES-1, the area within the Port has already been graded and developed, which constitutes the baseline conditions. Present and reasonably foreseeable future projects at the Port would generally be built on previously developed land and include features that would be similar to existing development, and thus, the overall visual quality of the area. Additionally, the present and reasonably foreseeable future related projects would not obstruct available views of the working port and horizon beyond from the analyzed viewpoints. Therefore, given the existing working port setting, the

cumulative impacts of past, present, and reasonably foreseeable future projects combined would not result in a significant cumulative impact under NEPA.

Contribution of the Proposed Project

As discussed under Cumulative Impact AES-1, the visual changes associated with the proposed Project would be consistent with the character of the existing views from each of the viewpoints analyzed in Section 3.1. and described in Table 3.1-3. The Project site is located within a highly industrialized area within the Port, and views from surrounding view points, including scenic routes and scenic vantage points, are often fleeting, distant, and/or obstructed by intervening topography and development. The overall effect of the proposed Project would be to increase the level of development of the existing APL Terminal on Pier 300. The development would support similar activities that are currently occurring at the Project site, and would add to the complex scene in the middle ground zone of most views. The new development would be visually compatible with the overall character of the view as a working port environment. Furthermore, views of the Vincent Thomas Bridge from sensitive viewing areas would not be obstructed.

Thus, the proposed Project would not contribute to negative changes to the overall visual character and quality of a landscape, and thus, would not make a cumulatively considerable contribution to a significant cumulative impact on viewer response under NEPA. Cumulative Impact AES-5 is not a CEQA issue of concern.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 2 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact to scenic resources under NEPA. Alternative 1 is not required to be analyzed under NEPA. Cumulative Impact AES-2 is not a CEQA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant impact under NEPA. Therefore, no mitigation measures would be required.

4.2.2 Air Quality, Meteorology, and Greenhouse Gases

4.2.2.1 Scope of Analysis

The region of analysis for cumulative effects on air quality is the South Coast Air Basin for Cumulative Impacts AQ-1 through AQ-8, and globally for Cumulative Impact AQ-9 (global climate change). However, the highest project impacts would occur within the communities adjacent to the proposed Project Berth 302-306 terminal, including San Pedro, Wilmington, and Long Beach.

4.2.2.2 Cumulative Impact AQ-1: The proposed Project would result in cumulatively considerable increase of a criteria pollutant for which the project region is in nonattainment under a national or state ambient air quality standard – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-1 assesses the potential for proposed Project construction along with other cumulative projects to produce a cumulatively significant increase in criteria pollutant emissions for which the project region is in nonattainment under a national or state ambient air quality standard or for which the South Coast Air Quality Management District (SCAQMD) has set a daily emission threshold. This calculation indicates that emissions for the terminal with the automated backlands would be less than without it for criteria pollutants and toxic DPM. Therefore, the analysis of criteria pollutants and health risk is based on the conventional cargo handling system throughout the terminal for all years evaluated to present a conservative analysis.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Due to its substantial amount of emission sources and topographical/meteorological conditions that inhibit atmospheric dispersion, the South Coast Air Basin is an "extreme" nonattainment area for 8-hour ozone (O_3), a "serious" nonattainment area for inhalable particulate matter (PM_{10}), and a nonattainment area for fine particulate matter ($PM_{2.5}$) in regard to the National Ambient Air Quality Standards (NAAQS). The South Coast Air Basin is in attainment of the NAAQS for carbon monoxide (CO), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). In regard to the California Ambient Air Quality Standards (CAAQS), the South Coast Air Basin is presently in nonattainment for O_3, PM_{10}, $PM_{2.5}$, NO_2 and lead. The South Coast Air Basin is in attainment of the CAAQS for SO_2, CO, and sulfates and is unclassified for hydrogen sulfide and visibility-reducing particles. These pollutant nonattainment conditions within the project region are therefore cumulatively considerable. In the time period between 2012 and 2013, a number of large construction projects would occur at the two ports and surrounding areas (see Table 4-1) that would overlap and contribute to cumulatively considerable construction impacts.

The *2007 Air Quality Management Plan* (AQMP) predicts attainment of all NAAQS within the South Coast Air Basin, including $PM_{2.5}$ by 2015 and O_3 by 2024 (SCAQMD, 2007). However, the predictions for $PM_{2.5}$ and O_3 attainment are speculative at this time.

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 (volatile organic compounds [VOCs], CO, nitrogen oxides [NO_X], sulfur oxides [SO_X], PM_{10}, and $PM_{2.5}$), the related projects would result in a significant cumulative air quality criteria pollutant impact.

Contribution of the Proposed Project (Prior to Mitigation)

Emissions from proposed Project construction would increase relative to CEQA and NEPA baseline emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. These emission increases would combine with construction emission construction projects, which would already be cumulatively considerable. As a result, without mitigation, emissions from

proposed Project construction would make a cumulatively considerable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under CEQA and NEPA.

Contribution of the Alternatives

Alternatives 5 and 6 construction emissions would be equivalent to the proposed Project and, therefore, would make a cumulatively considerable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under CEQA and NEPA. Alternative 2 would increase construction emissions relative to CEQA baseline emissions for VOCs, CO, NOx, SOx, PM_{10}, and $PM_{2.5}$; however, Alternative 2 would have the same conditions as the NEPA baseline. Since there would be no incremental difference in emissions between Alternative 2 and the NEPA baseline there would be no impact under NEPA. Alternatives 3 and 4 would both increase construction emissions relative to CEQA and NEPA baseline emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Construction of Alternatives 2 through 4 therefore would also make a cumulatively considerable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Alternative 1 would have no construction emissions and would not make a cumulatively considerable contribution to a significant cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

After mitigation, construction emissions would continue to increase relative to CEQA and NEPA baseline emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Therefore, during construction, the proposed Project and Alternatives 2 through 6 after mitigation would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under CEQA. Alternatives 3 through 6 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs, CO, NOx, SOx, PM_{10}, and $PM_{2.5}$ emissions under NEPA.

4.2.2.3 Cumulative Impact AQ-2: The construction of the proposed Project would produce emissions that exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-2 assesses the potential for proposed Project construction 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. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without

performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for NO_2, PM_{10}, and $PM_{2.5}$, and are unlikely to exceed for CO. Consequently, construction of the related projects would result in a significant cumulative air quality impact related to exceedances of the significance thresholds for NO_2, PM_{10}, and $PM_{2.5}$.

Contribution of the Proposed Project (Prior to Mitigation)

The SCAQMD develops ambient pollutant thresholds that signify significant increases in criteria pollutant concentrations. Project construction emissions would produce off-site impacts that would exceed the SCAQMD ambient thresholds for Federal and state 1-hour and state annual NO_2, 24-hour and annual PM_{10}, and annual $PM_{2.5}$. Overlap of proposed Project construction and operations would also result in significant impacts for 24-hour PM_{10}. Any concurrent emissions-generating activity that occurs near the Project site would add additional air emission burdens to these significant levels. As a result, without mitigation, emissions from Project construction could make a cumulatively considerable contribution to a significant cumulative impact related to ambient NO_X, PM_{10}, and $PM_{2.5}$ levels under CEQA and NEPA.

Contribution of the Alternatives

All alternatives with the exception of Alternative 1 would result in increased NO_2, PM_{10}, and $PM_{2.5}$ concentrations over the CEQA and NEPA baseline during construction. Alternative 2 would increase NO_2, PM_{10}, and $PM_{2.5}$ concentrations over the CEQA baseline only; however, increases would be minimal and are not anticipated to make a cumulatively considerable contribution to a significant cumulative impact under CEQA. As with the proposed Project, Alternatives 3 through 6 therefore would make a cumulatively considerable contribution to a significant cumulative impact relative to NO_2, PM_{10}, and $PM_{2.5}$ levels under CEQA and NEPA. Alternative 2 would have the same conditions as the NEPA baseline; therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

With mitigation, impacts from proposed Project construction would exceed NO_2, PM_{10} and $PM_{2.5}$ threshold. Construction emissions could still make a cumulatively considerable and unavoidable contribution to a significant impact relative to ambient NO_2, PM_{10}, and $PM_{2.5}$ levels from concurrent related project construction under CEQA and NEPA.

4.2.2.4 Cumulative Impact AQ-3: The operation of the proposed Project would produce a cumulatively considerable increase of a criteria pollutant for which the project region is in nonattainment under a national or state ambient air quality standard – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-3 assesses the potential for proposed Project operation along with other cumulative projects to produce a cumulatively considerable increase in criteria pollutant emissions for which the project region is in nonattainment under a national or state ambient air quality standard or for which 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 (Prior to Mitigation)

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

Contribution of the Alternatives

Peak daily emissions from Alternative 1 and 2 operations would not increase relative to CEQA baseline emissions during one or more project analysis years. As a result, emissions from Alternatives 1 and 2 operation would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Alternative 1 is not analyzed under NEPA. Alternative 2 operational emissions would not change relative to the NEPA baseline; therefore, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA.

Peak daily emissions from Alternatives 3 and 4 would not increase relative to CEQA, but would increase relative to NEPA for VOCs, CO, NOx, SOx, PM_{10} and $PM_{2.5}$. As a result, without mitigation, emissions from Alternative 3 and 4 would make a cumulatively considerable contribution to a significant cumulative impact for VOCs, CO, NOx, SOx, PM_{10} and $PM_{2.5}$ under NEPA.

Peak daily emissions from Alternatives 5 and 6 would increase relative to CEQA baseline emissions for VOCs and NOx, and NEPA baseline emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ during one or more project analysis years. As a result, without mitigation, emissions from Alternatives 5 and 6 would make a cumulatively considerable contribution to a significant cumulative impact for VOCs and NOx under CEQA and VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation, peak daily emissions from operation of Alternatives 3 and 4 would increase relative to the NEPA baseline emissions for VOCs and NOx during one or more project analysis years. As a result, mitigated emissions from operation of Alternatives 3 and 4 would make a cumulatively considerable contribution to a significant cumulative

impact for VOCs and NOx emissions under NEPA. Impacts would remain less than cumulatively considerable for all criteria pollutants under CEQA.

After mitigation, peak daily emissions from the proposed Project and Alternatives 5 and 6 would increase relative to CEQA baseline emissions for VOCs only and NEPA baseline emissions for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ during one or more project analysis years. As a result, after mitigation, emissions from the proposed Project and Alternatives 5 and 6 would make a cumulatively considerable contribution to a significant cumulative impact for VOCs under CEQA and VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under NEPA.

4.2.2.5 Cumulative Impact AQ-4: The operation of the proposed Project would produce emissions that cumulatively exceed an ambient air quality standard or substantially contribute to an existing or projected air quality standard violation – Cumulatively Considerable and Unavoidable

Cumulative Impact AQ-4 assesses the potential for proposed Project 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. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for NO_2, could exceed the thresholds for PM_{10} and $PM_{2.5}$, and are unlikely to exceed for CO. Consequently, operation of the related projects could result in a significant cumulative air quality impact related to exceedances of the significance thresholds for NO_2, PM_{10}, and $PM_{2.5}$.

Contribution of the Proposed Project (Prior to Mitigation)

The SCAQMD develops ambient pollutant thresholds that signify significant increases in concentrations of these pollutants. Project operational emissions would produce off-site impacts that would exceed the SCAQMD ambient thresholds for Federal and state 1-hour and state annual NO_2 and Federal annual $PM_{2.5}$. Any concurrent emissions-generating activity that occurs near the Project site would add additional air emission burdens to these significant levels. As a result, without mitigation, emissions from Project operations would make a cumulatively considerable contribution to a significant cumulative impact relative to ambient NO_2 levels under CEQA and NEPA and $PM_{2.5}$ levels under NEPA.

Contribution of the Alternatives

Alternatives 1 through 6 would result in increased NO_2 concentrations over the CEQA baseline and Alternatives 3 through 6 would result in increased NO_2 concentrations

NEPA baselines during Project operation; therefore, these alternatives would make a cumulatively considerable contribution to a significant cumulative impact relative to NO_2 levels under CEQA and NEPA. Alternatives 4 through 6 would result in increased $PM_{2.5}$ concentrations over the NEPA baseline during project operation; therefore, these alternatives would make a cumulatively considerable contribution to a significant cumulative impact relative to $PM_{2.5}$ levels under NEPA. Alternative 1 is not analyzed under NEPA. Alternative 2 operational emissions would not change relative to the NEPA baseline; therefore, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

With mitigation, impacts from Project operation would exceed NO_2 ambient thresholds. As a result, emissions from operation of the proposed Project and alternatives would make cumulatively considerable and unavoidable contributions to a significant cumulative impact relative to ambient NO_2 levels under CEQA and NEPA.

4.2.2.6 Cumulative Impact AQ-5: The operation of the proposed Project would not create on-road 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. Because this is unlikely to occur, the impacts of the other projects would be less than cumulatively considerable.

Contribution of the Proposed Project (Prior to Mitigation)

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

Contribution of the Alternatives

As with the proposed Project, none of the alternatives would make a cumulatively considerable contribution to a significant CO impact under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact relative to CO hot spots.

4.2.2.7 Cumulative Impact AQ-6: The operation of the proposed Project would not create objectionable odors at the nearest sensitive receptor – Less than Cumulatively Considerable

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 find that diesel combustion emissions are objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. Due to the greater distance of residents (sensitive receptors) from the proposed Project, and the minimal stationary industrial sources related to the proposed Project, odorous emissions in the Project region would be less than cumulatively significant for odor impacts.

Contribution of the Proposed Project (Prior to Mitigation)

Operation of the Project would increase diesel emissions within the Port. However these increases would not occur near residential areas and would not be considered to be significant from a cumulative analysis. As a result, without mitigation, Project operations would not make a cumulatively considerable contribution to a significant cumulative impact relative to odor impacts within the Project region under CEQA or NEPA.

Contribution of the Alternatives

As with the proposed Project, none of the alternatives would make a cumulatively considerable contribution relative to odor impacts under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project and alternatives would not make cumulatively considerable contribution to significant cumulative odor impacts.

4.2.2.8 Cumulative Impact AQ-7: The proposed Project would exposure receptors to significant levels of toxic air contaminants – 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 toxic air contaminants (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 SCAQMD in 2008 estimated the existing cancer risk from TACs in the South Coast Air Basin to be 1,200 in a million (SCAQMD, 2008). In MATES III the existing cancer risk from TACs

was estimated at a maximum of 3,700 per million in the highest grid cell, followed by the area south of Central Los Angeles with risk ranging from 1,400 to 1,900 in a million. In the *Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach*, the California Air Resources Board (CARB) estimates that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach occur within and in proximity to the two Ports (CARB, 2006). Based on this information, airborne cancer and non-cancer levels within the project region are therefore significant.

The Port has approved port-wide air pollution control measures through their San Pedro Bay Ports Clean Air Action Plan (CAAP) 2010 Update (LAHD et al., 2010). Implementation of these measures would reduce the health risk impacts from the Project and future projects at the Port. Currently adopted regulations and future rules proposed by CARB and USEPA would also 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 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 project region would still be cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

Prior to mitigation, proposed Project construction and operational emissions of TACs would increase cancer risks above future CEQA baseline levels. The cancer risk increases under CEQA would be significant at residential (25 in a million) and occupational (16 in a million) receptors. The location identified for the peak residential receptors are at the liveaboards (people who live on boats) for boats docked west of Terminal Island Freeway at Anchorage Road. The cancer risk increment would also exceed the significance threshold at the liveaboards docked in Fish Harbor west of the Project Site. However, residential incremental cancer risk would not exceed the significance threshold at any residential areas on the mainland.

Therefore under CEQA, the proposed Project would exceed the SCAQMD significant threshold of 10 in a million at several receptor types, and would make a cumulatively considerable contribution to cancer risks relative to the future CEQA baseline. The proposed Project emissions of TACs would also make a cumulatively considerable contribution (although a contribution of less than 10 in a million cases) to cancer risks relative to CEQA baseline levels to sensitive, student and recreational off-site receptor types.

The proposed Project construction and operational TAC emissions would not increase chronic non-cancer risks above future CEQA baseline levels. Therefore, the proposed Project would not make a cumulatively considerable contribution to impacts relative to chronic non-cancer health risks.

Prior to mitigation, proposed Project construction and operational emissions of TACs would increase cancer risks from NEPA baseline levels. The cancer risk increases under NEPA would be 7 in a million at a residential receptor, 7 in a million at an occupational receptor, 2 in a million at a sensitive receptor, and less than 1 in a million at student and recreational receptors. Therefore under NEPA, the proposed Project would not exceed the

SCAQMD significant threshold of 10 in a million at any receptor type. However, proposed Project emissions of TACs would make a cumulatively considerable contribution (although a contribution of less than 10 in a million cases) to cancer risks relative to NEPA baseline levels to all off-site receptor types. Similarly, while the proposed Project emissions would not have an individually significant impact on chronic non-cancer health effects at any receptor type under NEPA, the proposed Project would make a greater than zero, and therefore cumulatively considerable, contribution to impacts relative to chronic non-cancer health risks.

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 residential and occupational receptors in proximity to the Project terminal.

Any concurrent emissions-generating activity that occurs near the Project site would add additional airborne health burdens to these significant levels. As a result, without mitigation, emissions from Project construction and operation would make a cumulatively considerable contribution to significant impacts relative to airborne acute non-cancer levels at all receptor types under CEQA or NEPA.

Contribution of the Alternatives

As with the proposed Project, any concurrent emissions-generating activity that occurs near the Project site would add additional airborne health burdens. As a result, without mitigation, emissions from construction and operation of Alternatives 1 through 6 would make a cumulatively considerable contribution to a significant cumulative impact relative to airborne cancer levels at all receptor types under CEQA.

Additionally, without mitigation, emissions from construction and operation of Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant cumulative impact relative to airborne cancer and chronic non-cancer levels at all receptor types under NEPA (the NEPA impact determination does not apply to Alternative 1, and NEPA impacts are zero under Alternative 2).

Under both NEPA and CEQA, emissions from construction and operation of Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant cumulative impact relative to airborne acute non-cancer levels at all receptor types.

Mitigation Measures and Residual Cumulative Impacts

With mitigation, construction and operational emissions of TACs under the proposed Project and Alternatives 1 through 6 would increase cancer risks from future CEQA baseline levels at all receptor types. Project-level impacts would remain significant for residential receptors for all alternatives, and for occupational receptors for Alternatives 3 through 6. While impacts at the other receptor types would be less than significant on a project-level, emissions of TACs from the proposed Project and Alternatives 1 through 6 would make a cumulatively considerable contribution to a significant cumulative impact relative to cancer risks relative to CEQA baseline levels to all receptor types.

Also with mitigation, construction and operational emissions of TACs under the proposed Project and Alternatives 3 through 6 would increase cancer risks from NEPA baseline levels at all receptor types. While impacts would be less than significant on a project-

level, emissions of TACs from the proposed Project and Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant cumulative impact (although a contribution of less than 10 in a million cases) relative to cancer risks relative to NEPA baseline levels to all receptor types.

With mitigation, construction and operational emissions of TACs from the proposed Project and Alternatives 3 through 6 would increase acute non-cancer effects from CEQA and NEPA baseline levels to above the 1.0 hazard index significance criterion at occupational receptors in proximity to the Project terminal. Although the increases at residential, recreational, sensitive and student receptors would not exceed the 1.0 hazard index significance criterion, since the mitigated construction and operations under the proposed Project and Alternatives 3 through 6 would increase acute non-cancer effects in the Project region, the proposed Project and Alternatives 3 through 6 would also contribute to cumulatively considerable and unavoidable impacts relative to ambient non-cancer effects under CEQA and NEPA at these receptor types.

While the mitigated Project emissions would not have an individually significant impact on chronic non-cancer health effects at any receptor type under NEPA, the mitigated Project and mitigated Alternatives 3 through 6 would make a greater than zero contribution, and therefore make a cumulatively considerable contribution to a significant cumulative impact on chronic non-cancer health risks.

Under CEQA, the project-level chronic non-cancer health effects at all receptor types are less than the CEQA baseline; and therefore would not make a cumulatively considerable contribution to a significant cumulative impact.

Levels of TAC emissions from Port facilities and Port-related trucks traveling along adjacent streets will diminish in future years with the implementation of the recently approved 2010 CAAP Update and current and future rules adopted by the CARB and USEPA. Specifically, port-related diesel particulate matter (DPM) emissions are anticipated to decrease by approximately 72 percent by 2014 and 77 percent by 2023 over 2005 levels (POLA, 2010). 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 the ports have developed a “health risk reduction standard” that will aim by 2020 to lower the residential cancer risk due to DPM by 85 percent in the port region and communities adjacent to the ports. Although levels of TAC emissions from Port facilities and Port-related trucks traveling along adjacent streets will diminish in future years from these programs and rules, emissions from construction and operation of the proposed Project or Alternatives 1 through 6 are assumed to make a cumulatively considerable contribution to a significant cumulative impact relative to airborne cancer and chronic non-cancer levels at all receptor types under CEQA and NEPA (for the proposed Project and Alternative 3 through 6 only under NEPA), and a cumulatively considerable contribution to acute non-cancer levels at all receptor types under CEQA and NEPA.

4.2.2.9 Cumulative Impact AQ-8: The proposed Project would not conflict with or obstruction of implementation of an applicable AQMP – Less than Cumulatively Considerable

Cumulative Impact AQ-8 represents the potential of the proposed Project 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 2007 AQMP. The related projects would be subject to regional planning efforts and applicable land use plans (such as the General Plan, Community Plans, or the Particulate Measurement Program) or transportation plans such as the Regional Transportation Plan and the Regional Transportation Improvement Program. Because the 2007 AQMP accounts for population projections that were 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 (Prior to Mitigation)

The proposed Project would produce emissions of nonattainment pollutants. The 2007 AQMP proposes mobile source control measures and clean fuel programs that are designed to bring the South Coast Air Basin 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 Project would not conflict with or obstruct implementation of the AQMP.

The Port of Los Angeles regularly provides the Southern California Association of Governments (SCAG) with its Port-wide cargo forecasts for development of the AQMPs. Therefore, the attainment demonstration included in the 2007 AQMP accounts for the emissions generated by projected future growth at the Port. Because one objective of the proposed Project is to accommodate growth in cargo throughput at the Port, the AQMP accounts for the Project development. As a result, without mitigation, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact in terms of conflicting with or obstructing implementation of an applicable AQMP under CEQA or NEPA.

Contribution of the Alternatives

As with the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact in terms of conflicting with or obstructing implementation of an applicable AQMP under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

No mitigation is required because the proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact.

4.2.2.10 Cumulative Impact AQ-9: The proposed Project would contribute to global climate change – 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 Chapter 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, 2009). Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. According to the IPCC's Climate Change 2007 Synthesis Report (IPCC, 2007), global anthropogenic emissions of GHGs in 2004 were 49.0 gigatonnes of carbon dioxide equivalent (CO_2e). In California alone, CO_2e emissions totaled approximately 483.88 million metric tons or 0.5 gigatonnes in 2004 (CARB, 2010). Based upon this information, past, current, and future global GHG emissions, including emissions from projects in the Port Complex (Table 4-1) and elsewhere in California, are cumulatively significant.

Contribution of the Proposed Project (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, make a cumulatively considerable incremental contribution to a macro-scale impact. As noted above, CO_2e emissions in California totaled approximately 483.88 million metric tons in year 2004 (CARB, 2010). As shown in Table 3.2-41, the proposed Project would produce higher GHG emissions in each future project year compared to CEQA baseline levels. Any concurrent emissions-generating activity that occurs global-wide would add additional GHG emission burdens to these significant levels, which could further exacerbate environmental effects as discussed above and in Chapter 3.2.

Considering AQ-9, which states that any GHG increase over the CEQA baseline is significant, without mitigation, emissions from proposed Project construction and

operation would make a cumulatively considerable contribution to a significant cumulative impact relative to global climate change under CEQA. No significance determination is made under NEPA.

Contribution of the Alternatives

As with the proposed Project, emissions from Alternatives 2 through 6 construction and operation and Alternative 1 operations only would result in increased GHG emissions in each future project year and would therefore make a cumulatively considerable contribution to a significant cumulative impact to global climate change under CEQA.

Mitigation Measures and Residual Cumulative Impacts

As shown in Table 3.2-42, with mitigation, the proposed Project and Alternatives 1 through 6 would produce higher GHG emissions in each future project year, compared to CEQA baseline levels. The way in which GHG emissions associated with the proposed Project or alternatives might or might not influence actual physical effects of global climate change cannot be determined. For these reasons, it is uncertain whether emissions from the proposed Project or alternatives would make a cumulatively considerable contribution to a significant cumulative impact relative to global climate change when considered with the emissions generated by human activity. Nevertheless, as discussed in Chapter 3.2, existing GHG levels are projected to result in changes to the climate of the world, with significant warming seen in some areas, which, in turn, will have numerous indirect effects on the environment and humans.

GHG emissions from the alternatives would contribute to existing levels and, therefore, would contribute to the causes of global climate change. Considering AQ-9, which states that any increase in GHG emissions over the CEQA baseline is significant, emissions from construction and operation of the proposed Project and alternatives, would make a cumulatively considerable and unavoidable contribution to a significant impact relative to global climate change under CEQA.

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 site and extending approximately 1 mile (1.6 km) in all directions. The resources present are common species that are abundant throughout the region and are adapted to industrial areas in the 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 Los Angeles/Long Beach 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, but no distinct boundary can be established so the entire Harbor area is used.

For marine mammals, the analysis area includes the Los Angeles-Long Beach Harbor as well as the Pacific Ocean from near Angels Gate out to Catalina Island in order to cover vessel traffic effects.

The special status 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 Harbor area can occur, the area for cumulative analysis is limited to the Harbor. Sea turtles are not expected to occur in the Harbor and their presence in the near-shore areas where vessel traffic could affect them is unlikely and unpredictable; consequently, these animals are not considered in the cumulative analysis.

Past, present, and reasonably foreseeable future development that could contribute to significant 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 significant cumulative impacts on terrestrial species. Marine organisms could be affected by activities in the water, such as dredging, filling, wharf demolition and construction, and vessel traffic. Runoff of pollutants from construction and operations activities on land into Harbor waters via storm drains or sheet runoff also has the potential to affect marine biota, at least near the storm drains.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.3.4.2. These criteria are the same for both the CEQA and NEPA analyses.

4.2.3.2 Cumulative Impact BIO-1: The proposed Project would contribute to a cumulative loss of individuals or 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 – Cumulatively Considerable and Unavoidable

Cumulative Impact BIO-1 represents the potential of the proposed Project along with other cumulative projects to adversely affect state and federally listed endangered, threatened, rare, protected, or Species of Special Concern, or to result in the loss of designated critical habitat.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction of past fill projects in the Harbor has reduced the amount of marine surface water present and thus foraging and resting areas for special status bird species, but these projects have also added more land and structures that can be used for perching near the water. In 1979, LAHD began providing nesting habitat for the California least tern at a 15-acre nesting site. The location of this nesting site has changed over time due to Port development activities, and it is now on the southern tip of Pier 400. 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. Established roosting areas for birds and the occasional harbor seal occur along the breakwaters, particularly the Middle Breakwater, which is isolated from human access. Impacts to special-status species as a result of marine habitat loss would not be cumulatively significant.

Development of the vacant land in the southeast portion of Pier 400 adjacent to the California least tern nesting site (Plains All American Oil Marine Terminal Project [#10]) has the potential to adversely affect that species during construction; although the USFWS determined the project would not likely adversely affect the species given LAHD's incorporation of various minimization measures into the project design. Construction of the Cabrillo Shallow Water Habitat Expansion and Eelgrass Habitat Area as part of the Channel Deepening Project [#3] and Inner Cabrillo Beach Water Quality Improvement Program [#27], and other projects that involve dredging such as the TraPac Marine Terminal [#1], San Pedro Waterfront Project [#2], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Al Larson Boat Shop Improvement Project [#29], Pier 500 Container Terminal Development [#32], Middle Harbor Terminal Redevelopment [#90], Piers G & J [#91], and Pier S [#93] has the potential to adversely affect California least tern foraging during construction activities. These activities affected a small portion of the Harbor during any single episode and are of limited duration for each project, and any significant impacts to the California least tern could be mitigated through timing of construction activities in areas used for foraging to avoid work when the California least terns are present. Those projects that are occurring at the same time but that are not nearby would thus not have additive effects. 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. For these reasons, impacts to the California least tern would not be cumulatively significant.

In-water/over-water construction activities (i.e., TraPac Marine Terminal [#1], San Pedro Waterfront [#2], Channel Deepening Project [#3], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Inner Cabrillo Beach Water Quality Improvement Program [#27], Pier 500 Container Terminal Development [32], Middle Harbor Terminal [#90], Piers G & J Redevelopment [#91], Pier S Marine Terminal [#93], Schuyler F. Heim Bridge [#105], and Cerritos Channel Bridge [#107]) could disturb or cause special-status birds, in addition to the California least tern addressed above, to avoid the construction areas for the duration of the activities. Because these projects would occur at different locations throughout the Harbor and only some are likely to overlap in time, the birds could use other undisturbed areas in the Harbor, and few individuals would be affected at any one time. However, the Cerritos Channel Bridge [#107] 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 can be mitigated by scheduling the work to begin after the nesting season is complete. For instance, the Schuyler F. Heim Bridge [#105] would implement mitigation measures in which the existing nesting site is moved during the construction period and moved back to the new bridge after construction is complete. Impacts to other special-status bird species would be less than cumulatively significant.

Past, present, and future related projects have increased and will continue to increase vessel traffic. Ship strikes involving marine mammals and sea turtles, although uncommon, have been documented for the following listed species in the eastern North Pacific: blue whale, fin whale, humpback whale, sperm whale, southern sea otter, loggerhead sea turtle, green sea turtle, olive ridley sea turtle, and leatherback sea turtle (NOAA Fisheries and USFWS 1998a, 1998b, 1998c, 1998d; Stinson 1984; Carretta et al. 2001).

Ship strikes have also been documented involving gray, minke, and killer whales. The blue whale, fin whale, humpback whale, sperm whale, gray whale, and killer whales 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. Blue whales normally pass 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 recent population estimate is approximately 1,400 blue whales (Carretta et al., 2009). Along the California coast, there is evidence that despite vessel strikes blue whale abundance has increased over the past three decades (Calambokidis *et al*., 1990; Barlow, 1995; Calambokidis, 1995, Carretta et al., 2009). 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 vessel speed reduction would substantially reduce the potential for whale strikes because 80 percent 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 to 12 knots from Point Fermin out to 40 nautical miles from the Port. Port records show they currently have more than 90 percent participation in the VSRP, thereby reducing potential for present and future increases in whale strikes due to vessels entering the Harbor. Nonetheless, operation of many of the past projects have and present and future projects would result in increased vessel trips to and from the Harbor; therefore, the related projects could potentially increase whale mortalities from vessel strikes, which is considered to be a considerable and unavoidable significant cumulative impact.

The past projects that have increased vessel traffic have also increased underwater sound in the Harbor and in the ocean from the vessel traffic lanes to Angels Gate and Queens Gate. Ongoing and future terminal upgrade and expansion projects (i.e., TraPac Marine Terminal [#1], San Pedro Waterfront [#2], Channel Deepening [#3], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], Ultramar Lease Renewal Project [#11], China Shipping Development Project [#14], Pasha Marine Terminal [#15], Interim Container Terminal [#16], YTI Container Terminal[#23], Yang Ming Container Terminal [#24], Pier 500 Container Terminal Development [32], Middle Harbor Terminal Redevelopment [#90], Piers G & J [#91], and Pier S [#93]) 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 Harbor. The overall increase in sound would be less than 3 dBA, because the number of vessels would not double; therefore, no significant cumulative in-water noise impacts would occur that could affect sensitive species.

In-water construction activities, and particularly pile driving, would also result in underwater sound pressure waves that could affect marine mammals, if they are present and persist in the area. Any seals or sea lions present in the Pier 300 Channel during construction would likely avoid the disturbance areas and thus would not be injured. The locations of these activities (i.e., pile and sheet pile driving) are in areas where few marine mammals occur. In addition, in-water construction of related projects (Plains All American Oil Marine Terminal [#10], San Pedro Waterfront Project [#2], and Al Larson Boat Shop Improvement Project [#29]) near the proposed Project could occur concurrently; however, concurrent construction activities in the Harbor are unlikely to have an adverse cumulative effect on the marine mammals, because ample area exists for any marine mammals that happen to be in the Harbor to move to avoid any disturbance and projects in close proximity are not expected to occur concurrently. As a consequence, construction of the related projects would not result in a significant cumulative impact to marine mammals.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Section 3.3.4.3.1 (Impact BIO-1a and 1b), the proposed Project is not likely to result in the 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. The proposed Project would have less than significant impacts, prior to mitigation, on special-status species under CEQA and NEPA with the exception of potential impacts should development of the backlands occur during the nesting season and Elegant and Caspian terns are present.

Concrete pile driving is anticipated to result in disturbance (Level B harassment) to marine mammals (particularly harbor seals and sea lions) in the vicinity of pile-driving activities. Noise from impact pile driving during wharf construction could cause seals and sea lions to avoid construction areas during pile driving but would not result in the loss of individuals or habitat and thus the impact would be less than significant. However, although it is expected that marine mammals would avoid or voluntarily move away from pile-driving activities, standard conditions of approval (**SC BIO-1**. Avoid marine mammals) would be implemented to further reduce impacts to marine mammals during pile-driving activities. **SC BIO-1** would ensure that marine mammals would be readily able to avoid pile-driving areas, and no injury to marine mammals from pile-driving sounds would be expected. Other projects in the vicinity that would include pile-driving activities (i.e., Berth 408 under Plains All American Oil Marine Terminal [#10], primarily along the Main Channel's west side under the San Pedro Waterfront Project [#2], and the Al Larson Boat Shop Improvement Project [#29]) are located more than one mile from Berth 306. Further, there is adequate area in the harbor for marine mammals to avoid pile driving should it be occurring in multiple locations concurrently. Therefore, potential concurrent pile-driving activities are not expected to be cumulatively significant. Therefore, proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact relative to pile driving.

The proposed Project would have no impact on designated or proposed critical habitat as a result of construction and operations because no designated or proposed critical habitat is present. Elegant and Caspian terns nested on the 41-acre backlands, which will be developed as part of the proposed Project. Should development of the backlands overlap with the nesting season, development would result in a significant impact on nesting if Elegant and Caspian terns are present. Implementation of mitigation measure **MM BIO-1** would reduce potential impacts to Elegant and Caspian tern nesting due to backlands

development on the 41-acre site to less than significant. Other nesting habitat would continue to be available elsewhere in the Port. The conversion of the recently created 41-acre fill area to backlands (e.g., cranes, railyard, and container transfers) would not measurably change the numbers or species of common birds in that area and, thus, would not affect foraging and terns, which would likely find nesting habitat elsewhere in the Port. Therefore, proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to Elegant and Caspian terns from construction activities under CEQA and NEPA.

In-water/over-water construction would cause localized activity, noise, and turbidity that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Construction activities would result in no loss of individuals or habitat for special status species. Increased vessel activity from the proposed Project would result in increased noise levels; however, impacts are not considered cumulatively considerable because this would not lead to the loss of individuals or habitat of sensitive species. Therefore, proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to special status species from in-water/over-water noise or construction activities under CEQA and NEPA.

The increase in vessel traffic associated with the proposed Project would also increase the likelihood of a vessel collision with a marine mammal or sea turtle, which could result in injury or mortality. Because of the low probability of vessel strikes, this incremental increase associated with the proposed Project is considered less than significant. However, the increase in vessel traffic caused by the proposed Project would contribute to overall increases in vessel traffic along the southern California coast, which have contributed to marine mammal mortalities. Therefore, operation of the proposed Project could make a cumulatively considerable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would make a cumulatively considerable contribution to a significant impact under Impact BIO-1 under CEQA and NEPA (Alternative 1 is not applicable to NEPA, and Alternative 2 would result in no contribution under NEPA).

Improvements proposed under Alternatives 5 and 6 would include the wharf extension at Berth 306, and would therefore require pile-driving. This would not result in the loss of individuals or habitat and thus the impact would be less than significant. Further, because the distance between pile-driving activities associated with the wharf extension at Berth 306, and pile-driving activities associated with other projects in the Harbor is expected to be greater than one mile, possible concurrent pile driving activities are not expected to be cumulatively significant. Therefore, the incremental contribution of Alternatives 5 and 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA relative to pile driving.

Alternatives 4 through 6 would result in development of the 41-acre backlands and, as discussed for the proposed Project, with implementation of **MM BIO-1** if construction occurs during the nesting season, Alternatives 4 through 6 would not make a

cumulatively considerable contribution to a significant impact relative to special status species under CEQA and NEPA.

Alternatives 3 through 6 would result in increases in vessel traffic relative to the CEQA and NEPA baselines. This could potentially contribute to whale mortalities, and thus make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA. Alternatives 1 and 2 would result in increases in vessel traffic relative to the CEQA baseline, and thus make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Alternative 1 is not required to be analyzed under NEPA and Alternative 2 would not result in a vessel traffic increase relative to the NEPA baseline. Therefore Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of mitigation measure **MM BIO-1**, which requires that nesting surveys be conducted if construction on the 41-acre undeveloped area occurs between February 15 and September 1, would ensure that potential significant impacts to Elegant and Caspian terns nesting would be less than significant.

Standard condition of approval **SC BIO-1**, which requires the establishment of a 100-meter-radius safety zone and the monitoring for marine mammals within the zone would reduce potential cumulative effects from pile driving to marine mammals and ensure that the proposed Project and Alternatives 5 and 6 would not make a cumulatively considerable contribution to a significant cumulative impact related to pile-driving.

The proposed Project and Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant impact related to marine mammal mortalities from vessel traffic under CEQA and NEPA, and Alternatives 1 and 2 would make a cumulatively considerable contribution to a significant cumulative impact related marine mammal mortalities from vessel traffic under CEQA. Mitigation measure **MM AQ-10**, requiring ships calling at Berths 302 through 306 to participate in the Vessel Speed Reduction Program (VSRP) reduces the potential for vessel collision with marine mammals for the proposed Project and Alternatives 3 through 6; however, it would not eliminate potential cumulative effects.

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 and Alternatives 3 through 6 to contribute to a cumulatively considerable residual impact related to vessel strikes under CEQA or NEPA would remain. No mitigation would be applicable to Alternatives 1 and 2 because no discretionary action regarding the existing terminal lease that could implement mitigation would occur and, further, no mitigation would be available to reduce cumulative impacts related to vessel strikes to below the level of significance. Therefore, the potential for operation of Alternatives 1 and 2 to make a residual cumulatively considerable contribution to significant cumulative impact related to vessel strikes under NEPA would remain (as noted, Alternative 1 does not have to be analyzed under NEPA, and Alternative 2 would not result in any impact under NEPA).

4.2.3.3 Cumulative Impact BIO-2: The proposed Project would not contribute to a cumulatively substantial reduction or alteration of state, federally, or locally designated natural habitats, special aquatic sites, or plant communities, including wetlands – Less than Cumulatively Considerable

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 Harbor. The EFH protection requirements began in 1996, and thus, only apply to projects since that time. The projects in Table 4-1 that could result in a loss of EFH include TraPac Marine Terminal [#1], Channel Deepening Project [#3], China Shipping Development Project [#14], Pier 500 Container Terminal Development [#32], Middle Harbor Terminal [#90], Piers G & J Terminal [#91], Schuyler Heim Bridge [#105], and Cerritos Channel Bridge [#107]. The loss of EFH since 1996 is significant but can be mitigated under CEQA and NEPA, as the use of mitigation bank credits for the loss of marine habitat offset the losses of EFH. Temporary disturbances within EFH may also occur during in-water construction activities from cumulative related projects including: TraPac Marine Terminal [#1], San Pedro Waterfront [#2], Channel Deepening Project [#3], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Inner Cabrillo Beach Water Quality Improvement Program [#27], Pier 500 Container Terminal Development [32], Middle Harbor Redevelopment Project [#90], Piers G & J Redevelopment [#91], Pier S [#193], Schuyler F. Heim Bridge [#105], and Cerritos Channel Bridge [#107]. These disturbances in the Harbor occur at specific locations that are scattered in space and time within the Harbor. The concurrent construction activities at these sites are unlikely to increase impacts to EFH that would further degrade the habitat or ultimately result in significant increases in significant cumulative impacts since they will be relatively short in duration and dredge and other localized construction effects diminish rapidly with distance from the in-water activity. They would not likely reduce or permanently alter EFH within the 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, special aquatic sites (i.e., eelgrass beds, mudflats), and plant communities (wetlands) have a limited distribution and abundance in the Harbor. The prior 41-acre expansion of the Pier 300 backlands caused a loss of eelgrass beds that was previously mitigated. While recent marine habitat losses have been mitigated pursuant to inter-agency mitigation credit/debit systems, earlier losses of eelgrass, mudflats, and salt marsh from early landfill projects occurred as a result of the physical changes/development at the Port and are considered significant.

Contribution of the Proposed Project (Prior to Mitigation)

There are no special aquatic habitats and sensitive natural communities identified in the proposed Project area that would be affected by the proposed Project. There is no eelgrass or giant kelp at the Berth 306 wharf, so shading from the new wharf would not impact these resources. There are no mudflats or marshes near the Project site that would be affected by proposed Project construction or operation. Runoff from the newly paved areas of proposed Project site would be routed southward, treated via BMP devices, and discharged to the Pier 300 Channel. The runoff is not expected to adversely affect eelgrass beds present in the Shallow Water Habitat or Seaplane Lagoon due to the large separation distance (over 2,900 ft). Impacts to EFH during construction would be localized and temporary, and operational activities on land and in the water would not substantially reduce or alter EFH. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Construction and operation of the proposed Project would not affect any other natural habitats, special aquatic sites, or plant communities and thus would not make a cumulatively considerable contribution to a significant cumulative impact to such habitats, sites or communities under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to natural habitats, special aquatic sites, or plant communities. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.3.4 Cumulative Impact BIO-3: The proposed Project would not contribute to a cumulatively considerable interference with wildlife movement/migration corridors – Less than Cumulatively Considerable

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 Harbor. Migratory birds pass through the Harbor area, and some rest or breed, such as the California least tern, in this area. Past, present, and reasonably foreseeable future related projects in the 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 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 generally use designated travel lanes, the probability of interference with migrations is low.

The related projects would be developed on designated parcels in the urban environment and would not result in significant cumulative impacts to migration corridors.

Contribution of the Proposed Project (Prior to Mitigation)

Construction and operation of the proposed Project would not affect any migration or movement corridors in the Harbor or along the coast. Consequently, it would not make a cumulatively considerable contribution to a significant cumulative impact on wildlife migration or movement corridors under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to wildlife migration or movement corridors. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.3.5 Cumulative Impact BIO-4: The proposed Project would contribute to a cumulatively considerable disruption 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 (i.e., 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 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 (i.e., 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 benthic and invertebrate communities are shown to recolonize quickly following dredging. Because these

activities affected a small portion of the Harbor during any single episode, and recovery has occurred or is in progress, biological communities in the Harbor have not been substantially degraded. Similar construction activities and impacts (i.e., wharf construction/ reconstruction and dredging) would occur for these cumulative related projects that are currently under way and for some of those that would be constructed in the future, including the TraPac Marine Terminal [#1], San Pedro Waterfront Project [#2], Channel Deepening Project [#3], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Inner Cabrillo Beach Water Quality Improvements [#27], Al Larson Boat Shop Improvement Project [#29], Pier 500 Container Terminal Development [#32], Middle Harbor Terminal Redevelopment [#90], Piers G & J [#91], and Pier S [#93]. Because recolonization of dredged areas and new riprap and piles begins immediately and provides a food source for other species, such as fish, within a short time, multiple projects spread over time and space within the Harbor would not substantially disrupt benthic communities. 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 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 during and for short durations after the activities that disturb bottom sediments. Effects on marine biota are thus localized to relatively small areas of the Harbor and of limited duration for each project. Those projects that are occurring at the same time but that are not nearby would thus not have additive effects.

Furthermore, based on biological baseline studies described in Section 3.3, the benthic marine resources of the Harbor have not declined during Port development activities occurring since the late 1970s. An assessment of dominant species in the Harbor indicates a gradient of increasing environmental stress (enrichment/contamination) from the Outer Harbor to Inner Harbor and from basins to slips (MEC and Associates, 2002; SAIC, 2010). The most recent infaunal assessment documented relatively similar densities between Inner Harbor and Outer Harbor, but densities at shallow water stations were markedly higher than those in deeper water (SAIC, 2010). Over time, there has been an increasing tendency of movement of healthy Outer Harbor assemblages up the Main Channel and improved benthic indicators in the Inner Harbor areas (MEC and Associates, 2002; MBC, 2009; SAIC, 2010). While major dredging and filling activities within the harbor (including TraPac Marine Terminal [#1], San Pedro Waterfront Project [#2], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], Ultramar Lease Renewal Project [#11], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24]) Al Larson Boat Shop Improvement Project [#29], Pier 500 Container Terminal Development [#32], Middle Harbor Terminal Redevelopment [#90], Piers G & J [#91], and Pier S [#93]), can disturb benthic communities, 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 could take several years.

Based on the above, dredging, wharf construction, and other in-water construction of the past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts to the benthic community.

Backland Construction and Operations. Runoff from construction activities on land has reached Harbor waters at some locations during past project construction, particularly for projects implemented prior to the 1970s when environmental regulations were promulgated. The past projects included Pier 300, Pier 400, Pier J, and the remaining terminal land areas within the Los Angeles-Long Beach Harbor. Runoff also has the potential to occur during present and future projects (all projects in Table 4-1 because all drainage in the area containing the cumulative projects listed is ultimately to the Harbor). Construction runoff would only occur during construction activities, so that projects that are not concurrent would not have cumulative effects. Construction runoff would add to ongoing runoff from operation of existing projects in the Harbor at specific project locations and only during construction activities. For past, present, and future projects, the duration and location of such runoff would vary over time. Measures such as berms, silt curtains, and sedimentation basins are used to prevent or minimize runoff from construction, and this keeps the concentration of pollutants below thresholds that could measurably affect marine biota. Runoff from past construction projects (i.e., turbidity and any pollutants) dissipated shortly after construction was completed or diminished as solids 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 subsequent dredging projects. Runoff from operation of these past projects continues, but it is regulated. Biological baseline surveys in the Harbor (MEC, 1988; MEC and Associates, 2002; SAIC, 2010) have not shown any disruption of biological communities resulting from runoff. Further, the most recent major assessment, conducted in 2008, concluded that were no significant changes in habitat quality throughout the Harbor since 2000. In fact, based on studies summarized in Section 3.3, conditions in the harbor Area have remained about the same or improved between 1980 and 2008.

Effects of runoff from construction activities and operations would not substantially disrupt local biological communities in the Harbor, and as a consequence, past, present, and reasonably foreseeable future projects would not result in significant cumulative biological resource impacts related to runoff.

Much of the development in the Harbor has occurred and continues to occur on landfills that were constructed for that purpose. As a result, those developments did not affect terrestrial biota. Redevelopment of existing landfills to upgrade or change backland operations temporarily affected the terrestrial biota (i.e., landscape plants, rodents, and common birds) that had come to inhabit or use these industrial areas. Future cumulative developments such as hotels and other commercial developments on lands adjacent to the Harbor would be in areas that do not support natural terrestrial communities or are outside the region of analysis. Projects in Table 4-1 that are within the geographical region of analysis and could affect terrestrial biological resources include TraPac Marine Terminal [#1], San Pedro Waterfront Project [#2], Channel Deepening Project [#3], Evergreen Container Terminal [#5], SSA Outer Harbor Fruit Facility Relocation [#8], Adaptive Reuse of Warehouses 9 and 10 [#9], Ultramar Lease Renewal Project [#11], Pasha Marine Terminal [#15], Interim Container Terminal [#16], South Wilmington Grade Separation [#20], Wilmington Waterfront Development Project [#21], I-110/C Street/Figueroa Street/Realigned Harry Bridges Interchange [#22], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Pier A East [#92], Schuyler Heim Bridge Replacement [#105], and Cerritos Channel Bridge [#107].

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 (i.e., TraPac Marine Terminal [#1], San Pedro Waterfront [#2], Channel Deepening Project [#3], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], Ultramar Lease Renewal Project [#11], China Shipping Development Project [#14], Pasha Marine Terminal [#15], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Pier 500 Container Terminal Development [32], Middle Harbor Terminal Redevelopment [#90], Piers G & J [#91], and Pier S [#93]) that involve vessel transport of cargo into and out of the 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 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 Harbor, there is no evidence that these species have disrupted the biological communities in the Harbor. Biological baseline studies conducted in the Harbor continue to show the existence of diverse and abundant biological communities. However, absent the ability to completely 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 Harbor over time, even with these control measures. As a consequence, past, present, and reasonably foreseeable future projects would result in significant cumulative biological resource impacts related to the introduction of invasive species to Harbor water.

In addition, operation of the related projects would result in increased vessel traffic to and from the Port. There is the possibility, although remote, of accidental spills from one or more vessels that conceivably could release enough fuel into ocean waters to result in impacts to biological resources. However, in the unlikely event of a spill , it would be subject to regulations regarding containment, clean-up, and remediation. Therefore, cumulative impacts are not considered to be significant.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would result in dredge work and installation of in-water structures (pilings) associated with the new Berth 306 that would disturb the benthic community, but the community would begin recolonization soon after in-water construction ends. Resuspension of contaminants of concern during dredging could adversely affect aquatic organisms if contaminants of concern are present in sufficient dissolved concentrations; however, this would be limited in duration and would be confined to the vicinity where the dredging is taking place. Additionally, water quality monitoring and construction BMPs, including the use of silt curtains, would reduce the potential for these effects. As a result, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to the benthic community under CEQA and NEPA.

Construction activities in the study area, particularly pile driving, could cause short-term impacts on individuals (i.e., marine mammals and fishes, including those with designated EFH) in the immediate vicinity of pile driving or other construction activities (including sources of noise and light). The disturbances would be temporary and limited to

relatively small areas off the south side of Pier 300. As discussed under Cumulative Impact BIO-1, the distance between pile-driving activities associated with the wharf extension at Berth 306 and pile-driving activities associated with other projects in the Harbor is expected to be greater than one mile; therefore, no substantial disruption of biological communities would result from proposed Project construction. As a result, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological community under CEQA and NEPA.

Runoff from temporary disturbance areas on land during construction of proposed Project backland facilities would add to the cumulative amount of construction runoff from all other projects in the Harbor that are being constructed concurrently with the proposed Project. Construction activities are closely regulated by state and local agencies, and runoff of pollutants in quantities that could adversely affect marine biota is not likely to occur. Furthermore, runoff from the proposed Project and most of the cumulative projects would not occur simultaneously but rather would be events scattered over time, so that total runoff to Harbor waters would be dispersed, in both frequency and location. Existing runoff and storm drain discharge controls, as well as conditions of all proposed Project-specific permits, would be implemented to control runoff during operations of the proposed Project. Thus, construction and operation of the proposed Project would not contribute to cumulatively considerable effects on biological communities under CEQA or NEPA, because runoff control measures would be implemented and maintained as required in project permits and contract specifications.

The small increase in vessel traffic in the Harbor (6 percent relative to the CEQA baseline and 4.5 percent relative to the NEPA baseline) caused by the proposed Project would add to the cumulative potential for introduction of exotic species. Many exotic species have already been introduced into the Harbor, and many of these introductions occurred prior to implementation of ballast water regulations. These regulations would reduce the potential for introduction of non-native species. However, cumulative effects related to the introduction of non-native species have the potential to be cumulatively significant, and the proposed Project could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA and NEPA.

In addition, there is a remote possibility of an accidental spill from vessels during Project operation. The terminal operator is required to specifically prepare a Spill Response Plan for inclusion in the required Spill Prevention, Control, and Countermeasure/Oil Spill Contingency Plan (SPCC/OSCP) in the event of a vessel accident that results in a fuel spill. Additionally, should this occur, the spill would be subject to regulations governing containment, clean-up and remediation and thus would not make a cumulatively considerable contribution to a potentially significant impact under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, in-water construction activities or runoff from construction and operation would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological community under CEQA and NEPA(Alternative 1 is not applicable to NEPA, and Alternative 2 would result in no impact under NEPA). Similarly, upland construction of the alternatives and the potential for an accidental vessel spill would not make a cumulatively considerable contribution to a significant cumulative impact on biological

communities under CEQA or NEPA (Alternative 1 is not applicable to NEPA, and Alternative 2 would result in no impact under NEPA).

Alternatives 3 through 6 could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA and NEPA. Alternatives 1 and 2 would result in increases in vessel traffic relative to the CEQA baseline, and thus make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would not result in a vessel traffic increase relative to the NEPA baseline. Therefore, Alternatives 1 and 2 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

The proposed Project and alternatives would not make a cumulatively considerable contribution to a significant impact under CEQA or NEPA to the biological community from in-water construction activities, runoff from construction and operation, or accidental vessel spill.

Regarding the cumulatively considerable contribution to the significant cumulative biological resources impact related to the potential introduction of invasive species of the proposed Project and Alternatives 3 through 6 under CEQA and NEPA, and Alternatives 1 and 2 under CEQA, no feasible mitigation beyond legal requirements is currently available to totally prevent introduction of invasive species via vessel hulls or ballast water, due to the lack of a proven technology. New technologies are being explored, and, if methods become available in the future, they would be implemented as required at that time. Consequently, the proposed Project and Alternatives 3 through 6 would make a cumulatively considerable and unavoidable contribution to a significant impact to biological resources under CEQA and NEPA, and Alternatives 1 and 2 would make a cumulatively considerable contribution to a significant impact to biological resources under CEQA (Alternative 1 is not applicable to NEPA, and Alternative 2 would result in no impact under NEPA).

4.2.3.6 Cumulative Impact BIO-5: The proposed Project would not contribute to a cumulatively considerable permanent loss of marine habitat – No Impact

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.

As described in Section 3.3, no loss of marine habitat would occur because the proposed Project would not result in fill. Although new piles would be added to the water column, this could be considered to be a benefit from a marine habitat standpoint (addition of hard substrate in the water column provides another potential habitat type).

As there would be no project-specific impact, the proposed Project and the alternatives would not make a cumulatively considerable contribution to a significant cumulative impact related to permanent loss of marine habitat. Because there would be no proposed Project-specific impact, there would be no cumulatively considerable contribution to a significant cumulative impact from the proposed Project or alternatives under CEQA and NEPA.

4.2.4 Cultural Resources

4.2.4.1 Scope of Analysis

The geographic region of analysis for cumulative impacts on archaeological, ethnographic, architectural, and paleontological resources related to Port projects consists of the areas at the Port and in the immediate vicinity within natural landforms (i.e., excluding modern Port in-fill development). Under CEQA and NEPA, it also includes areas in water where there may be submerged prehistoric remains and/or where there is evidence that historical maritime activity could have occurred. Thus, past, present, planned and foreseeable future development that would contribute to cumulative impacts on archaeological and ethnographic 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 and/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 imported/modern fill material) have the potential under CEQA and NEPA 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 .4.2. The criteria for CR-1 and CR-2 apply to the CEQA analyses, while the criteria for Cumulative Impacts CR-3 and CR-4 apply to the NEPA analysis.

4.2.4.2 Cumulative Impact CR-1: The proposed Project would have a low potential to make a cumulatively considerable contribution to a significant cumulative impact involving disturbance, damage, or degradation of archaeological or ethnographic resources or its setting found important under the criteria of CEQA – Less than Cumulatively Considerable

Cumulative Impact CR-1 represents the potential of the proposed Project along with other projects to disturb, damage, or degrade listed, eligible, or otherwise unique or important archaeological or ethnographic resources that is found to be important under the criteria of CEQA.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Archaeologists estimate that past and present projects within urban areas including the project vicinity have destroyed over 80 percent of all prehistoric sites without proper assessment and systematic collection of information beforehand. As prehistoric sites are non-renewable resources, the direct and indirect impacts of these actions are cumulatively significant. Such projects have eliminated our ability to study sites that may have been likely to yield information important in prehistory. In other words, the vast majority of the prehistoric record has already been lost.

Construction activities (i.e., excavation, dredging, and land filling) associated with present and future Port projects, including TraPac Marine Terminal [#1], San Pedro

Waterfront Project [#2], Channel Deepening Project [#3], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], Ultramar Lease Renewal Project [#11], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Inner Cabrillo Beach Water Quality Improvements [#27], Al Larson Boat Shop Improvement Project [#29], Pier 500 Container Terminal Development [#32], Middle Harbor Terminal Redevelopment [#90], Piers G & J [#91], Pier S [#93], would potentially require excavation. These activities, however, would be in areas of that were submerged before modern landmaking activities and imported/modern fill material, and therefore would not affect prehistoric or historical archaeological or ethnographic resources.

Although much of the area has been previously disturbed, there is the potential for other related upland Port projects including the San Pedro Waterfront Project [#2], South Wilmington Grade Separation [#20], Wilmington Waterfront Development Project [#21], I-110/C Street/Figueroa Street/ Realigned Harry Bridges Interchange [#22], and I-110/SR-47 Connector Improvement Program [#26] on the periphery of the Port (i.e., in upland areas) to disturb unknown, intact subsurface prehistoric or historical archaeological resources. Reasonably foreseeable future projects within upland areas, including the Community of San Pedro [#39 through, #53], Community of Wilmington [#54 through #59], Harbor City, Lomita, and Torrance [#60 through #89], and City of Long Beach [#108 through #146], could disturb unknown, intact subsurface prehistoric or historical archaeological resources and potentially contribute to this impact. Although impacts of these upland projects would result in significant cumulative impacts, the activities associated with the proposed Project and alternatives would not affect prehistoric or historical archaeological or ethnographic resources; therefore, would not contribute to the overall significant cumulative impact.

Contribution of the Proposed Project (Prior to Mitigation)

As documented in Section 3.4.4.3.1 (Impact CR-1), no archaeological and ethnographic resources are known to exist in the Project area. Further, there would be an extremely low potential for buried resources to be found during the ground surface disturbance activities associated with the proposed Project construction as the majority of the Project site is underlain with imported/modern fill (i.e., dredged material) and is paved or highly disturbed. The amount of surface disturbance would be limited within the site boundaries. Further, a Sacred Lands File search and consultation with the Native American contacts did not result in information about traditional cultural properties in the Project area.

Due to the absence of known archaeological and ethnographic resources and because the proposed Project is located on imported/modern fill (i.e., dredged material), the probability of encountering intact, unknown archaeological and ethnographic resources is remote. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact on known archaeological or ethnographic resources under CEQA. Cumulative Impact CR-1 is not a NEPA issue of concern.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact on known archaeological or ethnographic resources under CEQA. Cumulative Impact CR-1 is not a NEPA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Although project-level impacts are not anticipated, standard conditions of approval **SC CR-1**, as described in Section 3.4.4.3.1 (Impact CR-1), provides that work shall be immediately stopped and relocated from the area in the unlikely event that potentially significant, intact archaeological or ethnographic resources are encountered during construction. Prior to the implementation of standard condition of approval **SC CR-1**, impacts would be less than significant; however, standard condition of approval **SC CR-1** was added in the remote chance that previously unknown archaeological or ethnographic resources are encountered during construction. There are no known archaeological and ethnographic resources in the project area that would be significantly affected by the proposed Project or Alternatives 1 through 6; therefore, the proposed Project or Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact on archaeological and ethnographic resources under CEQA.

4.2.4.3 Cumulative Impact CR-2: The proposed Project would have low potential to contribute to cumulatively considerable loss or loss of access to paleontological resources of regional or statewide significance – No Impact

Cumulative Impact CR-2 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.

As described in Section 3.4.4.3.1 (Impact CR-2), the proposed Project and alternatives would not result in ground disturbance within areas of high paleontological sensitivity. Any soil excavation would consist of imported/modern fill material in a previously disturbed area, and therefore would not be expected to adversely impact unique paleontological resources or geologic features. Because the proposed Project or any alternative would have no impact on paleontological resources, they would not make a cumulatively considerable contribution to a significant cumulative impact on paleontological resources under CEQA . Cumulative Impact CR-2 is not a NEPA issue of concern.

4.2.4.4 Cumulative Impact CR-3: The proposed Project would have a low potential to make a cumulatively considerable construction to an adverse effect on known or unknown prehistoric and/or historic archaeological or ethnographic resources included, or qualified for inclusion, on the NRHP - Less than Cumulatively Considerable

Cumulative Impact CR-3 represents the potential of the proposed Project along with other cumulative projects to result in an adverse effect by altering, directly or indirectly, any of the characteristics of a historic property on known or unknown prehistoric and/or historic archaeological or ethnographic resources that qualify the property for inclusion in the NRHP.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Impacts of past, present, and reasonably foreseeable future projects on prehistoric and historical archaeological resources for Cumulative Impact CR-3 are the same as those described above for Cumulative Impact CR-1. Historical resources are discussed below.

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 more than 50 years old is not necessarily unique, historic buildings are capable of contributing to understanding events that have made a significant contribution to the broad patterns of history; 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 more than 50 years of age) include the Pan-Pacific Fisheries Cannery Buildings Demolition Project [#18], the Port of Long Beach Administration Building Replacement Project [#94], and the Southwest Marine Demolition Project [#25]. 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 determined NRHP-eligible. A portion of the total facility, the Southwest Marine Historic District (former Bethlehem Shipyard facility), was determined NRHP-eligible 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" (LAHD, 2006). This would result in a significant historic impact and contributes to a significant cumulative impact.

As part of the proposed Channel Deepening Project, four Colby cranes that are contributing elements of the Southwest Marine Historic District would be relocated (USACE and LAHD, 2000). 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 (Prior to Mitigation)

As documented in Section 3.4.4.3.1 (Impact CR-3), no prehistoric or archaeological resources or historic resource eligible for listing in the NRHP or CRHR are recorded within the Project site. The proposed Project is located on imported/modern fill (i.e., dredged material), and the potential of encountering intact, unknown archaeological and ethnographic resources is considered to be extremely low in areas requiring activities that may disturb surface soils. Additionally, due to previous dredging and other in-water construction activities, the waters along Berths 302-306 are not likely to contain significant marine cultural resources. Further, a Sacred Lands File search and consultation with the Native American contacts did not result in information about

traditional cultural properties in the Project site. There are no structures more than 50 years of age that would be demolished or otherwise impacted as a result of the proposed Project.

Due to the absence of known archaeological and ethnographic resources and because the proposed Project is located on imported/modern fill (i.e., dredged material), the probability of encountering intact, unknown archaeological and ethnographic resources is remote. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact on known archaeological or ethnographic resources under NEPA.

There are no structures more than 50 years of age that would be demolished or otherwise impacted as a result of the proposed Project. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact on known historical resources under NEPA. Cumulative Impact CR-3 is not a CEQA issue of concern.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact on known archaeological or ethnographic resources under NEPA. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impact under NEPA. Cumulative Impact CR-3 is not a CEQA issue of concern.

Mitigation Measures and Residual Cumulative Impacts

Although project-level impacts are not anticipated, standard conditions of approval **SC CR-1**, as described in Section 3.4.4.3.1 (Impact CR-3), provides that work shall be immediately stopped and relocated from the area in the unlikely event that potentially significant, intact archaeological or ethnographic resources are encountered during construction. Prior to the implementation of **SC CR-1**, impacts would be less than significant; however, **SC CR-1** was added in the remote chance that previously unknown archaeological or ethnographic resources are encountered during construction. There are no known archaeological and ethnographic resources in the Project site that would be significantly affected by the proposed Project or Alternatives 2 through 6; therefore, the proposed Project or Alternatives 2 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact on archaeological and ethnographic resources under NEPA. Alternative 1 is not required to be analyzed under NEPA.

There are no cumulative impacts on archaeological or ethnographic resources associated with upland projects; therefore, there would be no cumulative residual effect under NEPA.

4.2.4.5 Cumulative Impact CR-4: The proposed Project would have low potential to contribute to a cumulatively considerable loss of significant paleontological resources - No Impact

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.

As described in Section 3.4.4.3.1 (Impact CR-4), the Project site would not be expected to yield significant paleontological resources or unique geologic features. The geologic formation within the Project site consists of imported/modern fill material (i.e., dredged material) constructed in the early 20th century. Any soil excavation would consist of artificial soils in a previously disturbed area, and therefore would not be expected to adversely impact unique paleontological resources or geologic features. In addition, the potential to encounter sensitive paleontological resources when performing dredging in the ancestral Port Complex is also extremely low.

Because the proposed Project or any alternative would have no impact on paleontological resources, they would not make a cumulatively considerable contribution to a significant cumulative impact on paleontological resources under NEPA. Cumulative Impact CR-4 is not a CEQA issue of concern.

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 is the Port Complex because an earthquake capable of creating substantial damage or injury at the proposed Project site could similarly cause substantial damage or injury throughout this area that consists primarily of artificial fill, which is susceptible to liquefaction and differential settlement. The geographic scope with respect to tsunamis 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, expansive soils, and unstable soil conditions would be confined to the proposed Project area because these impacts are site-specific and relate primarily to construction techniques. There is no geographic scope with respect to landslides, mudflows, and modification of topography or unique geologic features because the Port area is generally flat, not subject to slope instability, and contains no unique geologic features. The geographic scope with respect to mineral resources is the Wilmington Oil Field, which includes the northern portion of Terminal Island, trending northwest-to-southeast, and 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 the Port Complex 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 the cumulative projects listed in Table 4-1 they would involve existing or proposed structural engineering or on-site personnel.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.5. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.5.2 Cumulative Impact GEO-1: The proposed Project would not contribute to cumulatively considerable damage or exposure of people and structures to substantial risk of injury from fault rupture, seismic ground shaking, liquefaction, or other seismically induced ground failure – Less than Cumulatively Considerable

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. Since 1796, the region has been subjected to at least 52 major earthquakes of magnitude 6.0 or greater. Great earthquakes, like the 1857 San Andreas Fault earthquake, are quite rare in southern California. Earthquakes of magnitude 7.8 or greater occur at the rate of about two or three per 1,000 years, corresponding to a six to nine percent probability in 30 years. However, the probability of a magnitude 6.7 or greater earthquake in southern California in 30 years is 97 percent (Working Group on California Earthquake Probabilities, 2008). Therefore, it is reasonable to expect a strong ground motion seismic event during the lifetime of any proposed project in the region.

Ground motion in the region is generally the result of sudden movements of large blocks of the earth's crust along faults. Numerous active faults in the Los Angeles region are capable of generating earthquake-related hazards, particularly in the Harbor area, where the Palos Verdes Fault is present and hydraulic and alluvial fill are pervasive. Also noteworthy, due to its proximity to the site, is the Newport-Inglewood Fault, which has generated earthquakes of magnitudes up to 6.4 on Richter scale (Southern California Earthquake Data Center, 2011). 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 silty sand. The effects of liquefaction may be excessive if total and/or differential settlement of structures occurs on liquefiable soils or bearing capacity is compromised by the sudden loss of frictional resistance beneath the foundation.

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 the Port with various undocumented fill materials. In addition, dredged materials from the Harbor area were spread across lower Wilmington from 1905 until 1910 or 1911 (Ludwig, 1927). In combination with natural soil and groundwater conditions in the area (i.e., unconsolidated, soft, and saturated natural alluvial deposits, artificial fill material, 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 Port Complex (i.e., the cumulative geographic scope). This past development has placed commercial, industrial, and residential structures and their occupants in areas that are susceptible to seismic ground shaking. Thus, these developments have had the effect of increasing the potential for seismic ground shaking to result in injury to people and damage to property.

The present and reasonably foreseeable future projects, listed in Table 4-1, would result in increased infrastructure, structure, and number of people working on-site in the cumulative geographic scope. However, with incorporation of modern construction engineering and safety standards and compliance with building codes adopted by the local regulatory bodies, would minimize impacts due to seismically induced ground failure and thus, a less than significant cumulative impact would occur as a result of seismically induced ground failure.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Sections 3.5.4.4.1, the proposed Project would not result in significant impacts relative to Impact GEO-1. The proposed Project would increase the amount of structures and people working at the proposed Project site and Port. However, the proposed Project would not increase the risk of seismic ground shaking, nor would it contribute to the potential for seismically induced ground shaking to result in injury to people and damage to structures. Additionally, with incorporation of emergency planning and compliance with current building regulations, impacts due to seismically induced ground failure would be less than significant. The proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to seismic activity under both CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA relative to seismic activity. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.5.3 Cumulative Impact GEO-2: The proposed Project would not expose people and structures to cumulatively considerable risk involving tsunamis or seiches– Less than Cumulatively Considerable

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 seismic event can be great if a large submarine earthquake or landslide occurs that causes a tsunami or seiche that affects a populated area. As discussed in Section 3.5.2.2.3, abrupt sea level changes associated with tsunamis in the past had a great impact on human life. Tsunamis have also reportedly caused damage to moored vessels within the outer portions of the Harbor. Gasoline from damaged boats have caused a major spill in the Harbor waters and created a fire hazard following a seiche.

For on-site personnel, the risk of tsunami or seiches is a part of any ocean-shore interface, and hence, 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. However, the Port commissioned a detailed Tsunami Hazard Assessment for the Ports of Los Angeles and Long Beach (Moffatt and Nichol, 2007), which concluded that large earthquakes (Mw~7.5) are very infrequent and not every large earthquake is expected to generate a tsunami. The report also concluded that only about 10 percent of large earthquakes have the potential to generate a tsunami of some size. Furthermore, based on the seismicity, geodetics, and geology, a large locally generated tsunami from either local seismic activity or a local submarine landslide would probably not occur more than once every 10,000 years. Based on this report, the chances of a tsunami are very remote.

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 on-site in the Harbor area. This past development has placed commercial and industrial structures and their occupants in areas that are susceptible to tsunamis and seiches.

Due to the remote nature of the tsunamis or seiches in the Project area, the present and reasonably foreseeable future projects listed in Table 4-1, would not result in a significant cumulative impact.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Sections 3.5.4.4.1, tsunamis and seiches are typical for the entire California coastline and the risks of such events occurring would not be increased by construction or operation of the proposed Project (which would expand operations at an existing container terminal). The proposed Project elevation is located approximately 15 ft above MLLW; therefore, no substantial risk of flooding from earthquake based tsunamis and seiches are likely at the Project site. Under the theoretical worst-case scenario, maximum wave action (landslide-based tsunami) would not likely breach the Project site. Therefore, no substantial risk of flooding from earthquake based tsunamis or seiches are likely at the Project site. In addition, incorporation of lease measures **LM GEO-1**, which requires the terminal operator to coordinate with Port engineers and Port police to develop tsunami response training and procedures, would ensure less than significant impacts. The proposed Project would not make a cumulatively considerable

contribution to a significant cumulative impact related to a tsunami or seiche under both CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to tsunamis and seiches. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required. However, lease measure **LM GEO-1** , which would apply to the proposed Project and Alternatives 2 through 6 would further ensure that no significant impacts would occur.

4.2.5.4 Cumulative Impact GEO-3: The proposed Project would not result in cumulatively considerable damage to structures or infrastructure or expose people to substantial risk of injury from subsidence/soil 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/compressible sediments. 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects on the site of the proposed Project site have required excavation and fill, and therefore have affected the risk of subsidence/settlement on the Project site. However, the past projects are no longer present on the proposed Project site, and none of the related projects listed in Table 4-1 would be built there. As a consequence, past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact related to subsidence or settlement.

Contribution of the Proposed Project (Prior to Mitigation)

Settlement impacts in the proposed Project's backland areas would be less than significant under CEQA and NEPA because the proposed Project would be designed and constructed in compliance with the recommendations of the geotechnical engineer, consistent with Sections 91.000 through 91.7016 of the Los Angeles Municipal Code, and in conjunction with criteria established by LAHD and Caltrans, and would not result in substantial damage to structures or infrastructure, or expose people to substantial risk

of injury. The proposed Project would result in less than significant impacts for Cumulative Impact GEO-3. No other past (other than those projects on the proposed Project site), present, or reasonably foreseeable future projects could make a cumulatively considerable contribution to a significant cumulative impact related to subsidence or settlement at the proposed Project site, nor could development at the proposed Project site increase risk of subsidence or settlement at locations outside of the proposed Project area.

Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to subsidence or settlement. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.5.5 Cumulative Impact GEO-4: The proposed Project would not result in cumulatively considerable damage to structures or infrastructure or expose people to substantial risk of injury from soil expansion – Less than Cumulatively Considerable

Cumulative Impact GEO-4 addresses the degree to which the proposed Project, 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. 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects on the site of the proposed Project site could have contributed to fill and therefore potential risk of expansive soils, depending on the fill characteristics. However, the past projects are no longer present on the Project site, and none of the related projects listed in Table 4-1 would be built there. As a consequence, past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact related to expansive soils.

Contribution of the Proposed Project (Prior to Mitigation)

Expansive soil impacts in proposed Project backland areas would be less than significant under CEQA because the proposed Project would be designed and constructed in compliance with the recommendations of the geotechnical engineer, consistent with implementation of Sections 91.000 through 91.7016 of the Los Angeles Municipal Code, and in conjunction with criteria established by LAHD and would not result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury. Compliance with these applicable standards and policies would ensure that the proposed Project would not result in substantial elevation of risk to life or property. No other past (other than those projects on the proposed Project site), present, or reasonably foreseeable future projects could make a cumulatively considerable contribution to a significant cumulative impact related to soil expansion at the proposed Project site, nor could development associated with the proposed Project site increase risk of subsidence or settle at locations outside of the proposed Project area. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to expansive soils. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.5.6 Cumulative Impact GEO-5: The proposed Project would not result in or expose people or property to a cumulatively considerable risk of landslides or mudflows – No Impact

Cumulative Impact GEO-5 addresses the degree to which the proposed Project, 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 project area is flat and not subject to landslides or mudflows, the proposed Project would not expose places, structures, or people to substantial damage or substantial risk of harm. As there would be no project-specific impact, the proposed Project and the alternatives would not make a cumulatively considerable contribution to a significant cumulative impact related to landslides or mudflows under CEQA or NEPA.

4.2.5.7 Cumulative Impact GEO-6: The proposed Project would not expose people or structures to cumulatively considerable risk related to encountering shallow groundwater during excavation, which would cause unstable collapsible soils – Less than Cumulatively Considerable

Cumulative Impact GEO-6 addresses the degree to which the proposed Project, along with other cumulative projects, results in substantial damage to structures or infrastructure or expose people to substantial risk of injury as a result of collapsible or unstable soils.

Excavations that occur in natural alluvial and estuarine deposits, as well as artificial fill consisting of dredged deposits or imported soils, may encounter relatively fluid materials near and below the shallow groundwater table. Groundwater is locally present at depths ranging from 10 to 16.5 ft bgs. In the absence of proper engineering, new structures could be cracked and warped as a result of saturated, unstable or collapsible soils. 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects on the proposed Project site have contributed to fill and therefore risk of unstable soil conditions. However, none of the related projects listed in Table 4-1 are or would be built there. As a consequence, past, present, and reasonably foreseeable future projects would not contribute to a significant cumulative impact related to unstable soil conditions.

Contribution of the Proposed Project (Prior to Mitigation)

Due to implementation of standard engineering practices regarding saturated, collapsible soils, people and structures on the proposed Project site would not be exposed to substantial adverse effects from the proposed Project, and impacts associated with shallow groundwater would be less than significant under CEQA and NEPA. The proposed Project would result in less than significant impacts relative to collapsible or otherwise unstable soils, and no other past (other than those projects on the proposed Project site), present, or reasonably foreseeable future projects could make a cumulatively considerable contribution to a significant cumulative impact related to subsidence or settlement at the proposed Project site, nor could development associated with the proposed Project site increase risk of unstable collapsible soils at locations outside of the proposed Project area. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under either CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under

NEPA related to subsidence or settlement. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.5.8 Cumulative Impact GEO-7: The proposed Project would not result in the cumulatively considerable destruction, permanent covering, or the material and adverse modification of one or more distinct and prominent geologic or topographic features– No 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, rocky outcrops, water bodies, streambeds, and wetlands.

Because the proposed Project area is relatively flat and paved, with no prominent geologic or topographic features, construction and operations of the proposed Project and the alternatives would not result in any distinct and prominent geologic or topographic features being destroyed, permanently covered, or materially and adversely modified. Therefore, the proposed Project and the alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under either CEQA or NEPA.

4.2.5.9 Cumulative Impact GEO-8: The proposed Project would not result in the cumulatively considerable permanent loss of availability of a mineral resource of regional, statewide, or local significance – No 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. With respect to petroleum resources, the Project site is located immediately south and outside of the Wilmington Oil Field. Because no mineral resources are present on or beneath the Project site, neither construction nor operation of the proposed Project or an alternative would affect mineral resources. Therefore, the proposed Project and the alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

4.2.5.10 Cumulative Impact GEO-9: The proposed Project would not expose people and structures to cumulatively considerable risk involving sea level rise – Less than Cumulatively Considerable

Cumulative Impact GEO-9 addresses the degree to which the proposed Project, along with other cumulative projects, exposes people and structures to substantial risk from sea level rise. Models suggest that sea levels along the California coast could rise substantially over the next century as a result of climate change. While this has not historically been a concern, LAHD will begin planning for and implementing strategies to address predicted sea level rise to minimize potential future adverse affects on Port operations and access.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects would not change the risk of sea level rise and therefore would not contribute to a significant cumulative impact. However, past projects have resulted in the backfilling of natural drainages and creation of new low-lying land areas, which could be subject to future sea level rise. In addition, past development has increased the amount of infrastructure, structural improvements, and the number of people working on-site in the Harbor area. With increased sea level rise potential in the future, past development has placed commercial and industrial structures and their occupants in areas that may be susceptible to rising seas, depending on the extent to which levels rise over time.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Sections 3.5.2.3.5, the risk of potential future sea level rise is typical for the entire California coastline and the risks of such events occurring would not be increased by construction or operation of the proposed Project (which would expand operations at an existing container terminal). The proposed Project elevation is located approximately 15 ft above MLLW. High tide is 7 ft MLLW, so a sea level rise of less than 8 ft (96 inches) would not directly impact the proposed Project site. However, a sea level rise of 7 ft could affect some lower elevation areas along the western edge of the site. As discussed in Section 3.5, models predict that over the next century sea level could rise as much as approximately 6 ft (69 inches) and by 1.5 ft (17 inches) or less through 2050 and thus is not expected to adversely affect the proposed Project site. Additionally, measures to minimize impacts from seiches or tsunamis, such as the breakwater and constructing facilities at adequate elevation, are currently in place throughout the Port, and strategies identified by in the sea level rise study currently being prepared by LAHD and the Rand Corporation would also serve to limit the effects of sea level rise. Therefore, the proposed Project would not expose people or property to substantial risk or injuries related to sea level rise individually or cumulatively, and therefore, would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Cumulative Impact GEO-9 is not required to be analyzed under NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not expose people or property to substantial risk or injuries related to sea level rise

individually or cumulatively and therefore, would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Cumulative Impact GEO-9 is not required to be analyzed under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Therefore, no mitigation measures would be required.

4.2.6 Ground Transportation

4.2.6.1 Scope of Analysis

The transportation environmental setting for the cumulative ground transportation analysis includes those streets and intersections that would be used by both automobile and truck traffic to gain access to and from the APL Terminal, as well as those streets that would be used by construction traffic (i.e., equipment and commuting workers). The transportation analysis includes freeway/roadway segments (five segments) and intersections (15 key intersections) that would be used by truck and automobile traffic to gain access to and from the proposed Project site. The segments and key intersections are presented in Section 3.6.2.1

The level of proposed Project site traffic for the cumulative scenarios for both CEQA and NEPA analysis are the same for the proposed Project and its alternatives scenarios. However, the basis of comparison to those scenarios, the without project conditions, differ between CEQA and NEPA analysis. The CEQA without Project conditions have site traffic generated at a lower level than the NEPA without Project conditions which results in an increment of change between the without Project conditions and proposed Project and alternatives being greater under the CEQA analysis than under the NEPA analysis.

The CEQA analysis without Project conditions include cumulative projected land use and transportation conditions along with proposed Project site conditions (trip generation) that occurred during the CEQA baseline period. The NEPA analysis without Project conditions include cumulative projected land use and transportation conditions identical to the CEQA analysis, however the on-site conditions for the proposed Project site are those that would be present under build-out of current tenants, in other words the traffic produced by the level of development intensity allowed during the CEQA baseline rather than the actual traffic occurring during the CEQA baseline. This scenario is the same as the No Project Alternative for the CEQA analysis where the traffic conditions are analyzed for future analysis years without altering the uses of the proposed Project site. That is a condition that produces more traffic than the CEQA baseline conditions, but less than the proposed Project or its alternatives. Because the point of comparison for site traffic is lower for the CEQA cumulative analysis, the increment of change from which ground transportation and circulation significance is determined is greater for the CEQA cumulative analysis than it is for the NEPA cumulative analysis.

4.2.6.2 Cumulative Impact TRANS-1: Proposed Project construction would not result in a cumulatively considerable short-term, temporary increase in truck and auto traffic – Less than Cumulatively Considerable

Cumulative Impact TRANS-1 represents the potential of the proposed Project along with other cumulative projects to result in a short-term, temporary increase in construction truck and auto traffic, transport of construction equipment and materials to and from the construction site.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction activities could result in temporary increases in traffic volumes and roadway disruptions in the vicinity of a construction site. 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.
- 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.

Such temporary traffic increases would occur on a transportation system that would also have increased traffic due to background growth. Without mitigation, the impact of cumulative construction-generated traffic on transportation operations and safety could be cumulatively significant should it occur concurrently and in the same vicinity.

Contribution of the Proposed Project (Prior to Mitigation)

There would be increased travel on the study area roadway system during construction of the proposed Project associated with construction workers' vehicles and trucks delivering equipment to and removing material from the site. However, as shown in Table 3.6-16 in Section 3.6, a significant impact under NEPA would not occur. Therefore, construction of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative traffic impact under NEPA. Table 4-2 includes background traffic growth to the CEQA baseline conditions in the level of service, and demonstrates cumulative impacts under CEQA. As can be seen in Table 4-2, the proposed Project

would not make a cumulatively considerable contribution to a significant cumulative impact to traffic under CEQA.

Further, as a standard practice, the Port requires contractors to prepare a detailed traffic management plan for Port projects, which includes the following: detour plans, coordination with emergency services and transit providers, coordination with adjacent property owners and tenants, advanced notification of temporary bus stop loss and/or bus line relocation, identify temporary alternative bus routes, advanced notice of temporary parking loss, identify temporary parking replacement or alternative adjacent parking within a reasonable walking distance, use of designated haul routes, use of truck staging areas, observance of hours of operation restrictions and appropriate signing for construction activities. The traffic management plan would be submitted to LAHD for approval before beginning construction.

The proposed Project would be constructed between 2012 and 2014. Of the present and reasonably foreseeable future projects listed in Table 4-1, the other projects on Terminal Island for which it is reasonably foreseeable that construction would occur in the same time period are the Plains All American Oil Marine Terminal [#10], YTI Container Terminal [#23], and Al Larson Boat Shop Improvement Project [#29]. These projects, as well as other Port of Los Angeles projects, would be subject to the same requirements as the proposed Project for development of a traffic management plan subject to LAHD approval.

Given that impacts of the proposed Project would be less than significant under NEPA, which considers future growth within the area, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA related to Project-related construction traffic impacts. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

Table 4-2: Intersection Level of Service Analysis – 2012 CEQA Baseline vs. 2012 Proposed Project Construction

#	Study Intersection	2012 CEQA Baseline						2012 Proposed Project Construction						Changes in V/C			Significant Impact		
		AM Peak		MID Peak		PM Peak		AM Peak		MID Peak		PM Peak		AM Peak	MID Peak	PM Peak	AM Peak	MID Peak	PM Peak
		LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C						
1	Ocean Boulevard Ramps / Terminal Island Freeway North (SR-47) [B]	A	0.465	A	0.358	A	0.460	A	0.465	A	0.358	A	0.460	0.000	0.000	0.000	No	No	No
2	Ocean Boulevard Ramps / Terminal Island Freeway South (SR-47) [B]	A	0.236	A	0.294	A	0.306	A	0.236	A	0.294	A	0.336	0.000	0.000	0.030	No	No	No
3	Seaside Avenue / Navy Way [A]	A	0.471	A	0.379	B	0.660	A	0.471	A	0.379	B	0.692	0.000	0.000	0.032	No	No	No
4	Ferry Street / Vincent Thomas Bridge Ramps [A]	A	0.211	A	0.344	A	0.251	A	0.211	A	0.344	A	0.314	0.000	0.000	0.063	No	No	No
5	Anaheim Street / Henry Ford Avenue [A]	A	0.444	A	0.594	C	0.756	A	0.444	A	0.594	C	0.756	0.000	0.000	0.000	No	No	No
6	SR-47 Ramps / Henry Ford Avenue [A]	A	0.309	A	0.391	A	0.433	A	0.309	A	0.391	A	0.451	0.000	0.000	0.018	No	No	No
7	Henry Ford Avenue/ Denni Street [A]	A	0.192	A	0.280	A	0.343	A	0.192	A	0.280	A	0.350	0.000	0.000	0.007	No	No	No
8	Alameda Street / PCH Ramp (on PCH) [A]	B	0.612	A	0.550	B	0.683	B	0.612	A	0.550	B	0.683	0.000	0.000	0.000	No	No	No
9	Alameda Street / PCH Ramp (on Alameda) [A]	A	0.547	A	0.442	B	0.646	A	0.547	A	0.442	B	0.649	0.000	0.000	0.003	No	No	No
10	Alameda Street / Sepulveda Boulevard Ramp (On Sepulveda) [C]	C	0.702	B	0.655	C	0.705	C	0.702	B	0.655	C	0.705	0.000	0.000	0.000	No	No	No
11	Alameda Street / Sepulveda Boulevard Ramp (On Alameda) [C]	B	0.606	A	0.583	C	0.730	B	0.606	A	0.583	C	0.730	0.000	0.000	0.000	No	No	No
12	Intermodal Way / Sepulveda Boulevard [C]	A	0.411	A	0.405	A	0.464	A	0.411	A	0.405	A	0.464	0.000	0.000	0.000	No	No	No
13	Terminal Island Freeway (SR-103) / Sepulveda Boulevard [B]	A	0.472	A	0.598	B	0.698	A	0.472	A	0.598	B	0.698	0.000	0.000	0.000	No	No	No
14	Ferry Street / Terminal Way [A]	A	0.287	A	0.354	A	0.289	A	0.287	A	0.354	A	0.289	0.000	0.000	0.000	No	No	No
15	Navy Way / Reeves Avenue [A]	A	0.327	A	0.505	A	0.435	A	0.327	A	0.505	A	0.529	0.000	0.000	0.094	No	No	No

Notes:
[A] City of Los Angeles intersection, analyzed using CMA methodology according to City standards.
[B] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[C] City of Carson intersection analyzed using ICU methodology according to City standards.

4.2.6.3 Cumulative Impact TRANS-2: The proposed Project operations would not result in a cumulatively considerable long-term impact at study location intersection volume/ capacity ratios or level of service –Less than Cumulatively Considerable (with Mitigation)

Cumulative Impact TRANS-2 represents the potential of the proposed Project along with other cumulative projects to significantly impact volume/capacity ratios, or level of service, at intersections within the cumulative transportation area of analysis.

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. As described in greater detail in Section 3.6.4.5.1, the background future traffic growth forecast is developed based on SCAG Regional Growth Model and the Port's Travel Demand Model. All Ports of Long Beach and Los Angeles projected container and non-container terminal traffic growth are included in the Port Travel Demand Model.

Contribution of the Proposed Project (Prior to Mitigation)

Table 3.6-19 summarizes the trip generation projections that were completed for the proposed Project under NEPA. Traffic projections estimated under the NEPA baseline scenario reflects trips generated by other planned regional development, and therefore represent the cumulative traffic conditions under NEPA. Tables 4-3 through 4-5 include background traffic growth to the CEQA baseline conditions in the level of service, and demonstrate cumulative impacts of the proposed Project under CEQA.

The proposed Project would increase traffic volumes and degrade LOS at intersections within the proposed project vicinity. Since the impacts from the proposed Project are compared to the NEPA baseline that includes cumulative projects, this also represents the contribution to cumulative impacts under CEQA. The contribution from the proposed Project would be cumulatively considerable for one intersection (Navy Way and Reeves Avenue) in 2020, 2025, and 2027. Tables 3.6-20 through 3.6-22 show the cumulatively considerable impact in 2020, 2025, and 2027 for the proposed Project under NEPA (and therefore CEQA).

Without mitigation, the impact of cumulative traffic on intersection LOS is considered significant under CEQA and NEPA. Therefore, the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

1

Table 4-3: Intersection Level of Service Analysis – 2020 CEQA Baseline vs. 2020 Proposed Project

#	Study Intersection	2020 CEQA Baseline						2020 Proposed Project						Changes in V/C			Significant Impact		
		AM Peak		MID Peak		PM Peak		AM Peak		MID Peak		PM Peak		AM Peak	MID Peak	PM Peak	AM Peak	MID Peak	PM Peak
		LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C						
1	Ocean Boulevard Ramps / Terminal Island Freeway North (SR-47) [B]	A	0.525	A	0.370	A	0.461	A	0.563	A	0.413	A	0.499	0.038	0.043	0.038	No	No	No
2	Ocean Boulevard Ramps / Terminal Island Freeway South (SR-47) [B]	A	0.312	A	0.380	A	0.369	A	0.384	A	0.425	A	0.400	0.072	0.045	0.031	No	No	No
3	Seaside Avenue / Navy Way [A D]	N/A																	
4	Ferry Street / Vincent Thomas Bridge Ramps [A]	A	0.132	A	0.275	A	0.175	A	0.184	A	0.296	A	0.202	0.052	0.021	0.027	No	No	No
5	Anaheim Street / Henry Ford Avenue [A]	A	0.512	A	0.553	C	0.781	A	0.525	A	0.556	C	0.781	0.013	0.003	0.000	No	No	No
6	SR-47 Ramps / Henry Ford Avenue [A]	A	0.356	A	0.300	A	0.369	A	0.358	A	0.305	A	0.382	0.002	0.005	0.013	No	No	No
7	Henry Ford Avenue/ Denni Street [A]	A	0.178	A	0.167	A	0.255	A	0.178	A	0.167	A	0.255	0.000	0.000	0.000	No	No	No
8	Alameda Street / PCH Ramp (on PCH) [A]	A	0.383	A	0.367	A	0.501	A	0.390	A	0.374	A	0.508	0.007	0.007	0.007	No	No	No
9	Alameda Street / PCH Ramp (on Alameda) [A]	A	0.247	A	0.332	A	0.417	A	0.258	A	0.340	A	0.429	0.011	0.008	0.012	No	No	No
10	Alameda Street / Sepulveda Boulevard Ramp (On Sepulveda) [C]	D	0.811	C	0.732	D	0.838	D	0.811	C	0.732	D	0.838	0.000	0.000	0.000	No	No	No
11	Alameda Street / Sepulveda Boulevard Ramp (On Alameda) [C]	B	0.665	A	0.578	C	0.756	B	0.671	A	0.584	C	0.763	0.006	0.006	0.007	No	No	No
12	Intermodal Way / Sepulveda Boulevard [C]	A	0.497	A	0.475	A	0.573	A	0.505	A	0.475	A	0.573	0.008	0.000	0.000	No	No	No
13	Terminal Island Freeway (SR-103) / Sepulveda Boulevard [B]	A	0.583	B	0.620	C	0.761	B	0.605	B	0.641	C	0.775	0.022	0.021	0.014	No	No	No
14	Ferry Street / Terminal Way [A]	A	0.278	A	0.289	A	0.223	A	0.304	A	0.302	A	0.240	0.026	0.013	0.017	No	No	No
15	Navy Way / Reeves Avenue [A]	A	0.558	A	0.567	A	0.434	B	0.656	C	0.736	A	0.574	0.098	0.169	0.140	No	**Yes**	No

Notes:
[A] City of Los Angeles intersection, analyzed using CMA methodology according to City standards.
[B] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[C] City of Carson intersection analyzed using ICU methodology according to City standards.
[D] Navy Way /Seaside Avenue Interchange - Construction of a new flyover connector from northbound Navy Way to westbound Seaside Avenue is assumed to be complete by year 2020. This improvement would eliminate the need for a traffic signal and would provide direct ramp connections for existing left-turns thereby eliminating conflicts between left and thru traffic that would normally occur at a traditional intersection.

2

Table 4-4: Intersection Level of Service Analysis – 2025 CEQA Baseline vs. 2025 Proposed Project

#	Study Intersection	2025 CEQA Baseline						2025 Proposed Project						Changes in V/C			Significant Impact		
		AM Peak		MID Peak		PM Peak		AM Peak		MID Peak		PM Peak		AM Peak	MID Peak	PM Peak	AM Peak	MID Peak	PM Peak
		LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C						
1	Ocean Boulevard Ramps / Terminal Island Freeway North (SR-47) [B]	A	0.534	A	0.395	A	0.454	A	0.579	A	0.438	A	0.499	0.045	0.043	0.045	No	No	No
2	Ocean Boulevard Ramps / Terminal Island Freeway South (SR-47) [B]	A	0.315	A	0.408	A	0.365	A	0.400	A	0.465	A	0.404	0.085	0.057	0.039	No	No	No
3	Seaside Avenue / Navy Way [A D]	N/A																	
4	Ferry Street / Vincent Thomas Bridge Ramps [A]	A	0.349	A	0.558	A	0.496	A	0.435	A	0.588	A	0.526	0.086	0.030	0.030	No	No	No
5	Anaheim Street / Henry Ford Avenue [A]	A	0.516	A	0.578	C	0.779	A	0.530	A	0.582	C	0.779	0.014	0.004	0.000	No	No	No
6	SR-47 Ramps / Henry Ford Avenue [A]	A	0.340	A	0.295	A	0.345	A	0.342	A	0.300	A	0.347	0.002	0.005	0.002	No	No	No
7	Henry Ford Avenue/ Denni Street [A]	A	0.172	A	0.167	A	0.248	A	0.175	A	0.167	A	0.248	0.003	0.000	0.000	No	No	No
8	Alameda Street / PCH Ramp (on PCH) [A]	A	0.384	A	0.384	A	0.506	A	0.395	A	0.395	A	0.516	0.011	0.011	0.010	No	No	No
9	Alameda Street / PCH Ramp (on Alameda) [A]	A	0.266	A	0.397	A	0.408	A	0.278	A	0.406	A	0.419	0.012	0.009	0.011	No	No	No
10	Alameda Street / Sepulveda Boulevard Ramp (On Sepulveda) [C]	D	0.819	C	0.739	D	0.849	D	0.819	C	0.739	D	0.849	0.000	0.000	0.000	No	No	No
11	Alameda Street / Sepulveda Boulevard Ramp (On Alameda) [C]	B	0.665	B	0.625	C	0.749	B	0.672	B	0.638	C	0.757	0.007	0.013	0.008	No	No	No
12	Intermodal Way / Sepulveda Boulevard [C]	A	0.513	A	0.518	A	0.579	A	0.522	A	0.518	A	0.579	0.009	0.000	0.000	No	No	No
13	Terminal Island Freeway (SR-103) / Sepulveda Boulevard [B]	B	0.613	B	0.625	C	0.765	B	0.639	B	0.652	C	0.784	0.026	0.027	0.019	No	No	No
14	Ferry Street / Terminal Way [A]	A	0.482	C	0.763	A	0.384	B	0.640	C	0.770	A	0.404	0.158	0.007	0.020	No	No	No
15	Navy Way / Reeves Avenue [A]	A	0.550	B	0.617	A	0.456	C	0.709	D	0.800	B	0.625	0.159	0.183	0.169	**Yes**	**Yes**	No

Notes:
[A] City of Los Angeles intersection, analyzed using CMA methodology according to City standards.
[B] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[C] City of Carson intersection analyzed using ICU methodology according to City standards.
[D] Navy Way /Seaside Avenue Interchange - Construction of a new flyover connector from northbound Navy Way to westbound Seaside Avenue is assumed to be complete by year 2020. This improvement would eliminate the need for a traffic signal and would provide direct ramp connections for existing left-turns thereby eliminating conflicts between left and thru traffic that would normally occur at a traditional intersection.

Table 4-5: Intersection Level of Service Analysis – 2027 CEQA Baseline vs. 2027 Proposed Project

#	Study Intersection	2027 CEQA Baseline						2027 Proposed Project						Changes in V/C			Significant Impact		
		AM Peak		MID Peak		PM Peak		AM Peak		MID Peak		PM Peak		AM Peak	MID Peak	PM Peak	AM Peak	MID Peak	PM Peak
		LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C						
1	Ocean Boulevard Ramps / Terminal Island Freeway North (SR-47) [B]	A	0.548	A	0.422	A	0.464	A	0.596	A	0.469	A	0.513	0.048	0.047	0.049	No	No	No
2	Ocean Boulevard Ramps / Terminal Island Freeway South (SR-47) [B]	A	0.318	A	0.409	A	0.372	A	0.408	A	0.466	A	0.415	0.090	0.057	0.043	No	No	No
3	Seaside Avenue / Navy Way [A D]	N/A																	
4	Ferry Street / Vincent Thomas Bridge Ramps [A]	A	0.372	B	0.635	A	0.525	A	0.463	B	0.665	A	0.560	0.091	0.030	0.035	No	No	No
5	Anaheim Street / Henry Ford Avenue [A]	A	0.556	B	0.601	D	0.872	A	0.572	B	0.604	D	0.872	0.016	0.003	0.000	No	No	No
6	SR-47 Ramps / Henry Ford Avenue [A]	A	0.378	A	0.295	A	0.369	A	0.382	A	0.304	A	0.380	0.004	0.009	0.011	No	No	No
7	Henry Ford Avenue/ Denni Street [A]	A	0.202	A	0.167	A	0.288	A	0.205	A	0.167	A	0.288	0.003	0.000	0.000	No	No	No
8	Alameda Street / PCH Ramp (on PCH) [A]	A	0.399	A	0.403	A	0.526	A	0.410	A	0.413	A	0.536	0.011	0.010	0.010	No	No	No
9	Alameda Street / PCH Ramp (on Alameda) [A]	A	0.274	A	0.411	A	0.413	A	0.282	A	0.420	A	0.430	0.008	0.009	0.017	No	No	No
10	Alameda Street / Sepulveda Boulevard Ramp (On Sepulveda) [C]	D	0.832	C	0.761	D	0.872	D	0.832	C	0.761	D	0.872	0.000	0.000	0.000	No	No	No
11	Alameda Street / Sepulveda Boulevard Ramp (On Alameda) [C]	B	0.678	B	0.648	C	0.765	B	0.685	B	0.661	C	0.772	0.007	0.013	0.007	No	No	No
12	Intermodal Way / Sepulveda Boulevard [C]	A	0.524	A	0.532	A	0.591	A	0.536	A	0.532	A	0.591	0.012	0.000	0.000	No	No	No
13	Terminal Island Freeway (SR-103) / Sepulveda Boulevard [B]	B	0.630	B	0.635	C	0.779	B	0.658	B	0.661	C	0.799	0.028	0.026	0.020	No	No	No
14	Ferry Street / Terminal Way [A]	A	0.491	C	0.784	A	0.430	B	0.665	C	0.791	A	0.437	0.174	0.007	0.007	No	No	No
15	Navy Way / Reeves Avenue [A]	B	0.654	B	0.636	A	0.470	C	0.725	D	0.821	B	0.656	0.071	0.185	0.186	**Yes**	**Yes**	No

Notes:
[A] City of Los Angeles intersection, analyzed using CMA methodology according to City standards.
[B] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[C] City of Carson intersection analyzed using ICU methodology according to City standards.
[D] Navy Way /Seaside Avenue Interchange - Construction of a new flyover connector from northbound Navy Way to westbound Seaside Avenue is assumed to be complete by year 2020. This improvement would eliminate the need for a traffic signal and would provide direct ramp connections for existing left-turns thereby eliminating conflicts between left and thru traffic that would normally occur at a traditional intersection.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to increased traffic volume. Alternatives 1 and 2 would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Implementation of mitigation measure **MM TRANS-1,** which will re-configure Navy Way and Reeves Avenue when the intersection operates at LOS E or worse, would reduce the cumulatively considerable contribution to a significant cumulative traffic impact of the proposed Project and Alternatives 2 through 6 to less than significant under CEQA and NEPA. Mitigation is not applicable to Alternative 1 because there would be no discretionary actions subject to CEQA and thus Alternative 1 would make a significant unavoidable contribution to a significant cumulative impact.

4.2.6.4 Cumulative Impact TRANS-3: An increase in on-site employees due to proposed Project operations would not contribute to a cumulatively significant increase in related public transit use – Less than Cumulatively Considerable

Cumulative Impact TRANS-3 represents the potential of the proposed Project along with other cumulative projects to result in a significant increase in related public transit use.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The past projects have contributed to the current transit baseline, and the present and future projects would result in additional transit demand due to employees, the increase in work-related trips, and increases in school and shopping related transit trips. Cumulatively, the projects combined could result in an increase in demand for transit, however, this is not expected to exceed transit supply and thus would not result in a significant cumulative impact. Section 3.6.2.3 describes the existing local and regional transit services (Metro, DASH, Long Beach Transit, etc.) in the proposed project area. These providers continually monitor cumulative transit demand and enhance or adjust services to meet demand, based on available funding.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.6, the proposed Project would create additional on-site employees; however, the increase in work-related trips using public transit would be negligible. Port Terminals generate low transit demand for several reasons. Intermodal facilities generate extremely low transit demand for several reasons. The primary reason that proposed Project workers generally would not use public transit is their work shift schedule. Most workers prefer to use a personal automobile to facilitate timely commuting. Also, Port workers' incomes are generally higher than similarly skilled jobs in other areas and higher incomes correlates to lower transit usage. In addition, parking at the Port is readily available and free for employees, which encourages workers to drive to work. Finally, although there are 13 existing transit routes that serve the general area

surrounding the proposed Project, none of the existing routes stop within one mile of the proposed Project site. There are no other cumulative projects that are expected to generate increased demand for transit services along the same transit routes serving the proposed Project. Consequently, the impact of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternatives 3 through 6 would not contribute to cumulatively considerable impact under NEPA related to public transit use. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.6.5 Cumulative Impact TRANS-4: Proposed Project operations would not result in increases considered cumulatively considerable related to freeway congestion – Less Than Cumulatively Considerable

Cumulative Impact TRANS-4 represents the potential of the proposed Project along with other cumulative projects to result in a significant increase in freeway congestion.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Freeway traffic levels have continued to increase in and near the study area due to development activity in San Pedro, Wilmington, Harbor City, and the Southern California region as a whole. Not only has local development resulted in additional freeway traffic on I-110 and SR-47, but also regional increases in traffic have resulted in increased diversion of traffic from other congested facilities such as I-405 to the freeways near the project study area. Historically, traffic volumes on all nearby freeways have increased over the past decade. The cumulative projects would be expected to result in significant impacts on the freeway system in the future as well. The cumulative projects will add traffic to the freeways, some of which are already operating at level of service F, which exceeds the State of California Congestion Management Program (CMP) threshold for acceptable operating conditions. Regional improvements are programmed through the Regional Transportation Plan (RTP) and the State Transportation Improvement Program (STIP). The projects that are programmed are intended to mitigate the impacts of cumulative and regional traffic growth, but the extent to which they will mitigate future cumulative impacts on the freeway system within the study area is unknown.

Contribution of the Proposed Project (Prior to Mitigation)

According to the CMP, Traffic Impact Analysis (TIA) Guidelines (Los Angeles Metropolitan Transportation Authority 2004 Congestion Management program for Los Angeles County), a traffic impact analysis is required at the following (Los Angeles County, 2004):

- CMP arterial monitoring intersections, including freeway on-ramp or off-ramp, where the Project would add 50 or more trips during either the A.M. or P.M. weekday peak hours.
- CMP freeway monitoring locations where the Project would add 150 or more trips during either the A.M. or P.M. weekday peak hours. The CMP freeway monitoring stations expected to be affected by the proposed Project are located at the following locations:
    - I-405 at Santa Fe Avenue (CMP Station 1066);
    - SR-91 east of Alameda Street and Santa Fe Avenue (CMP Station 1033);
    - I-710 between I-405 and Del Amo Boulevard (CMP Station 1079);
    - I-710 between PCH and Willow Street (CMP Station 1078); and
    - I-110 south of C Street (CMP Station 1045).

Per CMP guidelines, an increase of 0.02 or more in the V/C ratio with a resulting LOS F is deemed a significant impact.

The cumulative NEPA analysis of freeway impacts is the same as the NEPA analysis of the freeway impacts in Chapter 3.6; however, the cumulative CEQA analysis differs from the CEQA analysis of the proposed Project. The cumulative CEQA analysis is shown in Tables 4-6 through 4-13. The results of the analysis indicate that the proposed Project would not result in a freeway link an increase of 0.02 demand-to-capacity ratio at a freeway link operating at LOS F or worse. The amount of Project-related traffic that would be added at all other freeway links would not be of sufficient magnitude to meet or exceed the threshold of significance of the CMP.

However, as discussed above, the cumulative projects (including other Port terminal and non-Port projects) would add traffic to the freeway system and at the CMP monitoring stations. The cumulative traffic would not exceed the CMP thresholds and increase V/C ratios by more than 0.02 at the monitoring stations operating at LOS F or worse, thus not creating a cumulatively considerable impact. Consequently, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative freeway traffic impact under CEQA and NEPA.

Table 4-6: 2015 CEQA Baseline vs. 2015 Proposed Project Freeway Analysis – AM Peak Hour

Fwy	Location	Capacity	Northbound/Eastbound									Southbound/Westbound								
			2015 CEQA Baseline			Project Added Trips	2015 Proposed Project			Change in D/C	Sig Imp	2015 CEQA Baseline			Project Added Trips	2015 Proposed Project			Change in D/C	Sig Imp
			Volume	D/C	LOS		Volume	D/C	LOS			Volume	D/C	LOS		Volume	D/C	LOS		
#1 I-405	Between I-110 and I-710 (CMP monitoring station - Santa Fe Ave)	10,000	11,861	1.186	F(0)	**2**	11,863	1.186	F(0)	0.000	No	9,707	0.971	E	**6**	9,714	0.971	E	0.001	No
#2 SR-91	West of I-710 (CMP monitoring station - e/o Alameda St/Santa Fe Ave interchange)	12,000	7,231	0.603	C	**46**	7,276	0.606	C	0.004	No	8,694	0.725	C	**32**	8,727	0.727	C	0.003	No
#3 I-710	North of I-405 (CMP monitoring station n/o Jct. 405, s/o Del Amo)	8,000	6,558	0.820	D	**136**	6,694	0.837	D	0.017	No	7,806	0.976	E	**74**	7,880	0.985	E	0.009	No
#4 I-710	North of PCH (CMP monitoring station- n/o Jct Rte 1 (PCH), Willow St)	6,000	5,605	0.934	E	**113**	5,718	0.953	E	0.019	No	5,797	0.966	E	**77**	5,874	0.979	E	0.013	No
#5 I-110	South of C Street (CMP monitoring station - s/o "C" St)	8,000	4,902	0.613	C	**131**	5,033	0.629	C	0.016	No	3,668	0.458	B	**51**	3,719	0.465	B	0.006	No

Table 4-7: 2015 CEQA Baseline vs. 2015 Proposed Project Freeway Analysis – PM Peak Hour

Fwy	Location	Capacity	Northbound/Eastbound									Southbound/Westbound								
			2015 CEQA Baseline			Project Added Trips	2015 Proposed Project			Change in D/C	Sig Imp	2015 CEQA Baseline			Project Added Trips	2015 Proposed Project			Change in D/C	Sig Imp
			Volume	D/C	LOS		Volume	D/C	LOS			Volume	D/C	LOS		Volume	D/C	LOS		
#1 I-405	Between I-110 and I-710 (CMP monitoring station - Santa Fe Ave)	10,000	9,608	0.961	E	**1**	9,609	0.961	E	0.000	No	11,611	1.161	F(0)	**5**	11,616	1.162	F(0)	0.000	No
#2 SR-91	West of I-710 (CMP monitoring station - e/o Alameda St/Santa Fe Ave interchange)	12,000	8,732	0.728	C	**20**	8,752	0.729	C	0.002	No	7,772	0.648	C	**25**	7,798	0.650	C	0.002	No
#3 I-710	North of I-405 (CMP monitoring station n/o Jct. 405, s/o Del Amo)	8,000	8,582	1.073	F(0)	**69**	8,650	1.081	F(0)	0.009	No	7,060	0.883	D	**59**	7,119	0.890	D	0.007	No
#4 I-710	North of PCH (CMP monitoring station-n/o Jct Rte 1 (PCH), Willow St)	6,000	5,907	0.984	E	**61**	5,968	0.995	E	0.010	No	4,425	0.738	C	**61**	4,487	0.748	C	0.010	No
#5 I-110	South of C Street (CMP monitoring station - s/o "C" St)	8,000	3,656	0.457	B	**46**	3,702	0.463	B	0.006	No	4,605	0.576	C	**48**	4,653	0.582	C	0.006	No

Table 4-8: 2020 CEQA Baseline vs. 2020 Proposed Project Freeway Analysis – AM Peak Hour

Fwy	Location	Capacity	Northbound/Eastbound									Southbound/Westbound								
			2020 CEQA Baseline			Project Added Trips	2020 Proposed Project			Change in D/C	Sig Imp	2020 CEQA Baseline			Project Added Trips	2020 Proposed Project			Change in D/C	Sig Imp
			Volume	D/C	LOS		Volume	D/C	LOS			Volume	D/C	LOS		Volume	D/C	LOS		
#1 I-405	Between I-110 and I-710 (CMP monitoring station - Santa Fe Ave)	10,000	12,085	1.209	F(0)	**2**	12,088	1.209	F(0)	0.000	No	9,929	0.993	E	**7**	9,936	0.994	E	0.001	No
#2 SR-91	West of I-710 (CMP monitoring station - e/o Alameda St/Santa Fe Ave interchange)	12,000	7,294	0.608	C	**55**	7,349	0.612	C	0.005	No	8,791	0.733	C	**38**	8,829	0.736	C	0.003	No
#3 I-710	North of I-405 (CMP monitoring station n/o Jct. 405, s/o Del Amo)	8,000	6,598	0.825	D	**160**	6,758	0.845	D	0.020	No	7,813	0.977	E	**87**	7,900	0.988	E	0.011	No
#4 I-710	North of PCH (CMP monitoring station-n/o Jct Rte 1 (PCH), Willow St)	6,000	5,658	0.943	E	**132**	5,791	0.965	E	0.022	No	5,807	0.968	E	**91**	5,898	0.983	E	0.015	No
#5 I-110	South of C Street (CMP monitoring station - s/o "C" St)	8,000	5,260	0.657	C	**160**	5,420	0.677	C	0.020	No	3,970	0.496	B	**61**	4,032	0.504	B	0.008	No

1

Table 4-9: 2020 CEQA Baseline vs. 2020 Proposed Project Freeway Analysis – PM Peak Hour

Fwy	Location	Capacity	Northbound/Eastbound									Southbound/Westbound								
			2020 CEQA Baseline			Project Added Trips	2020 Proposed Project			Change in D/C	Sig Imp	2020 CEQA Baseline			Project Added Trips	2020 Proposed Project			Change in D/C	Sig Imp
			Volume	D/C	LOS		Volume	D/C	LOS			Volume	D/C	LOS		Volume	D/C	LOS		
#1 I-405	Between I-110 and I-710 (CMP monitoring station - Santa Fe Ave)	10,000	10,000	1.000	F(0)	**1**	10,001	1.000	F(0)	0.000	No	11,955	1.196	F(0)	**5**	11,960	1.196	F(0)	0.001	No
#2 SR-91	West of I-710 (CMP monitoring station - e/o Alameda St/Santa Fe Ave interchange)	12,000	8,994	0.749	C	**24**	9,018	0.751	C	0.002	No	8,085	0.674	C	**30**	8,114	0.676	C	0.002	No
#3 I-710	North of I-405 (CMP monitoring station n/o Jct. 405, s/o Del Amo)	8,000	9,113	1.139	F(0)	**81**	9,194	1.149	F(0)	0.010	No	7,487	0.936	E	**69**	7,556	0.945	E	0.009	No
#4 I-710	North of PCH (CMP monitoring station-n/o Jct Rte 1 (PCH), Willow St)	6,000	6,382	1.064	F(0)	**71**	6,453	1.075	F(0)	0.012	No	4,768	0.795	D	**72**	4,839	0.807	D	0.012	No
#5 I-110	South of C Street (CMP monitoring station - s/o "C" St)	8,000	4,151	0.519	B	**55**	4,206	0.526	B	0.007	No	4,867	0.608	C	**57**	4,924	0.615	C	0.007	No

Table 4-10: 2025 CEQA Baseline vs. 2025 Proposed Project Freeway Analysis – AM Peak Hour

Fwy	Location	Capacity	Northbound/Eastbound								Southbound/Westbound								
			2025 CEQA Baseline			Project Added Trips	2025 Proposed Project			Change in D/C	Sig Imp	2025 CEQA Baseline			Project Added Trips	2025 Proposed Project			Change in D/C	Sig Imp
			Volume	D/C	LOS		Volume	D/C	LOS			Volume	D/C	LOS		Volume	D/C	LOS		
#1 I-405	Between I-110 and I-710 (CMP monitoring station - Santa Fe Ave)	10,000	12,310	1.231	F(0)	**3**	12,312	1.231	F(0)	0.000	No	10,150	1.015	F(0)	**9**	10,158	1.016	F(0)	0.001	No
#2 SR-91	West of I-710 (CMP monitoring station - e/o Alameda St/Santa Fe Ave interchange)	12,000	7,358	0.613	C	**67**	7,425	0.619	C	0.006	No	8,888	0.741	C	**47**	8,935	0.745	C	0.004	No
#3 I-710	North of I-405 (CMP monitoring station n/o Jct. 405, s/o Del Amo)	8,000	6,638	0.830	D	**194**	6,832	0.854	D	0.024	No	7,820	0.977	E	**107**	7,927	0.991	E	0.013	No
#4 I-710	North of PCH (CMP monitoring station-n/o Jct Rte 1 (PCH), Willow St)	6,000	5,712	0.952	E	**161**	5,873	0.979	E	0.027	No	5,816	0.969	E	**112**	5,929	0.988	E	0.019	No
#5 I-110	South of C Street (CMP monitoring station - s/o "C" St)	8,000	5,617	0.702	C	**193**	5,811	0.726	C	0.024	No	4,273	0.534	B	**75**	4,348	0.543	C	0.009	No

Table 4-11: 2025 CEQA Baseline vs. 2025 Proposed Project Freeway Analysis – PM Peak Hour

Fwy	Location	Capacity	Northbound/Eastbound								Southbound/Westbound								
			2025 CEQA Baseline			Project Added Trips	2025 Proposed Project			Change in D/C	Sig Imp	2025 CEQA Baseline			Project Added Trips	2025 Proposed Project			Change in D/C	Sig Imp
			Volume	D/C	LOS		Volume	D/C	LOS			Volume	D/C	LOS		Volume	D/C	LOS		
#1 I-405	Between I-110 and I-710 (CMP monitoring station - Santa Fe Ave)	10,000	10,393	1.039	F(0)	**1**	10,394	1.039	F(0)	0.000	No	12,299	1.230	F(0)	**7**	12,305	1.231	F(0)	0.001	No
#2 SR-91	West of I-710 (CMP monitoring station - e/o Alameda St/Santa Fe Ave interchange)	12,000	9,256	0.771	D	**28**	9,284	0.774	D	0.002	No	8,397	0.700	C	**36**	8,433	0.703	C	0.003	No
#3 I-710	North of I-405 (CMP monitoring station n/o Jct. 405, s/o Del Amo)	8,000	9,645	1.206	F(0)	**96**	9,740	1.218	F(0)	0.012	No	7,914	0.989	E	**83**	7,997	1.000	E	0.010	No
#4 I-710	North of PCH (CMP monitoring station-n/o Jct Rte 1 (PCH), Willow St)	6,000	6,857	1.143	F(0)	**85**	6,941	1.157	F(0)	0.014	No	5,110	0.852	D	**86**	5,196	0.866	D	0.014	No
#5 I-110	South of C Street (CMP monitoring station - s/o "C" St)	8,000	4,646	0.581	C	**66**	4,712	0.589	C	0.008	No	5,129	0.641	C	**68**	5,197	0.650	C	0.009	No

Table 4-12: 2027 CEQA Baseline vs. 2027 Proposed Project Freeway Analysis – AM Peak Hour

Fwy	Location	Capacity	Northbound/Eastbound									Southbound/Westbound								
			2027 CEQA Baseline			Project Added Trips	2027 Proposed Project			Change in D/C	Sig Imp	2027 CEQA Baseline			Project Added Trips	2027 Proposed Project			Change in D/C	Sig Imp
			Volume	D/C	LOS		Volume	D/C	LOS			Volume	D/C	LOS		Volume	D/C	LOS		
#1 I-405	Between I-110 and I-710 (CMP monitoring station - Santa Fe Ave)	10,000	12,399	1.240	F(0)	**3**	12,402	1.240	F(0)	0.000	No	10,238	1.024	F(0)	**10**	10,248	1.025	F(0)	0.001	No
#2 SR-91	West of I-710 (CMP monitoring station - e/o Alameda St/Santa Fe Ave interchange)	12,000	7,384	0.615	C	**69**	7,453	0.621	C	0.006	No	8,927	0.744	C	**51**	8,978	0.748	C	0.004	No
#3 I-710	North of I-405 (CMP monitoring station n/o Jct. 405, s/o Del Amo)	8,000	6,653	0.832	D	**201**	6,854	0.857	D	0.025	No	7,822	0.978	E	**116**	7,938	0.992	E	0.015	No
#4 I-710	North of PCH (CMP monitoring station-n/o Jct Rte 1 (PCH), Willow St)	6,000	5,733	0.956	E	**166**	5,899	0.983	E	0.028	No	5,820	0.970	E	**121**	5,942	0.990	E	0.020	No
#5 I-110	South of C Street (CMP monitoring station - s/o "C" St)	8,000	5,760	0.720	C	**203**	5,964	0.745	C	0.025	No	4,394	0.549	C	**81**	4,474	0.559	C	0.010	No

Table 4-13: 2027 CEQA Baseline vs. 2027 Proposed Project Freeway Analysis – PM Peak Hour

Fwy	Location	Capacity	Northbound/Eastbound								Southbound/Westbound								
			2027 CEQA Baseline			Project Added Trips	2027 Proposed Project			Change in D/C	Sig Imp	2027 CEQA Baseline			Project Added Trips	2027 Proposed Project			Change in D/C	Sig Imp
			Volume	D/C	LOS		Volume	D/C	LOS			Volume	D/C	LOS		Volume	D/C	LOS		
#1 I-405	between I-110 and I-710 (CMP monitoring station - Santa Fe Ave)	10,000	10,549	1.055	F(0)	**1**	10,551	1.055	F(0)	0.000	No	12,436	1.244	F(0)	**7**	12,443	1.244	F(0)	0.001	No
#2 SR-91	west of I-710 (CMP monitoring station - e/o Alameda St/Santa Fe Ave interchange)	12,000	9,361	0.780	D	**33**	9,393	0.783	D	0.003	No	8,522	0.710	C	**38**	8,560	0.713	C	0.003	No
#3 I-710	north of I-405 (CMP monitoring station n/o Jct. 405, s/o Del Amo)	8,000	9,857	1.232	F(0)	**112**	9,970	1.246	F(0)	0.014	No	8,085	1.011	F(0)	**89**	8,174	1.022	F(0)	0.011	No
#4 I-710	north of PCH (CMP monitoring station-n/o Jct Rte 1 (PCH), Willow St)	6,000	7,046	1.174	F(0)	**100**	7,146	1.191	F(0)	0.017	No	5,247	0.874	D	**92**	5,339	0.890	D	0.015	No
#5 I-110	south of C Street (CMP monitoring station - s/o "C" St)	8,000	4,844	0.606	C	**75**	4,920	0.615	C	0.009	No	4,239	0.530	B	**73**	4,312	0.539	B	0.009	No

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to freeway congestion. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project or any of its alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

4.2.6.6 Cumulative Impact TRANS-5: Proposed Project operations would not cause a cumulatively considerable increase in vehicular delay at railroad grade crossings in excess of the threshold.

Cumulative Impact TRANS-5 represents the potential of the proposed Project along with other cumulative projects to cause an increase in rail activity, causing delay in traffic. As discussed in Section 3.6.4.4 for Impact Trans-5, the discussion of the rail transport of goods outside of the Port area is applicable to CEQA only.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Impacts of the past, present, and reasonably foreseeable future projects on the regional rail corridors north of the proposed Project site would not be significant since the Alameda Corridor project has been completed. The completion of the corridor has eliminated the regional at-grade rail/highway crossings between the Port and the downtown railyards; therefore, there would be no change in vehicular delay at any of those crossings due to the past, present, and reasonably foreseeable future projects that include rail activity (they are now all grade separated). There would be a significant cumulative impact on the at-grade rail crossings east of downtown Los Angeles. This cumulative impact would be due to the overall growth in rail activity that would occur to serve the added cargo throughput in the southern California region and the nation.

Contribution of the Proposed Project (Prior to Mitigation)

Vehicular delays resulting from rail trips associated with the proposed Project were estimated by adding rail trips resulting from the expanded container terminal and associated throughput growth to the applicable CEQA baseline. An increase in rail activity due to the proposed Project would not result a significant additional delay in regional traffic impact and thus would not make a cumulatively considerable contribution to a significant cumulative impact at any impacted crossing (Tables 3.6-36 through 3.6-41 in Section 3.6) under CEQA.

The rail lines beyond the Hobart and East Los Angeles yards are the outer geographic limits from Port of Los Angeles terminals the USACE has evaluated cumulative rail-

related impacts in previous EIS/EIRs, and they also represent the USACE's outer geographical limits of NEPA evaluation of cumulative rail-related impacts in this EIS/EIR. Therefore, Cumulative Impact TRANS-5 is not required to be analyzed under NEPA.

Contribution of the Alternatives

Alternative 6 would generate the greatest number of rail trips. Tables 4-14 through 4-19 list the cumulative delay impacts at at-grade crossings for each of the major main lines for the year 2027 for Alternative 6. It can be seen that although the cumulative delay is projected to increase as a result of increase in train counts and vehicular traffic volume, none of the crossings have an average vehicular delay exceeding 55 seconds. Therefore, Alternative 6 would not make a cumulatively considerable contribution to a significant cumulative impact relative to an increase in rail activity and/or delays in regional traffic. Alternatives 1 through 5 would involve fewer rail trips than Alternative 6 and likewise would not make a cumulatively considerable contribution to a significant cumulative impact relative to an increase in rail activity and/or delays in regional traffic exceeding the threshold under CEQA. Cumulative Impact TRANS-5 is not required to be analyzed under NEPA.

Table 4-14: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, CY2027

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
San Bernardino MP 0.0							
Laurel St	2	2,940	102.3	213.7	9.6	12.3	NO
Olive St	2	3,490	102.3	213.7	11.6	12.6	NO
E St	2	920	102.3	213.7	2.9	11.3	NO
H St	2	1,840	102.3	213.7	5.8	11.8	NO
Valley Bl	2	13,790	102.3	213.7	68.0	22.1	NO
Colton Crossing MP 3.2							
Highgrove Junction MP 6.1 (Connection to Perris via MetroLink)							
Main St	2	4,580	147.8	293.4	21.5	18.0	NO
Riverside-San Bernardino County Line MP 6.41							
Center St	4	10,360	147.8	294.2	49.0	18.1	NO
Iowa Av	4	28,000	147.8	294.2	177.2	27.1	NO
Palmyrita Av	2	690	147.8	293.4	2.9	15.4	NO
Chicago Av	4	16,220	147.8	294.2	83.5	20.3	NO
Spruce St	4	8,170	147.8	294.2	37.5	17.4	NO
3rd St	4	19,640	147.8	294.2	106.7	21.9	NO
Mission Inn (7th St)	4	4,410	147.8	294.2	19.3	16.2	NO
Riverside Yard and Amtrak Station MP 10.02-10.16							
Cridge St	2	3,720	159.8	302.2	17.3	17.7	NO

Table 4-14: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, CY2027

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
West Riverside Junction MP 10.6 (Connection to UP Los Angeles Sub)							
Jane St	2	2,640	111.9	205.3	7.9	11.3	NO
Mary St	4	15,980	111.9	206.0	55.3	13.8	NO
Washington St	2	14,040	111.9	205.3	59.2	18.3	NO
Madison St	4	22,050	111.9	206.0	83.9	15.8	NO
Jefferson St	2	6,840	111.9	205.3	22.8	13.1	NO
Adams St	4	8,650	111.9	206.0	27.1	12.0	NO
Jackson St	4	9,900	111.9	206.0	31.5	12.3	NO
Gibson St	2	3,910	111.9	205.3	12.1	11.8	NO
Harrison St	2	3,800	111.9	205.3	11.7	11.7	NO
Tyler St	4	2,360	111.9	206.0	6.9	10.8	NO
Pierce St	2	2,580	111.9	205.3	7.7	11.2	NO
Buchanan St	2	50	111.9	205.3	0.1	10.4	NO
Magnolia Av Eb	2	19,900	111.9	205.3	109.8	26.7	NO
Magnolia Av Wb	2	19,900	111.9	205.3	109.8	26.7	NO
Mckinley St	4	12,150	111.9	206.0	39.8	12.8	NO
Radio Rd	2	390	111.9	205.3	1.1	10.5	NO
Joy St	2	10,160	111.9	205.3	37.4	15.1	NO
Sheridan St	2	7,790	111.9	205.3	26.7	13.6	NO
Cota St	4	12,120	111.9	206.0	39.7	12.8	NO
Railroad St	4	18,990	111.9	206.0	68.8	14.7	NO

Table 4-14: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, CY2027

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
Smith St	4	18,280	111.9	206.0	65.5	14.5	NO
Auto Center Dr	2	14,140	111.9	205.3	59.9	18.4	NO
Riverside-Orange County Line							
Kellogg Dr	4	7,270	111.9	206.0	22.5	11.8	NO
Lakeview Av	3	19,960	111.9	205.6	84.4	18.3	NO
Richfield Rd	4	10,030	111.9	206.0	32.3	12.4	NO
Atwood Junction MP 40.6 (Connection to Old Olive Sub)							
Van Buren St	2	7,160	84.8	176.8	22.0	12.1	NO
Jefferson St	3	6,720	84.8	177.0	19.2	10.9	NO
Tustin Av (Rose Dr)	4	30,870	84.8	177.2	128.4	18.6	NO
Orangethorpe Av	4	29,980	84.8	177.2	122.3	18.1	NO
Kraemer Bl	4	20,940	84.8	177.2	71.8	14.1	NO
Placentia Av	4	15,340	84.8	177.2	48.1	12.4	NO
State College Bl	4	24,950	84.8	177.2	92.0	15.7	NO
Acacia Av	4	7,130	84.8	177.2	20.0	10.6	NO
Raymond Av	4	22,250	84.8	177.2	78.1	14.6	NO
Fullerton Junction MP 45.5 = MP 165.5							
Orange-LA County Line							
Valley View Av	4	25,250	139.8	220.6	108.5	18.6	NO
Rosecrans/Marquardt Av	4	23,850	139.8	220.6	99.6	17.9	NO

Table 4-14: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, CY2027

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles /Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
Lakeland Rd	2	6,720	139.8	219.8	23.2	13.7	NO
Los Nietos Rd	4	21,050	139.8	220.6	83.2	16.6	NO
Norwalk Bl	4	26,970	139.8	220.6	120.2	19.6	NO
Pioneer Bl	4	15,740	139.8	220.6	56.7	14.6	NO
Passons Bl	4	13,050	139.8	220.6	45.1	13.7	NO
Serapis Av	2	6,450	139.8	219.8	22.1	13.6	NO
Commerce Yard MP 148.5							
Hobart Yard MP 146.0							
OVERALL							**NO**
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**2,797.1**		
PM Peak Average Delay per Vehicle (Seconds/Vehicle)						**17.1**	

Table 4-15: BNSF Cajon Subdivision from San Bernardino to Barstow, CY2027

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)	Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
Barstow MP 0							
Lenwood Rd	2	5,420	108.7	204.4	14.2	9.9	NO
Hinkley Rd	2	580	108.7	204.4	1.4	8.5	NO
Indian Trail Rd	2	650	108.7	204.4	1.5	8.5	NO
Vista Rd	2	3,340	108.7	204.4	8.3	9.2	NO
Turner Rd	2	40	108.7	204.4	0.1	8.4	NO
North Bryman Rd	2	190	108.7	204.4	0.4	8.4	NO
South Bryman Rd	2	2,330	108.7	204.4	5.7	9.0	NO
Robinson Ranch Rd	2	140	108.7	204.4	0.3	8.4	NO
1st St	2	830	108.7	242.3	2.8	12.1	NO
6th St	4	4,360	108.7	282.2	20.4	17.1	NO
Silverwood Junction MP 56.6							
Keenbrook Junction MP 69.4							
Swarthout Canyon Rd	2	220	116.6	364.9	1.5	25.4	NO
Devore Rd / Glen Helen Pkwy	4	7,580	116.6	365.8	57.9	28.4	NO
Dike Junction							
Palm Av	2	14,330	94.1	301.6	122.3	35.5	NO
San Bernardino MP 81.4							
OVERALL							**NO**
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**236.9**		
PM Peak Average Delay per Vehicle (Seconds/Vehicle)						**23.3**	

Table 4-16: UP Alhambra Subdivision from Los Angeles Transportation Center (LATC) to Colton Crossing, CY2027 (Excluding Segment That is Combined with UP LA Subdivision)

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)	Daily Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
LATC MP 482.9							
San Pablo St	4	4,350	39.2	207.3	30.7	26.1	NO
Vineburn Av	2	1,450	39.2	145.7	4.9	12.5	NO
Worth/Boca Rd	2	8,420	39.2	145.7	36.3	17.7	NO
Valley Bl	4	29,530	39.2	97.1	66.1	9.9	NO
Ramona St	2	13,660	39.2	145.7	66.3	20.9	NO
Mission Rd	3	24,740	39.2	145.9	135.7	25.0	NO
Del Mar Av	2	22,620	39.2	145.7	178.7	42.4	NO
San Gabriel Bl	4	37,700	39.2	146.1	233.7	29.8	NO
Walnut Grove Av	3	16,470	39.2	84.8	24.3	6.1	NO
Encinita Av	2	6,860	39.2	84.7	8.9	5.0	NO
Lower Azusa Rd	4	18,690	39.2	84.8	26.2	5.6	NO
Temple City Bl	4	22,420	39.2	84.8	33.4	6.2	NO
Baldwin Av	4	27,810	39.2	84.8	45.8	7.1	NO
Arden Dr	4	11,860	39.2	84.8	15.1	4.9	NO
El Monte Junction MP 494.99							
Tyler Ave	4	12,640	82.0	115.6	19.3	6.2	NO
Cogswell Rd	2	10,810	15.3	115.2	19.0	7.5	NO
Temple Av	4	29,050	50.6	115.6	59.3	9.3	NO
Bassett Junction MP 498.45							
Vineland Av	2	13,470	40.0	85.3	21.9	7.0	NO
Puente Av	4	34,150	40.0	85.5	65.1	8.8	NO
Orange Av	2	6,190	40.0	85.3	7.9	5.0	NO

Table 4-16: UP Alhambra Subdivision from Los Angeles Transportation Center (LATC) to Colton Crossing, CY2027 (Excluding Segment That is Combined with UP LA Subdivision)

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)	Daily Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
California Av	2	20,150	40.0	85.3	45.2	11.2	NO
City of Industry Junction MP 501.5							
Fullerton Rd	4	19,630	44.9	95.9	31.4	6.5	NO
Fairway Dr	4	21,300	44.9	95.9	35.1	6.8	NO
Lemon Rd	4	18,440	44.9	95.9	29.0	6.3	NO
Brea Canyon Rd	2	15,450	44.9	95.7	30.4	8.8	NO
Pomona Junction MP 514.3	**HANDLED SEPARATELY DUE TO PROXIMITY TO UP LA SUB**						
LA-San Bernardino County Line MP 516.7							
Montclair Junction							
Bon View Av	2	12,090	48.9	101.5	21.3	7.4	NO
Vineyard Av	4	37,110	48.9	101.7	86.2	11.0	NO
Milliken Av	6	41,260	48.9	101.9	78.0	8.1	NO
Kaiser Junction MP 527.5							
West Colton MP 534.7							
Colton Crossing MP 538.70							
OVERALL							**NO**
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**1,455.4**		
PM Peak Average Delay per Vehicle (Seconds/Vehicle)						**12.3**	

Table 4-17: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, CY2027 (Excluding Segment That is Combined with UP Alhambra Subdivision)

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)	Daily Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
East Los Angeles MP 5.85							
S. Vail Av	2	8,460	43.9	114.6	22.7	10.8	NO
Maple Av	2	5,950	43.9	114.6	14.8	9.7	NO
S. Greenwood Av	4	7,800	43.9	114.9	18.5	9.1	NO
Montebello Bl	4	22,020	43.9	114.9	64.3	12.2	NO
Durfee Av	2	14,950	43.9	77.9	22.4	6.8	NO
Rose Hills Rd	4	10,120	43.9	74.1	9.9	3.8	NO
Mission Mill Rd	2	2,330	43.9	73.9	2.1	3.5	NO
Workman Mill	4	8,190	43.9	74.1	7.8	3.7	NO
Turnbull Canyon Rd	4	15,470	43.9	74.1	16.3	4.3	NO
Stimson Av & Puente Av	4	15,770	43.9	74.1	16.6	4.3	NO
Bixby Dr	2	3,170	43.9	73.9	2.9	3.6	NO
Fullerton Rd	4	25,960	43.9	74.1	32.4	5.5	NO
Nogales St	6	40,420	43.9	74.3	51.7	5.7	NO
Fairway Dr	4	27,160	43.9	74.1	34.7	5.7	NO
Lemon St	4	16,130	43.9	74.1	17.1	4.3	NO
Pomona Junction MP 31.9	**HANDLED SEPARATELY DUE TO PROXIMITY TO UP ALHAMBRA SUB**						
LA-San Bernardino County Line MP 33.17							
E. Montclair Junction MP 35.02							
Bonview Av	2	4,290	45.5	78.2	4.4	4.0	NO
Grove Av	6	48,580	45.5	78.6	77.0	7.4	NO

Table 4-17: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, CY2027 (Excluding Segment That is Combined with UP Alhambra Subdivision)

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)	Daily Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
Vineyard Av	4	5,480	45.5	78.4	5.4	3.8	NO
Archibald Av	4	6,470	45.5	78.4	6.5	3.9	NO
San Bernardino-Riverside County Line MP 43.36							
Milliken Av	6	26,040	45.5	78.6	30.3	4.8	NO
Mira Loma Junction MP 45.7							
Bellegrave Av	2	10,480	48.8	83.4	13.5	5.4	NO
Rutile St	2	4,100	48.8	83.4	4.4	4.1	NO
Clay St	4	34,970	48.8	83.7	59.9	8.1	NO
Jurupa Av	2	17,560	48.8	99.7	43.5	11.7	NO
Mountain View Av	2	2,130	48.8	99.7	3.2	5.6	NO
Streeter Av	4	17,210	48.8	99.9	30.4	7.2	NO
Palm Av	2	15,390	48.8	93.3	30.1	8.9	NO
Brockton Av	4	20,100	48.8	99.9	37.2	7.7	NO
Riverside Av	2	19,240	48.8	99.7	52.0	13.3	NO
Panorama Road	2	3,970	48.8	99.7	6.1	5.9	NO
West Riverside Junction MP 56.7							
OVERALL							**NO**
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**738.2**		
PM Peak Average Delay per Vehicle (Seconds/Vehicle)						**7.0**	

Table 4-18: Combined UP Alhambra and LA Subdivisions in Pomona and Montclair Area, CY2027

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)	Daily Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
Pomona Junction MP 514.3							
Hamilton Bl	4	8,590	92.9	181.5	21.9	9.7	NO
Park Av	2	6,080	92.9	181.1	16.2	10.4	NO
Main St	2	1,690	92.9	181.1	4.0	8.8	NO
Palomares St	2	4,150	92.9	181.1	10.5	9.6	NO
San Antonio Av	4	7,390	92.9	357.2	74.1	37.7	NO
LA-San Bernardino County Line MP 516.7							
Monte Vista Av	4	14,710	92.9	181.5	40.6	10.9	NO
San Antonio Av	4	12,460	92.9	181.5	33.3	10.5	NO
Vine Av	2	9,140	92.9	181.1	26.5	11.8	NO
Sultana Av	2	13,620	92.9	181.1	46.3	14.8	NO
Campus Av	2	12,790	92.9	181.1	42.1	14.1	NO
Montclair Junction							
OVERALL							**NO**
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**315.6**		
PM Peak Average Delay per Vehicle (Seconds/Vehicle)						**13.9**	

Table 4-19: UP Yuma Subdivision from Colton Crossing to Indio, CY2027

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)	Daily Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
Colton Crossing MP 539.0							
Hunts Lane	4	18,140	75.0	182.1	62.2	13.8	NO
Whittier Av	2	260	75.0	215.8	1.0	13.6	NO
Beaumont Av	2	620	75.0	215.8	2.4	13.8	NO
San Timoteo Cyn Rd	2	15,630	75.0	215.8	98.3	28.5	NO
Alessandro Rd	2	390	75.0	215.8	1.5	13.7	NO
San Bernardino-Riverside County Line MP 549.25							
Live Oak Cyn Rd	2	1,470	75.0	215.8	5.7	14.1	NO
San Timoteo Cyn Rd	2	690	75.0	215.8	2.6	13.8	NO
Viele Av	2	760	75.0	181.7	2.0	9.8	NO
California Av	2	2,220	75.0	181.7	6.2	10.2	NO
Pennsylvania Av	2	970	75.0	181.7	2.6	9.8	NO
North Sunset Av	2	24,030	75.0	181.7	142.1	30.1	NO
22nd St	4	10,710	75.0	182.1	32.0	11.3	NO
San Gorgonio Av	2	5,560	75.0	181.7	16.6	11.4	NO
Hargrave St	2	5,690	75.0	181.7	17.1	11.4	NO
Apache Trail	2	5,740	75.0	181.7	17.2	11.4	NO
Broadway	2	2,840	75.0	181.7	8.0	10.4	NO
Tipton Rd	2	170	75.0	181.7	0.5	9.6	NO
Garnet MP 588.32							
West Indio MP 609.63							

Table 4-19: UP Yuma Subdivision from Colton Crossing to Indio, CY2027

Boundary/Junction – Street	# of Lanes	Average Daily Traffic (Vehicles/Day)	Average Daily Train Volume (Trains/Day)	Daily Total Gate Down Time (Minutes/Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	PM Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
			W/Proj	W/Proj	W/Proj	W/Proj	
Indio MP 610.9							
Avenue 52	4	14,700	75.0	182.1	46.2	12.1	NO
Avenue 56/Airport Blvd	2	7,980	75.0	181.7	25.3	12.4	NO
Avenue 66/4th Street	2	10,480	75.0	181.7	35.6	13.6	NO
OVERALL							**NO**
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					**525.1**		
PM Peak Average Delay per Vehicle (Seconds/Vehicle)						**17.6**	

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project or any of its alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA.

4.2.7 Groundwater and Soils

4.2.7.1 Scope of Analysis

The geographic scope for cumulative impacts on groundwater and soils varies, depending on the impact. The geographic scope with respect to contaminated soils would be confined to the proposed Project site because these impacts are site-specific and relate primarily to potential exposure of contaminants to on-site personnel during construction and operation of the proposed Project or an alternative. There is no geographic scope with respect to change in potable water levels and potential violation of regulatory water quality standards at an existing production well because there are no groundwater wells within a 2-mile radius. Similarly, there is no geographic scope with respect to potential reduction in groundwater recharge because the proposed Project site is not used for groundwater recharge. The LADWP is responsible for supplying water to the Project site and vicinity; local groundwater would not be utilized as a potable water supply.

Past, present and reasonably foreseeable future developments that could contribute to cumulative impacts associated with groundwater and soils under CEQA are limited to projects that would result in paving and potential reduction in groundwater recharge. With respect to NEPA, there are no off-site past, present, planned, and reasonably foreseeable future development that could contribute to cumulative impacts associated with groundwater and soils. NEPA-related soil impacts would be limited to potentially encountering onshore contaminated soil at the onshore/in-water interface, during excavations for wharf construction, and during construction of backlands that are not included in the NEPA baseline (refer to Section 2.6.2); however, such impacts do not extend beyond individual project boundaries. See Section 4.2.14 with respect to potentially contaminated offshore sediments.

The cumulative area of influence is predominantly underlain by a shallow, unconfined aquifer (non-potable) (with an overlying shallow, perched, water-bearing zone of saline, non-potable water), which has historically occurred at depths as shallow as 5 ft bgs. This shallow aquifer is underlain by several major water-bearing zones. Spills of petroleum products and hazardous substances, due to long-term industrial land use, have resulted in contamination of some surface soils and shallow groundwater. Hazardous materials refers to any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released. Hazardous materials that are commonly found in soil and groundwater include petroleum products, fuel additives, heavy metals, and volatile organic compounds. Depending on the type and degree of contamination that is present in soil and groundwater, any of several governmental agencies may have jurisdiction over investigation or remediation. Most of the cumulative area of influence has been disturbed in the past, may contain buried contaminated soils, and is covered in impervious surfaces.

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

4.2.7.2 Cumulative Impact GW-1: The proposed Project construction activities would not contribute to a cumulatively considerable encounter with toxic substances or other contaminants associated with historical uses of the Port, resulting in short-term exposure (duration of construction) to construction/operations personnel and/or long-term exposure to future site occupants – Less than Cumulatively Considerable

Cumulative Impact GW-1 addresses the degree to which the proposed Project, along with other cumulative projects, results in exposing soils containing toxic substances and petroleum hydrocarbons associated with prior operations, which would be deleterious to humans. Exposure to contaminants associated with historical uses of the Project site could result in short-term effects (duration of construction) to construction workers, on-site personnel, and/or long-term impacts to future site occupants. The cumulative geographic scope is includes the proposed Project and immediate area because the effects of soil contamination are generally site-specific and consist primarily of the potential to expose on-site personnel to contaminants during construction or subsequent to construction.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past uses at the Port have contributed to soil and/or groundwater contamination, including sites that are at and adjacent to the proposed Project site as discussed in Section 3.7.2.3. Remediation of much of the soil contamination has and is currently occurring, but some contamination remains, and is especially likely where those past activities occurred. Disturbance of contaminated soil could occur during construction activities, which could pose a risk of exposure to construction workers. However, each related project listed in Table 4-1 is subject to regulatory standards that must be achieved during construction and demolition activities, including compliance with Los Angeles RWQCB, DTSC, and Los Angeles Fire Department regulations governing handling and cleanup of hazardous materials, and Cal EPA OEHHA worker safety requirements which would reduce potential impacts associated with exposing soil contamination. Further, as described above, the effects of soil contamination and groundwater are generally site-specific and thus not subject to Port-wide cumulative effects. Therefore, the related projects would not result in a significant cumulative impact related to exposing soil contamination.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Section 3.7.2.3, soil and groundwater at the APL Terminal have been impacted by waste materials, hazardous substances, and petroleum products as a result of spills and industrial activities associated with historic land uses of the site. Construction activities such as grading and excavation could disturb contaminated soils and potentially expose construction workers, existing operations personnel, or future occupants of the site to contaminated soil and groundwater. However, with incorporation of lease

measures **LM GW-1** and **LM GW-2** which require remediation of all contamination encountered within the excavation zones and development of a contamination contingency plan to address contamination that could be encountered during construction, impacts would be less than significant. As described above, impacts associated with soil contamination are site-specific, and thus the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to exposing soil contamination. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Although project-level impacts are not anticipated, lease measures, **LM GW-1** and **LM GW-2** require that any contaminated soils and groundwater encountered during construction would be remediated in compliance with applicable requirements and conditions. Further, all applicable regulations governing use and handling of hazardous materials would be complied with. Therefore, the proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA. As such, no mitigation measures are required.

4.2.7.3 Cumulative Impact GW-2: The proposed Project would not result in a cumulatively considerable impact in the expansion of the area affected by movement, expansion, or increase in existing contaminants – Less than Cumulatively Considerable

Cumulative Impact GW-2 addresses the degree to which the proposed Project, 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. A large portion of the Project site would be developed as backlands, and would effectively serve as an impermeable surface barrier above any contamination zone and would prevent runoff from percolating through contamination. In addition, potential remediation activities required under LAHD lease measures for site remediation and a contamination contingency plan (**LM GW-1** and **LM GW-2**) would result in the beneficial effect of removing soil contamination as a source of groundwater contamination. The cumulative geographic scope is the same as the proposed Project site, because the effects of soil contamination are site-specific in that they relate primarily to potential exposure of contaminants to on-site personnel during construction, or to on-site personnel or recreational users, subsequent to construction.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past uses that have contributed to soil and/or groundwater contamination at the Project site have been identified, as discussed in Section 3.7.2.3. With the exception of the proposed Project, present and reasonably foreseeable future projects would have no effect on soil contamination on-site because these projects would not be located at the Project site. Consequently, the related projects would not result in significant cumulative impacts relative to the expansion of the area affected by movement, expansion, or increase in existing contaminants.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Section 3.7, the proposed Project would not be expected to change the rate, direction, or extent of existing soil and/or groundwater contamination due to the placement of an impermeable surface layer over the Project site. Furthermore, as discussed for Impact GW-1, if contamination were encountered during construction activities, it would be remediated prior to paving or capping the surface. The removal of site contamination prior to development would further minimize the potential for the movement or expansion of existing contamination. Because the contribution from the proposed Project would lessen the effects of contamination movement, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact (from past uses at the proposed Project site) under both CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to the movement or expansion of contamination. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

The placement of an impermeable surface (pavement or similar material) over the new backlands, or replacement of pavement in disturbed areas, at the Project site would reduce the potential for existing contamination to move or migrate compared to baseline conditions, and would keep the proposed Project or alternative from cumulatively affecting existing contamination. Additionally, LAHD lease measures requiring site remediation and a contamination contingency plan (**LM GW-1** and **LM GW-2**) would be implemented to protect worker health and safety and to establish procedures to manage unforeseen encounters with contamination during Project construction, as discussed under Cumulative Impact GW-1, which would also have the beneficial effect of reducing the amount of existing contamination on the Project site. As such, the proposed Project and the alternatives would not make a cumulatively considerable contribution to a significant cumulative impact.

4.2.7.4 Cumulative Impact GW-3: The proposed Project would not result in a cumulatively considerable change in potable water levels – No Impact

Cumulative Impact GW-3 addresses the degree to which the proposed Project or alternatives, along with other cumulative projects, would 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 wellfields (public or private); and
- Adversely change the rate or direction of groundwater flow.

As described in Section 3.7, the salinity and potential contamination of the groundwater beneath the proposed Project site and vicinity makes it unsuitable as a potable water supply. In addition, there are no designated groundwater recharge areas in the Port or the Project area that could be affected by the related projects listed in Table 4-1. Although shallow groundwater may be locally extracted during construction (i.e., for installation of utility lines or storm drains), it would have no impact on potential potable water supplies. As such, there would be no cumulative impact to groundwater recharge. Furthermore, neither the proposed Project nor any alternative would affect groundwater recharge activities, and therefore, would not make a cumulatively considerable contribution to a significant cumulative groundwater recharge impact under CEQA or NEPA.

4.2.7.5 Cumulative Impact GW-4: The proposed Project would not result in a cumulatively considerable reduction in potable groundwater recharge capacity – No Impact

Cumulative Impact GW-4 represents the potential of the proposed Project, along with other cumulative projects, to result in a demonstrable and sustained reduction in potable groundwater recharge capacity. There are no groundwater recharge areas at the proposed Project site or in the vicinity, and only saline or otherwise non-potable groundwater underlies the coastal areas of the Los Angeles Basin. Deeper groundwater recharge occurs farther inland and upstream, and is important in sustaining the aquifers used as industrial and municipal water supply outside of the Project area. Although past, present, and reasonably foreseeable future projects, including projects listed in Table 4-1, 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, neither the proposed Project nor any alternative would affect groundwater recharge or potable water supplies, and therefore, would not make a cumulatively considerable contribution to a significant cumulative groundwater recharge impact under CEQA or NEPA.

4.2.7.6 Cumulative Impact GW-5: The proposed Project would not result in a cumulatively considerable violation of regulatory water quality standards at an existing production well – No Impact

Cumulative Impact GW-5 addresses the degree to which the proposed Project and alternatives when combined with other cumulative projects (see Table 4-1), would result in a violation of regulatory water quality standards at an existing production well, as defined in the CCR, Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act. Because no existing groundwater production wells are located in the vicinity of the proposed Project site, neither the proposed Project nor an alternative would contribute to a cumulative potential to violate regulatory water quality standards at existing production wells. Consequently, neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

4.2.8 Hazards and Hazardous Materials

4.2.8.1 Scope of Analysis

The geographic scope for cumulative impacts associated with accidental spills, releases, or explosions of hazardous materials encompasses the overall Port Complex. The importance of regional projects diminishes as distance away from the Port Complex increases because the magnitude of potential impacts diminishes with greater distance from the Port Complex. 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 Complex.

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

4.2.8.2 Cumulative Impact RISK-1: The proposed Project would not result in cumulatively considerable increase the probable frequency and severity of consequences to people or property as a result of an accidental release or explosion of a hazardous substance– Less than Cumulatively Considerable

Cumulative Impact RISK-1 represents the potential of the proposed Project along with other cumulative projects to substantially increase the probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

During the period 2006-2009, there were 39 hazardous material spills directly associated with container terminals in the Port Complex. This equates to approximately ten spills per year for the entire Port Complex (39 spills over a 4-year period). During this period,

the total throughput of the container terminals within the Port Complex was 31,423,871 TEUs. Therefore, the probability of a spill at a container terminal is estimated at 1.24 x 10^{-6} per TEU (39 spills divided by 31,423,871 TEUs). This spill probability conservatively represents the baseline hazardous material spill probability because it includes materials that would not be considered a risk to public safety (i.e., perfume spills), but would still be considered an environmental hazard. The probability of spills associated with future operations would be based on the spill probability per TEU times the increase in TEUs under the proposed Project or alternative. It should be noted, with respect to hazardous material spills, during this period there were no reported impacts to the public (injuries, fatalities, and evacuations).

Other present and reasonably foreseeable projects (listed in Table 4-1) would contribute to higher cargo throughput levels in the Port Complex resulting in a higher spill probability. In looking at Table 3.8-3, Risk Matrix (in Section 3.8.4.1), this cumulative spill probability qualifies the probability as "frequent" (greater than once per year). With no injuries, fatalities, or evacuations that affected the public, and with only minor injuries to workers, the consequences of the spills would be categorized as "slight". Based on the Risk Matrix, the cumulative risk of the past, present, and reasonably foreseeable future projects falls into the unshaded area of the Matrix; therefore, cumulative impacts would be less than cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project and any other Port project 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, construction, demolition, and operation of the proposed Project would not substantially increase the probable frequency and severity of consequences to people or property as a result of an accidental release or explosion of a hazardous substance, as analyzed in Section 3.8. Therefore, construction and operation of the proposed Project would not make a cumulative considerable contribution to a significant cumulative impact relative to hazardous substances exposure risk.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to accidental releases or explosions. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA. Therefore, no mitigation measures would be required.

4.2.8.3 Cumulative Impact RISK-2: The proposed Project would not result in a cumulatively considerable increase in the probable frequency and severity of consequences to people from exposure to health hazards– Less than Cumulatively Considerable

Cumulative Impact RISK-2 represents the potential of the proposed Project along with other cumulative projects to substantially increase the probable frequency and severity of consequences to people from exposure to health hazards. In the case of the proposed Project, one of the biggest public safety hazards is associated with potential injuries and fatalities that could result from traffic accidents with project-related trucks.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

All past, present, and reasonably foreseeable projects that would involve the handling of hazardous materials would be subject to the same BMPs as the proposed Project and would be constructed in accordance with the Los Angeles Municipal Code (Chapter 5, Section 57, Division 4 and 5; Chapter 6, Article 4). Quantities of hazardous materials that exceed the thresholds provided in Chapter 6.95 of the California Health and Safety Code would be subject to a Release Response Plan (RRP) and a Hazardous Materials Inventory (HMI). Implementation of increased inventory accountability and spill prevention controls associated with this RRP and HMI, such as limiting the types of materials stored and size of packages containing hazardous materials, would limit both the frequency and severity of potential releases of hazardous materials, thus minimizing potential health hazards and/or contamination of soil or water during demolition and construction activities. These measures reduce the frequency and consequences of spills by requiring proper packaging for the material being shipped, limits on package size, and thus potential spill size, as well as proper response measures for the materials being handled. Implementation of these preventative measures would minimize the potential for spills to impact members of the public and limit the adverse impacts of contamination to a relatively small area. As a consequence, construction of the related projects would not result in substantial increases in the frequency or severity of hazardous materials spills, and would therefore not result in significant cumulative impacts.

Past, present, and the reasonably foreseeable future projects listed in Table 4-1 have and would continue to generate truck trips that travel throughout the Port. According to a Federal Motor Carrier Safety Administration (FMCSA) detailed analysis (2008), the estimated non-hazardous materials truck accident rate (which is more than twice the hazardous materials truck accident rate) is 0.73 accidents per million vehicle miles traveled (U.S. Department of Transportation [DOT], 2008a). Based on data from the National Highway Traffic Safety Administration (NHTSA), of the estimated 380,000 truck crashes in 2008 (causing fatalities, injuries, or property damage), an estimated 10.7 percent (4,066 of the total 380,000 truck crashes) produced fatalities and 17.4 percent (66,000 of the total 380,000 truck crashes) produced injuries (DOT, 2008b). The Fatality Analysis Reporting System (FARS) and the Trucks Involved in Fatal Accidents (TIFA) survey were the sources of data for this analysis, which primarily examined fatalities associated with vehicle impact and trauma.

Although the related projects would result in increases in truck trips in the Port, beyond baseline conditions, the truck trip increases are not expected to result in increases in the probable frequency and/or severity of consequences, because all vehicles are subject to traffic laws and restrictions, weight and speed limits, designated truck routes, and cargo packaging and labeling requirements. The Port is currently developing a Port-wide transportation master plan (TMP) for roadways in and around its facilities. Present and future traffic improvement needs are being determined based on existing and projected traffic volumes. The results will be a TMP providing ideas on what to expect and how to prepare for future traffic volumes. Some of the transportation improvements under consideration include: I-110/SR-47/Harbor Boulevard interchange improvements; south Wilmington grade separations; and additional traffic capacity analysis for the Vincent Thomas Bridge and I-110 connector roads. In addition, the Port is working on several strategies to increase rail transport, which will reduce reliance on trucks. These projects would serve to reduce the frequency of truck accidents.

The Port is currently phasing out older trucks as part of its Clean Truck Program, and the Transportation Worker Identification Credential (TWIC) program will help identify and exclude truck drivers that lack the proper licensing and training. The phasing out of older trucks would reduce the probability of accidents that occur as a result of mechanical failure by approximately 10 percent (ADL, 1990). In addition, proper driver training, or more specifically, the reduction in the number of drivers that do not meet minimum training specifications, would further reduce potential accidents by approximately 30 percent.

Furthermore, as part of the CAAP, the Port will be implementing measures and requirements that will result in truck fleet improvements (i.e., requiring newer trucks that meet certain USEPA standards), which would have the effect of phasing out older trucks and replacing them with newer trucks (POLA and POLB, 2010). Consequently, as the truck fleet composition changes or improves over time, improvements to the accident frequencies and severity rates should also improve. Based on above and the engineering improvements to the transportation system in the Port area, the related projects would not result in a significant cumulative impact related to an increase in the probable frequency and severity of harm from truck accidents.

Contribution of the Proposed Project (Prior to Mitigation)

As explained in Section 3.8, construction/demolition activities at the APL Terminal would not substantially increase the probable frequency and severity of consequences to people from exposure to health hazards. Because the incremental impact of the proposed Project would not be significant, and because the impacts of past, present and reasonably foreseeable future projects are expected to be short term and localized, the incremental effect from handling hazardous materials during Project construction would not represent a cumulatively considerable impact.

The analysis in Section 3.8 demonstrates that operation of the proposed Project would not substantially increase the probable frequency and/or severity of consequences to people from exposure to health hazards and would not result in a significant impact under CEQA or NEPA. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact on the probable frequency and severity of consequences to people under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to risks during construction. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.8.4 Cumulative Impact RISK-3: The proposed Project would not result in a cumulatively considerable interference with an existing emergency response or evacuation plan or contribute to increase the risk of injury or death– No Impact

Cumulative Impact RISK-3 represents the potential of the proposed Project along with other cumulative projects to substantially interfere with an existing emergency response or evacuation plan, thereby increasing risk of injury or death.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Virtually all of the proposed cumulative projects that would have any impact on emergency response or evacuation plans would be subject to approval by the LAHD and 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. Consequently, the related projects would not result in significant cumulative impacts related to emergency response or evacuation plans under CEQA and NEPA.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would optimize terminal operations by improving the existing terminal, extending the existing wharf to add a new berth, adding new cranes, and expanding existing container terminal to accommodate modern container terminal ships, and implementing transportation infrastructure improvements.

Proposed Project construction would occur primarily on-site or within the immediate vicinity of the terminal's gates, and is not expected to interfere with emergency responses or evacuation plans. Construction and demolition activities would be subject to emergency response and evacuation systems implemented by LAFD. In addition, the contractor would coordinate with the agencies responsible for the Emergency response and evacuation planning: the LAPD, LAFD, Port Police, and USCG. As such, emergency access to these sites would not be adversely impacted during construction/demolition.

Proposed Project operations would also be subject to emergency response and evacuation systems implemented by the LAFD, which would review all plans to ensure that adequate access in the proposed Project vicinity is maintained. The proposed terminal operations would not interfere with any existing contingency plans, because the terminal improvements and related terminal operations would be confined to the Project site. The existing oil spill contingency and emergency response plans for the proposed Project site would be revised to incorporate proposed facility and operation changes. The proposed Project site would be secured, with access allowed only to authorized personnel. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to emergency response and evacuation plans under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to an increase in spill probabilities. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

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

4.2.8.5 Cumulative Impact RISK-4: The proposed Project would comply with applicable regulations and policies guiding development within the Port – No Impact

Cumulative Impact RISK-4 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 past, present, and foreseeable future projects would not result in a significant cumulative impact under CEQA or NEPA.

Contribution of the Proposed Project (Prior to Mitigation)

All projects within the Port, including the proposed Project, are required to comply with applicable development regulations and policies. The LAHD has implemented various plans and programs to ensure compliance with these regulations, which must be adhered to during construction and terminal operation. Accordingly, proposed Project construction/demolition would be completed using standard BMPs and in accordance with LAHD plans and programs, LAFD regulations, Los Angeles Municipal Code requirements, and applicable hazardous waste laws and regulations. Operations at the

proposed Project site would not conflict with RMP guidelines. Proposed Project plans and specifications would be reviewed by the LAFD for conformance to the City of Los Angeles Fire Code, and operation of the proposed Project would be required to comply with all existing applicable hazardous waste laws and regulations. Therefore, the proposed Project would have no significant impact related to compliance with applicable regulations and policies guiding development within the Port. As such, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to an increase in spill probabilities. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

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

4.2.8.6 Cumulative Impact RISK-5: The Proposed Project would not result in a cumulatively considerable increase in the probability of tsunami-induced flooding and seismic events resulting in fuel releases from ships or hazardous substances releases from containers, which in turn would result in risks to persons and/or the environment – Less than Cumulatively Considerable

Cumulative Impact RISK-5 represents the potential of the proposed Project along with other cumulative projects to result in an accidental spill as a result of a tsunami or other seismic event.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

As discussed in Section 3.5, there is the potential for a large tsunami to affect the Port. A large tsunami could lead to a fuel spill if a moored vessel is present. Although crude oil tankers would not moor at Berths 302-306, each ship contains large quantities of fuel oil (up to 5,000 barrels). While in transit, the hazards posed to tankers are insignificant, and in most cases, imperceptible. However, while docked, a tsunami striking the Port could cause significant ship movement and even a hull breach if the ship is pushed against the wharf.

The Port is subject to diurnal tides, meaning two high tides and two low tides during a 24-hour day. The average of the lowest water level during low tide periods each day is typically set as a benchmark of 0 ft and is defined as Mean Lower Low Water (MLLW). For purposes of this discussion, all proposed Project structures and land surfaces are expressed as height above (or below) MLLW. The MSL in the Port is +2.8 ft above

MLLW (NOAA, 2011). This height reflects the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch (19 years) and, therefore, reflects the mean of both high and low tides in the Port. The recently developed Port Complex model described in Section 3.5.2 predicts tsunami wave heights with respect to msl, rather than MLLW and, therefore, can be considered a reasonable average condition under which a tsunami might occur. The Port MSL of +2.8 ft must be considered in comparing projected tsunami run-up (i.e., amount of wharf overtopping and flooding) to proposed wharf height and topographic elevations, which are measured with respect to MLLW.

A reasonably foreseeable scenario for generation of a tsunami or seiche in the San Pedro Bay Ports includes the recently developed Port Complex model, which predicts tsunami wave heights at various locations around the Port Complex under both earthquake and landslide scenarios.

The most likely worst-case tsunami scenario was based partially on a magnitude 7.6 earthquake on the offshore Santa 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, because only about 10 percent of earthquakes worldwide result in a tsunami. In addition, available evidence indicates that tsunamigenic 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). As noted above, the probability of the worst-case combination of a large tsunami and extremely high tides would be less than once in a 100,000-year period.

Containers of hazardous substances on ships or on berths could similarly be damaged as a result of a large tsunami. Such damage could result in releases of both hazardous and non-hazardous cargo to the environment, adversely affecting persons and/or the marine waters. However, containers carrying hazardous cargo would not necessarily release their contents in the event of a large tsunami. The DOT regulations (49 CFR Parts 172 through 180) covering hazardous material packaging and transportation would minimize potential release volumes because packages must meet minimum integrity specifications and size limitations.

The owner or operators of tanker vessels are required to have an approved Tank Vessel Response Plan on board and a qualified individual in 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 Port are sufficient to isolate spills with containment booms and recover the maximum possible spill from an oil tanker.

Designing new facilities based on existing building codes might not prevent substantial damage to structures from coastal flooding as a result of tsunamis or seiches. Impacts due to seismically induced tsunamis and seiches are typical for the entire California coastline, however, the probability of a major tsunami occurring is classified as "improbable" (less than once every 10,000 years), as discussed in Section 3.5. The

potential consequence of such an event is classified as "moderate", resulting in a Risk Code of 4, which is "acceptable". Although the related projects would result in additional Port facilities adjacent to or near Harbor waters that could be subject to a tsunami, there is a low probability and the risks are considered acceptable, and thus a significant cumulative impact would not occur under CEQA or NEPA.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.8.4.3.1, the proposed Project would also have a Risk Code of 4 due to the same major tsunami probability of less than 1 every 10,000 years in conjunction with a "moderate" potential consequence. The Tsunami Hazard Assessment (Moffatt and Nichol, 2007) updated and evaluated the potential for a tsunami to overtop wharves in various areas throughout the Port Complex. The results of this analysis indicate that a worst-case tsunami wave height in Project vicinity would be about 1.0 to 4.7 ft, which would be well below the minimum wharf elevation in the Pier 300 Channel. However, because the proposed Project site elevation is located within 10 to 15 ft above MLLW, there is a substantial risk of coastal flooding due to tsunamis and seiches, which in turn, could result in accidental spills of petroleum products or hazardous substances.

As the volume of spilled fuel that could occur as a result of tsunami or other seismic event induced spilling is also expected to be relatively low because all fuel storage containers at the proposed Project site would be quite small in comparison to the significance criteria volumes. Given that single-hulled vessels would not be used, there is a minimal chance of a substantial fuel spill. While there would be fuel-containing equipment present during operation, most equipment is equipped with watertight tanks, with the most likely scenario being the infiltration of water into the tank and fuel combustion chambers and very little fuel spilled. Thus, the volume spilled in the event of a tsunami or other seismic risk would likely be less than 10,000 gallons, which is considered "slight".

Because the project-level probability of an accidental spill would be the same as for the related projects, the proposed Project would not cause an increase in the probability of an accidental spill. As a result, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact, under CEQA or NEPA, related to increased spill probabilities.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to an increase in spill probabilities. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.8.7 Cumulative Impact RISK-6: The proposed Project would not result in a cumulatively considerable or a measurable increase in the probability of a terrorist action – Less than Cumulatively Considerable

Cumulative Impact RISK-6 represents the risk that a potential terrorist action would result in adverse consequences to areas near the proposed Project site.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Potential impacts due to terrorism are characteristic of the entire Los Angeles and Long Beach metropolitan area. Terrorism risk can be based on simple population-based metrics (i.e., population density) or event-based models (i.e., specific attack scenarios). Willis et al. (2005) evaluated the relative merits and deficiencies of these two approaches to estimating terrorism risk, and outlined hybrid approaches of these methods. Overall, the results of the terrorism risk analysis characterized the Los Angeles/Long Beach metropolitan area as one of the highest-risk regions in the country. Using population metrics, the Los Angeles/Long Beach region was ranked either first or second in the country, while the event-based model dropped the Los Angeles/Long Beach region to the 5th ranked metropolitan area, mainly due to the relative lack of attractive, high-profile targets (i.e., national landmarks or high profile, densely populated buildings). Using various approaches and metrics, the Los Angeles/Long Beach region represented between 4 and 11 percent of the U.S. terrorism risk.

Historical experience provides little guidance in estimating the probability of a terrorist action 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 action 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 (i.e., major sporting events, mass transit, skyscrapers, etc.), or critical infrastructure facilities. Currently, the United States has more than 500 chemical facilities operating near large populations. U.S. waterways also transport more than 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.

The Port of Los Angeles is one of the world's largest trade gateways, and the economic contributions to the regional and national economy are substantial. As discussed in Chapter 1, cumulative container throughput continues to grow in importance on a national level, the Port Complex already represents a substantial fraction of national container terminal throughput, and by default, an attractive economic terrorist target. Given the relative importance of the Port Complex under baseline conditions, cumulative

growth would not be expected to materially change the relative importance as a potential terrorist target.

Intermodal cargo containers could also be used to transport a harmful device into the Port Complex intended to cause harm to the Ports. This could include a weapon of mass destruction or a conventional explosive. The likelihood of such an attack would be based on the desire to cause harm to the port, with potential increases in cumulative Port Complex infrastructure or throughput having no measurable effect on the probability of an attack. Additionally, the use of cargo containers to smuggle weapons of mass destruction through the Port Complex intended to harm another location such as a highly populated and/or economically important region is another possible use of a container by a terrorist organization. The consequences associated with the smuggling of a terrorist weapon would depend, in part, on the nature of the device or material, but could be substantial in terms of impacts to the environment and public health and safety, especially if it were a mass destruction device. However, the consequences of a WMD attack would not be affected by cumulative growth at the Port Complex; rather, the consequences would depend on the composition and type of device or material, how a terrorist intends to use the device, and to what aim he or she intends to accomplish, the time of day, the surrounding population or property density, or any number of other non-Port throughput-related factors. To reiterate, the likelihood of a terrorist event would not be affected by cumulative infrastructure growth or throughput increases at the Port Complex, but would be based on the outcome that the terrorists desired. 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 (i.e., land-based ports of entry, cross border tunnels, and illegal vessel transportation).

Because there are no measurable and/or definitive links between container throughput and the consequences of a terrorist action, and because many factors other than container throughput would be the likely or primary motivations that would dictate the probability and consequences of a terrorist action, the throughput increases at the Port associated with the related projects would not result in a significant cumulative impact related an increased probability of a terrorist action.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.8.4.3.1, the proposed Project would not result in a significant Project-level impact related to an increase in the probability of a terrorist action, because the likelihood of such an event would not be based on Project-related throughput, but rather would be based on the intent of the terrorist and his/her desired outcome. Based on this, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to an increase in the probability of a terrorist action. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.9 Land Use

4.2.9.1 Scope of Analysis

Because the proposed Project has the capacity to affect the environment within the Port and surrounding communities, the region of analysis for cumulative land use impacts includes the Port and extends to adjacent areas, including the communities of Wilmington and San Pedro. The Wilmington and San Pedro communities would be assessed in terms of their compatibility with the already existing Port industrial uses.

4.2.9.2 Cumulative Impact LU-1: The proposed Project would be consistent with the adopted land use/density designation in the Community Plan, redevelopment plan, or specific plan for the site – No Impact

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 build-out within the proposed Project area.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past actions within the proposed Project vicinity have been subject to the land use/density designations stipulated in the Port Master Plan (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 past development projects have been approved pursuant to the adopted PMP, ensuring compliance with the coastal zone management program Port of Los Angeles (POLA, 1979). The City-approved Port of Los Angeles Plan and other Community Plans are the governing documents that regulate the continued development and operation of the Port. Parcel zoning designations control the land use types and densities that can be constructed on a given parcel. Over the years, the Port has developed consistent with the PMP, the Port of Los Angeles Plan, and site zoning, thereby ensuring consistency with land use/density designations to minimize impacts on surrounding areas. Similarly, existing facilities within with the proposed Project vicinity have been modified as necessary to ensure proposed land use/density designations are consistent with their respective land use plan and site zoning designations.

Construction and operation associated with past, present, and reasonably foreseeable future projects, including the TraPac Marine Terminal [#1], San Pedro Waterfront Project [#2], the Channel Deepening Project [#3], the Evergreen Container Terminal [#5], the Plains All American Oil Marine Terminal [#10], the Ultramar Lease Renewal Project [#11], China Shipping Development Project [#14], the Wilmington Waterfront Development Project [#21], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and the Pier 500 Container Terminal Development [#32] have been, and

would continue to be modified, during the project review process to ensure consistency with the Port of Los Angeles Plan (or other Community Plan) and/or PMP land use/density designations, and with site zoning designations. Because of this, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts related to land use designations inconsistencies.

Contribution of the Proposed Project (Prior to Mitigation)

As stated in Section 3.9.4.3.1 (Impact LU-1), the proposed Project would be consistent with site zoning and land use designations of applicable plans, including the [Q] M3-1 zone designation for the Project site, as well as the designated uses in applicable land use plans (Port of Los Angeles Plan and the PMP). The proposed Project would have no adverse effects on land use plans or zoning designation consistency and, thus, would not make a cumulatively considerable contribution to a significant cumulative land use impact under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to land use plans or zoning designation consistency. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.9.3 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 – No Impact

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 goals and policies delineated in land use plans that govern buildout within the proposed Project area.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past actions within the proposed Project vicinity have been subject to the goals and objectives delineated in the Port of Los Angeles Plan, the PMP, and the respective land use plan. The City-approved Port of Los Angeles Plan is the governing document that regulates the continued development and operation of the Port and is consistent with the PMP. Over the years, the Port 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 as coordinating development of the Port and adjacent communities as stipulated in the Wilmington-

Harbor City Community Plan and the San Pedro Community Plan. Similarly, present projects within the proposed Project vicinity have been developed to ensure proposed developments are consistent with Port of Los Angeles Plan, PMP, and/or applicable land use plan policies.

Construction and operation associated with past, present, and reasonably foreseeable future projects, including the TraPac Marine Terminal [#1], the San Pedro Waterfront Project [#2], the Channel Deepening Project [#3], the Evergreen Container Terminal [#5], the Plains All American Oil Marine Terminal, [#10], the Ultramar Lease Renewal Project [#11], China Shipping Development Project [#14], the Wilmington Waterfront Development Project [#21], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and the Pier 500 Container Terminal Development [#32], have been, or will continue to be, modified during the project review process to ensure consistency with the Port of Los Angeles Plan, the PMP, and applicable land use plans and policies. Because of this, past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact related to plan inconsistencies.

Contribution of the Proposed Project (Prior to Mitigation)

As stated in Section 3.9.4.3.1 (Impact LU-2), the proposed Project would be consistent with the adopted objectives and policies identified in the General Plan and adopted environmental goals or policies contained in other applicable plans. Improvements to and expansion of the existing APL Terminal would be consistent the Port of Los Angeles Plan Objectives 1 and 4, which give priority to water-dependent developments that are necessary to accommodate the needs of foreign and domestic water-borne commerce. Additionally, the proposed Project would be consistent with the uses identified in the PMP, the Coastal Act, SCAG policies including the RCP and RTP, the CAAP, and Port-related goals in the San Pedro and Wilmington-Harbor City community plans (through implementation of applicable portions of the Sustainable Construction Guidelines and the Water Resources Action Plan [WRAP]). The proposed Project would be consistent with adopted environmental goals and policies contained in applicable plans, and thus, would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to land use plan consistency. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.9.4 Cumulative Impact LU-3: The proposed Project would not result in a cumulatively considerable affect on the types and/or extent of existing land uses in the Project area – Less than Cumulatively Considerable

Cumulative Impact LU-3 represents the potential of the proposed Project along with other related projects to cumulatively effect the types and/or extent of existing land uses in the Project area.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past actions within the proposed Project vicinity have been subject to the goals and objectives delineated in the Port Plan and the PMP, the General Plan for the City, and site zoning. The City-approved Port Plan is the City's governing document that regulates the continued development and operation of the Port. Parcel zoning designations control the land use types and densities that can be constructed on a given parcel. Over the years, the Port has developed consistent with the PMP, the Port Plan, and site zoning, thereby ensuring consistency with land use/density designations established to minimize potential land use incompatibilities on surrounding areas. Similarly, existing facilities within the proposed Project vicinity have been modified as necessary to ensure proposed land use/density designations are consistent with their respective land use plan and site zoning designations. Because maintaining consistency with plans is an inherent outcome of the permitting process, past, present, and reasonably foreseeable future projects would not adversely impact the types and/or extent of existing land uses in the Project area.

Consequently, past, present, and reasonably foreseeable future projects would not cause substantial changes to the types or extent of land uses in the geographical scope, and significant cumulative impacts would not occur.

Contribution of the Proposed Project (Prior to Mitigation)

As stated in Section 3.9.4.3.1 (Impact LU-3), land use effects of the proposed Project would be confined to the Project site on Pier 300 and would consist of land uses and operations that are similar to those that currently exist on and around Berths 302-305 and other container terminals on Terminal Island. The reuse or disposal of dredged material would take place off-site. This reuse or disposal would be consistent with the uses (or permitted uses) on the site(s) where the reuse or disposal would occur. Because the proposed Project would not affect the types or intensity of off-site land uses, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative land use impact under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA on the types or intensity of off-site land uses. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.9.5 Cumulative Impact LU-4: The proposed Project would not result in a cumulatively considerable secondary impact to surrounding land uses - Less than Cumulatively Considerable

Cumulative Impact LU-4 represents the potential of the proposed Project along with other cumulative projects to result in secondary impacts on surrounding land uses. Specifically, the secondary impacts of concern include effects on residential property values in the cumulative geographic scope related to blighted conditions in communities adjacent to the Port and activities at the Port or substantial unanticipated growth.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

While proximity of the Port may historically have led to lower residential property values in communities nearest the Port compared to more affluent communities in southern Los Angeles County, such as Redondo Beach and Rancho Palos Verdes, residential property values in communities near the Port have grown over the last decade and do not exhibit depreciated or stagnant values. The recent housing market slump has led to decreased property values throughout California, a trend mirrored in the study area and the nearby communities. Thus, the incremental development of past and present projects has not contributed to decreased property values.

Additionally, the LAHD is in the process of implementing a number of actions designed to enhance community quality of life and to provide public access to visually stimulating and historically relevant developments within and adjacent to the Port. This includes the CAAP program and other policies and programs aimed at improving environmental quality in the surrounding communities, and the San Pedro and Wilmington waterfront development projects. Objectives of the San Pedro Waterfront Project and Wilmington Waterfront Project include increasing public access and pedestrian connectivity to the waterfront; increasing visitor-serving commercial and recreational development; and enhancing vehicular access to, from, and within the waterfront. The Wilmington Waterfront Project also includes specific objectives focused on improving the local economy and economic sustainability of the community. The environmental programs and waterfront development projects are anticipated to improve the quality of life and local economy.

Additionally, construction and operation of waterfront development projects and other projects associated with present and reasonably foreseeable future projects, such as the TraPac Marine Terminal [#1], San Pedro Waterfront Project [#2], the Channel Deepening Project [#3], the Evergreen Terminal [#5], the Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], Pasha Marine Terminal [#15], YTI Container Terminal [#23], the Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32],would result in increased jobs. However, it is likely that the new employees would come from the local Los Angeles area, and thus,

would not contribute to substantial increase or decrease in property values within surrounding communities that could in turn result in physical land use changes. As a consequence, past, present, and reasonably foreseeable future projects would not result in significant cumulative secondary land use impacts, including substantial unanticipated growth or blight.

Contribution of the Proposed Project (Prior to Mitigation)

As stated in Section 3.9.4.3.1 (Impact LU-4), the proposed Project would not adversely influence residential property values in the areas immediately adjacent to the Port. It would increase the number of direct, indirect, and induced jobs and income in the region and would result in other economic benefits. However, it would not induce substantial unanticipated growth because most new terminal employees would come from local sources in the Los Angeles area, largely the existing International Longshore and Warehouse Union (ILWU) workforce. As such, the proposed Project would not result in secondary land use impacts, including substantial unanticipated growth or blight. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative secondary impact on land use under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to secondary impacts on land use. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.10 Marine Transportation

4.2.10.1 Scope of Analysis

The proposed Project would allow a greater number of container vessels to call at the Port, including larger vessels that could be accommodated at the new berth. Like all commercial vessels, these ships would follow designated traffic channels (also used by other vessels) when approaching and leaving the Harbor. Similarly, dredging and in-water/over-water construction activities associated with the proposed Project would occur within the existing federal channel limits (i.e., channel and berthing areas) at the Port. Because 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 Port and Pier 300 Channel (see Figure 2-1), and the berths themselves.

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

4.2.10.2 Cumulative Impact VT-1: Proposed Project construction- and operation-related marine traffic would not result in a cumulatively considerable interference with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, Harbor, or Precautionary Area – 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 Main Channel, the Pier 300 Channel areas, and/or precautionary areas. This includes construction and operation phase impacts.

As reported in Section 3.10.2.1, vessel traffic levels are highly regulated by the USCG Captain of the Port (COTP) and the Marine Exchange of Southern California via the VTS to ensure the total number of vessels transiting the Port does not exceed the design capacity of the federal channel limits. Mariners are required to report their position to the COTP and the VTS prior to transiting through the Port; the VTS monitors the positions of all inbound/outbound vessels within the Precautionary Area and the approach corridor traffic lanes. In the event of scheduling conflicts and/or vessel occupancy within the Port is operating at capacity, vessels are required to anchor at the anchorages outside the Federal Breakwater until mariners receive COTP authorization to initiate transit into the Port.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

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

Present and reasonably foreseeable Port projects, including the other terminal projects, could result in marine vessel safety impacts if they introduce construction equipment to the Main Channel, Harbor, and Precautionary Area, and/or interfere with USCG designated vessel traffic lanes. In-water/over-water construction activities associated with the marine-based related projects listed in Table 4-1, including the TraPac Marine Terminal [#1], San Pedro Waterfront Project [#2], Channel Deepening Project [#3], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], the Ultramar Lease Renewal Project [#11], China Shipping Development Project [#14], Pasha Marine Terminal [#15], ,YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32],would introduce construction equipment into the Main Channel.

Most of the related projects involving in-water/over-water construction would be located towards the inner harbor and would not affect traffic within the Pier 300 Channel. Additionally, the Port utilizes standard safety precautions in piloting these vessels

through Harbor waters, and standard measures including compliance with LAHD standards for construction and dredging safety, including the requirement to comply with USCG navigation rules and providing the USCG with a dredging schedule in advance of construction. Compliance with standard safety precautions and requirements would keep construction and operational vessels from blocking navigation channels or creating circumstances that could result in substantial navigation hazards. Consequently, the related projects would not result in significant cumulative impacts related to navigation hazards.

Contribution of the Proposed Project (Prior to Mitigation)

The construction phase of the proposed Project would involve the use of construction vessels and equipment to conduct dredging, crane installation, and wharf construction activities within the Pier 300 Channel. In-water/over-water construction activities are routinely conducted in the Port and contractors performing in-water/over-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts and Department of the Army permits, including navigation hazard markings. Because standard safety precautions would be utilized by all contractors, the presence of a derrick/support boat would not substantially affect marine vessel safety in the main channels and connected basin areas. Accordingly, proposed in-water construction equipment would not interfere with existing operations at Pier 300 berths, including APL Terminal and the APM Terminal operations at Berths 401-406.

In the operation phase, the cumulative increase in Port cargo volume (i.e., containers and TEUs) from the proposed Project in combination with reasonably foreseeable future Port development of the related projects listed in Table 4-1, including the TraPac Marine Terminal Project [#1], the Evergreen Container Terminal [#5], the Plains All American Oil Marine Terminal [#10], the Ultramar Lease Renewal Project [#11], the China Shipping Development Project [#14], the Pasha Marine Terminal [#15], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and the Pier 500 Container Terminal Development [#32], would result in additional vessel traffic in the Precautionary area, Outer Harbor, and Main Channel. Consequently, the proposed Project along with future Port development would increase the risk of in-water vessel traffic hazards. However, according to the USCG vessels accidents database, the Harbor area has one of the lowest accident rates among all U.S. ports, with a 0.0038 percent probability of a vessel experiencing an ACG during a single transit, as compared to the average 0.025 percent ACG probability for all U.S. ports (U.S. Naval Academy, 1999). The proposed Project operations would result in a 143 vessel calls per year (approximately 12 vessel calls per month) at Berths 302-306, project operations would result in a 6 percent increase over the number of vessels that called at the Port Complex in 2008.

Proposed Project improvements would also improve overall conditions in the Harbor by extending the existing wharf by 1,250 lf and creating the new Berth 306, which would be sized to accommodate modern, deep-draft vessels with greater cargo capacity. The new deep-draft berth is expected to improve shipping and Port operations by helping to accommodate increased efficiencies associated with larger ship capacities to meet future port throughput demands rather than meeting that demand with a higher number of smaller vessels. The dredging along Berth 306 would help ensure that the larger, deep-draft ships would be able to navigate and berth safely.

Given the continued use of standard practices, including adherence to Harbor Safety Plan (HSP) speed limit regulations, adherence to limited-visibility guidelines, Vessel Traffic Service (VTS) monitoring requirements (i.e., issuance of security calls by dredge operators on the VTS prior to commencement of dredge operations and transit to disposal sites), and Port tariffs requiring vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board to use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, the projected increase in annual ship calls in the Pier 300 Channel at Berths 302-306 would not significantly decrease the margin of safety for marine vessels within the cumulative area impacted by the proposed Project. Scheduling of ship calls from outside the breakwaters to Berths 302-306 would continue to be authorized by the COTP to ensure that the projected increase in vessel traffic would not result in changes to routing or vessel safety procedures. Continued implementation of COTP uniform procedures including advanced notification to vessel operators, vessel traffic managers, and Port pilots to identify the location of dredges, derrick barges, and any associated operational procedures or restrictions (i.e., one-way traffic), would ensure safe transit of vessels operating within and to and from the proposed Project area. Therefore, neither construction nor operation of the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact relative to vessel traffic or navigational safety under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to vessel traffic or navigational safety. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.11 Noise

4.2.11.1 Scope of Analysis

For the purposes of cumulative noise impact analysis, the area of influence includes those sensitive receptors closest to the proposed Project site, which might potentially be affected by construction noise or noise associated with traffic generated by the proposed Project or an alternative and sensitive receptors along major transportation corridors serving the Project area. The nearest residential area outside of the Port is located more than one mile to the west, across the Main Channel of the Los Angeles Harbor. There are also Port-related residential uses at Reservation Point and in the Cabrillo Beach area, along with live-a-board boats in Fish Harbor and the Cerritos Channel just west of the Terminal Island Freeway (State Route 47) Bridge. When considering the cumulative impacts resulting from the interaction of the noise due to the proposed 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. 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. 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.

This analysis assesses the potential of the proposed Project, along with other cumulative projects, to cause a substantial increase in noise as a result of project construction activities and operational activities (including on-site operations, increased traffic noise, and increased railroad noise).

4.2.11.2 Cumulative Impact NOI-1: Construction activities lasting more than 10 days in a 3-month period would result in a cumulatively considerable exceedance in existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use – 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 assessed if construction activities necessary to implement the proposed Project, in combination with one or more of the related and cumulative projects, would cause a substantial short-term increase in noise at a sensitive receptor, and the project contribution would be considered cumulatively considerable. A substantial increase is defined to be a 5 dBA increase during any daytime hour when construction activities would occur (Section 3.11.3.1). Thus, if overlapping noise levels from the concurrent construction of related projects exceeds 5 dBA at a sensitive receiver, a cumulatively considerable impact would result. During construction of the automated backlands infrastructure, should it occur, the level of construction activity would be less intense (i.e, would not involve pile driving or occur concurrently with other on-site construction activities) as compared to the construction levels for Phase 1 and 2 construction of the proposed Project, and thus, would not be anticipated to make a cumulatively considerable contribution to a significant cumulative impact.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The list of related and cumulative projects was reviewed to determine if construction activities associated with any of these projects could, in combination with the proposed Project, cause a cumulative construction noise impact on sensitive receptors that would have a temporary increase in ambient noise levels during construction of the proposed Project (Fish Harbor, Reservation Point, and Cabrillo Beach).

In the vicinity of Reservation Point and Fish Harbor, projects that could occur concurrently with the proposed Project and would result in potential noise impacts on sensitive receptors include the San Pedro Waterfront Project [#2], Evergreen Container Terminal [#5], Canners Steam Remediation [#6], Plains All American Oil Marine Terminal [#10], Westway Demolition [#12], Pan-Pacific Fisheries Cannery Buildings

Demolition Project [#18], Southwest Marine Demolition Project [#25], Al Larson Boat Shop Improvement Project [#29], the City Dock No. 1 Marine Research Center [#30], and Pier 500 Container Terminal Development [#32].

In the vicinity of Cabrillo Beach, projects that could occur concurrently with the proposed Project and would result in potential noise impacts on sensitive receptors include Cabrillo Way Marina, Phase II [#4], Plains All American Oil Marine Terminal [#10], Inner Cabrillo Beach Water Quality Improvement Project [#27], and Cabrillo Beach Pump Project [#28], and Pier 500 Container Terminal Development [#32].

It is likely that construction activities and associated noise levels of related projects would be similar to those expected from the equipment necessary to construct the project elements. Additionally, several projects, including the San Pedro Waterfront Project [#2], Plains All American Project [#10], Al Larson Boat Shop Improvement Project [#29], and Pier 500 Container Terminal Development [#32], and include pile driving. It also is likely that the other related projects would result in significant cumulative noise impacts at some sensitive locations due to concurrent construction.

Contribution of the Proposed Project (Prior to Mitigation)

Pile driving has been identified as having a significant impact under NEPA and CEQA at Reservation Point. Therefore, the project would have a cumulatively considerable noise impact when combined with any other project that would affect the same receptor locations and occur concurrently with the proposed Project. In addition, the proposed Project would have a greater than 1 dBA temporary increase in ambient noise levels but would not exceed the City's noise impact thresholds at Reservation Point during general construction activities, Fish Harbor during pile driving and general construction activities, and Cabrillo Beach during pile driving activities. While proposed Project individually would not have significant adverse noise impacts, should construction of other projects in the vicinity occur concurrently, the proposed Project could make a cumulatively considerable contribution to a significant cumulative impact at Reservation Point (general construction activities) and Fish Harbor. Given that Cabrillo Beach is located over two miles from the proposed Project site and there is no clear line of sight, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative noise impact at Cabrillo Beach.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 5 through 6 would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to construction noise. Alternatives 3 and 4 would not involve pile driving and thus not result in significant construction noise impacts. However, ambient noise levels at Reservation Point and Fish Harbor would temporarily increase during construction activities and thus Alternatives 3 and 4 could also contribute to cumulatively considerable noise impacts at Reservation Point and Fish Harbor. Thus, Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to construction noise. Alternatives 1 and 2 would involve minimal construction and thus would not contribute to cumulatively considerable noise impacts at Reservation Point and Fish Harbor under CEQA. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation measure **MM NOI-1,** which requires the contractor to use a pile driving system, such as an IHC Hydrohammer SC Series or equivalent, would reduce the maximum noise levels during wharf construction. Mitigation measure **MM NOI-2**, which would require installation of temporary noise attenuation barriers suitable for pile driving equipment as needed, would further reduce construction noise. Even with implementation of mitigation measures **MM NOI-1** and **MM NOI-2**, the proposed Project and Alternatives 3 through 6 would make a cumulatively considerable contribution to a significant cumulative impact related to noise.

4.2.11.3 Cumulative Impact NOI-2: Noise levels from cumulative construction activities would not result in a cumulatively considerable exceedance in 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 – Less than Cumulatively Considerable

Cumulative Impact NOI-2 represents the potential of nighttime construction activities of the proposed Project along with other related 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 assessed if nighttime construction activities necessary to implement the proposed Project, in combination with one or more of the related and cumulative projects, would cause a substantial short-term increase in noise at a sensitive receptor, and the project contribution would be considered cumulatively considerable. A substantial increase is defined to be a 5 dBA increase during any nighttime hour and anytime on Sunday when construction activities would occur (Section 3.11.3.1). Thus, if overlapping noise levels from the concurrent construction of related projects exceeds 5 dBA at a sensitive receiver, a cumulatively considerable impact would result.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The list of related and cumulative projects was reviewed to determine if construction activities associated with any of these projects could, in combination with the proposed Project, cause cumulative nighttime construction noise impact on sensitive receptors (Fish Harbor, Reservation Point, and Cabrillo Beach) that would have a temporary increase in ambient noise levels during construction of the proposed Project.

In the vicinity of Reservation Point and Fish Harbor, the only project that may involve nighttime construction activities and could occur concurrently with the proposed Project is the Channel Deepening Project [#3]. Nighttime activities would involve 24-hour trench excavations at several locations in the vicinity of sensitive receptors affected by the proposed Project: Berth 243-245 in the vicinity of Reservation Point and Fish Harbor, and the Cabrillo Shallow Water Habitat Site in the vicinity of Cabrillo Beach. The SEIS/SEIR for the Channel Deepening Project determined that the nighttime activities

would not exceed the existing ambient noise levels at the nearest receptor locations (USACE and LAHD, 2000).

Contribution of the Proposed Project (Prior to Mitigation)

Dredging is the proposed Project's only construction activity that would occur during nighttime hours. Berth 306 is located over one mile from the nearest sensitive receptor (liveaboards at the Al Larson Marina in Fish Harbor and Reservation Point), and accordingly, no construction activities would occur within 500 ft of a residential zone 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. Night construction during dredging of Berth 306 would result in average noise levels that exceed the ambient levels at the Fish Harbor liveaboards or Reservation Point; however, the increases would be less than 2 dBA, and thus would not exceed the significance criteria at these locations. Given that the nighttime construction activities associated with the Channel Deeping Project [#3] would not increase ambient noise levels at sensitive receptor locations and the proposed Project would result in a less than 2 dBA increase in ambient noise levels and would occur at a distance of over one mile from the proposed Project site, should nighttime construction occur concurrently, the noise level increase would be less than 5 dBA and thus no cumulative impact would occur. Thus, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact relative to nighttime construction noise.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 5 and 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to nighttime construction noise. Alternatives 3 and 4 would not involve nighttime construction and thus would have no impact. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Cumulative Impact NOI-2 represents the potential of the proposed Project or any of its alternatives along with other cumulative projects to cause a substantial increase in construction noise at night. With the exception of dredging along Berth 306, the proposed Project would follow construction hours in accordance with the City of Los Angeles Noise Ordinance.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project or any of its alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

4.2.11.4 Cumulative Impact NOI-3: The operation of the proposed Project would not result in a cumulatively considerable exceedance of existing ambient noise levels at sensitive receptors – Less than Cumulatively Considerable

Cumulative Impact NOI-3 represents the potential of the proposed Project along with other cumulative projects to cause a substantial permanent increase in ambient noise levels at sensitive receivers within the geographic scope of the project.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

On-site operations at the Port Complex, roadway traffic on the roadway network along major roadways in the study area including I-110 and SR-47, Vincent Thomas Bridge, Harry Bridges Boulevard, and other streets in the Wilmington and San Pedro areas are the dominant sources of community noise at 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, for instance, some of the Port-wide operational plans and programs, would contribute to existing noise sources such as traffic, terminal operations, and neighborhood noise sources, including parks and schools, and therefore significant cumulative noise impacts would occur.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the 'normally unacceptable' or 'clearly unacceptable category,' or otherwise by 5 dBA or greater. Noise increases associated with on-site terminal operations (including traditional or automated operations on the 41-acre backlands), and increase in container shipments to and from the Port via area rail and roadway corridors, along with increased workforce automobile traffic on area roadways would increase noise levels at adjacent noise sensitive uses by less than 2 dBA at Fish Harbor and by 1 dBA or less at other sensitive receptor locations in the vicinity. Therefore, the proposed Project would not make a cumulatively considerable contribution to significant on-site noise impacts at the any of the noise sensitive areas under both CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA related to operational noise levels. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project or any of its alternatives would not contribute a cumulatively considerable impact under CEQA and NEPA.

4.2.12 Recreation

4.2.12.1 Scope of Analysis

Cumulative impacts on recreational areas could result from the combined demand of the proposed Project along with past, present, and future related projects on any of the parks or recreational areas on which the proposed Project may have impacts. The geographic scope depends on the service area of the individual recreational facilities and the extent over which increased demand for services from the proposed Project could affect those services. The region of analysis for cumulative recreational impacts includes public recreational opportunities located within the Port and neighboring communities of Wilmington and San Pedro.

4.2.12.2 Cumulative Impact REC-1: The proposed Project would not result in a substantial or cumulatively considerable physical deterioration or expansion of existing park or recreational facilities, or construction of new facilities – Less than Cumulatively Considerable

Cumulative Impact REC-1 represents the potential of the proposed Project along with other cumulative projects to result in a substantial physical deterioration or expansion of existing park or recreational facilities, or result in construction of new facilities.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and operation of past projects has resulted in 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 the TraPac Marine Terminal [#1], Evergreen Container Terminal [#5], China Shipping Development Project [#14], Pasha Marine Terminal [#15], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32]. These actions represent expansion or intensification of existing industrial or transportation uses and would not induce population growth that could result in cumulatively considerable impacts on the demand for recreation. Projects listed in Table 4-1 would provide new open space and recreation resources for the public including the San Pedro Waterfront Project [#2], Cabrillo Way Marina [#4], Wilmington Waterfront Development Project [#21], Banning Museum and Banning Park [#59], Wilmington Drain Multi-Use and Machado Lake Ecosystem Rehabilitation Project [#88], Kroc Community Center [#117], and Admiral Kidd Park Expansion Site [#133]. The majority of the related projects would either not result in substantial demand for recreational services in the Port or would result in additional available recreational opportunities. As a consequence, past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact to recreational resources.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would not directly or indirectly result in substantial increases in population growth that could increase demand for recreational facilities. Additionally, construction activities and operations would not or remove or otherwise interfere with existing recreational opportunities, such as watercraft activities, within the Port. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact on recreational resources under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA related to recreation. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because neither the proposed Project or any of its alternatives would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA.

4.2.13 Public Services and Utilities

4.2.13.1 Scope of Analysis

Cumulative impacts on utilities and public services can result from the combined demand of the proposed Project along with past, present, and future related projects on any of the utilities and public services on which the proposed Project may have impacts (i.e., police and fire protection, water supply, landfill and wastewater treatment capacities, energy, and recreational resources). 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 could reduce the availability of such services. For the Port Police, this area is localized to the Port Complex and neighboring Harbor Area communities, such as Wilmington. The service area of the LAPD and LAFD encompasses the City; however, the police and fire stations identified as serving the proposed Project serve only the Port and Harbor area. Direct impacts of the proposed Project would be localized to the Port area, and indirect impacts could extend farther within the City. For stormwater, the geographic scope is the proposed Project backlands and immediately adjacent lands within the subwatershed of the Harbor because this represents the drainage area that would be influenced by the proposed Project. The service area of the Bureau of Sanitation (wastewater), Waste Management, Waste Connections, and Browning Ferris Industries (BFI) (solid waste), and LADWP (water and electricity) encompasses the City. The Southern California Gas Company (Gas Company) (natural gas) serves most of central and southern California. However, the analysis region for cumulative utilities impacts focuses on the Port and Harbor District because the infrastructure immediately serving the Project is located within this service area and service subareas of utility providers are sufficiently separated such that increased service demands from the proposed Project would not threaten such provisions in other areas.

4.2.13.2 Cumulative Impact PS-1: The proposed Project would not 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 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 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 circumstances (as described in Section 3.13.2.1.2); 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. Many of the present and reasonably foreseeable related projects described in Table 4-1 involve the relocation of existing facilities within the Port and vicinity or do not otherwise involve expansion of facilities; therefore, these would not result in an increase in public resources. However, several of the related projects would utilize or increase the demand for local police services by increasing the amount of Port land used for operations. Specifically, the TraPac Marine Terminal [#1], Evergreen Container Terminal [#5], Ultramar Lease Renewal Project [#11], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Pier 500 Container Terminal Development [#32], Middle Harbor Terminal Redevelopment [#90], and Piers G & J Redevelopment [#91] would generate increased on-land terminal operations. However, similar to the proposed Project, 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 in conjunction with future development in order to ensure that adequate service would be provided to all future project sites.

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 related projects would not affect USCG response times because these projects would be located within the same operating distance of other facilities within the jurisdiction of Sector Los Angeles and Long Beach; therefore, response times would not increase.

Law enforcement services have developed over time in concert with surrounding development needs, and because of this, past, present, and reasonably foreseeable future related projects would not result in significant cumulative impacts related to the demand for law enforcement.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would not substantially increase the demand for police protection services. The 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. Proposed Project development of 56 additional acres of terminal lands would require less than one (i.e., 0.390) new Port Police officer, which is a negligible contribution to cumulative demands. Additionally, as described in Section 3.13, the proposed Project would not diminish the resources or response times provided by the USCG. Therefore, the proposed Project would have no adverse effects on police protection or USCG services and, thus, would not make a cumulatively considerable

contribution to a significant cumulative impact to law enforcement services under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to law enforcement services. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.13.3 Cumulative Impact PS-2: The proposed Project would not result in a cumulatively considerable need for 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 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. Many of the present and reasonably foreseeable future cumulative related projects described in Table 4-1 involve the relocation of existing facilities within the Port and vicinity or do not otherwise involve expansion of facilities; therefore, these would not result in an increased demand on fire protection. As described under Impact PS-2 in Section 3.13.4.3.1.1, LAFD emergency response times would only be affected by land use changes, removal of fire protection infrastructure, and removal of site access routes; intensification of existing uses would not affect response times. Several of the related projects would increase the demand for local fire protection services by increasing the amount of Port land used for operations. Specifically, the TraPac Marine Terminal [#1], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32], would generate increased on-land terminal operations. However, these related projects 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. 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.

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 reasonably foreseeable future related projects would not result in significant cumulative impacts to fire protection services.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would not substantially increase the demand for fire protection services. As described under Impact PS-2, the proposed Project would be designed and constructed to meet all applicable state and local codes and ordinances to ensure adequate fire protection, which would be subject to LAFD review and approval. In addition, emergency response times would not increase because the existing land use would not change, existing fire lanes and hydrants would not be removed (i.e., they would only be relocated or expanded), and any site access alterations would be reviewed and approved by the LAFD prior to construction. Because fire protection features would be incorporated into the proposed Project site and emergency response times would not increase, the proposed Project would have no adverse effects on fire protection services and would not make a cumulatively considerable contribution to a significant cumulative impact to fire protection services under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to fire protection services. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.13.4 Cumulative Impact PS-3: The proposed Project would not result in a cumulatively considerable increase in utility demands – Less than Cumulatively Considerable

Cumulative Impact PS-3 represents the potential of the proposed Project along with other cumulative projects to create a 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.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The installation of utility lines that service the Port and its uses has occurred and accommodates the construction and operational demand for storm drain, water, and wastewater line infrastructure from past and present projects. Storm drains within the Port area are maintained by the LAHD and have sufficient capacity to accommodate current demands. 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 implements a Capital Improvement Program (CIP) 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 (LADWP, 2010). 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 related projects would not result in a significant cumulative impact on the water-distribution lines.

The TIWRP is currently operating at 58 percent of its capacity of 30 million gpd; therefore, it is able to adequately accommodate current wastewater generations that are a result of past projects. Wastewater in the TIWRP service area is conveyed to TIWRP through the conveyance system that is designed and sized to accommodate TIWRP capacity. Wastewater flows in the TIWRP service area are substantially below the plant's capacity and the capacity of the conveyance system. The City projects that by 2020, wastewater flows in the TIWRP service area will grow to 19.9 mgd (LADPW, 2006); therefore, approximately 10 mgd in daily capacity at TIWRP would remain unused and available for future years (beyond 2020). Wastewater from the related projects would not significantly affect existing or future capacity at TIWRP due to the substantial remaining capacity at TIWRP beyond 2020, which, based on the wastewater flow growth rate projected between 2006 and 2020, is estimated to adequately handle 2027 wastewater flow demands. Similarly, conveyance system capacity would accommodate wastewater flows from the related projects. Consequently, the past, present, and reasonably foreseeable future related projects would not result in a significant cumulative impact to wastewater conveyance capacity.

Many of the related projects identified in Table 4-1 involve new or expanded land uses and/or increased cargo throughput that may result in additional demand on utilities and service systems. These related projects include the TraPac Marine Terminal [#1], the San Pedro Waterfront Project [#2], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], Pasha Marine Terminal Improvements [#15], SCIG [#17], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32]. The related projects would likely require construction or installation of water, wastewater, and storm drains utility systems on their respective sites, and may have to connect with nearby supply utility lines (usually in streets and other public right-of-ways). Because the water, wastewater, and storm drain utility lines have adequate capacity, past, present, and reasonably foreseeable future related projects would not result in significant cumulative impacts to utilities.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would result in minimal increased water demands, wastewater generations, and storm runoff that would not exceed the capacity of existing facilities; however, construction and expansion of on-site water, wastewater, and storm drain lines would be required to support new terminal development. All infrastructure improvements and connections within City streets would comply with the City municipal code and would be performed under permit by the City Bureau of Engineering and/or LADWP. Additionally, the LAHD would prepare a Public Services Relocation Plan as

part of the proposed Project to address the public utilities that would be affected by proposed Project construction. The Plan would ensure that only minor service interruptions occur and that all pipeline installations would occur within existing utility corridors/easements. The proposed Project impact on utility pipeline construction would be less than significant and would not make a cumulatively considerable contribution to a significant cumulative impact on utility lines under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to utility pipeline capacity and utility lines. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.13.5 Cumulative Impact PS-4: The proposed Project would not result in a cumulatively considerable exceedance of water or wastewater requirements, require new wastewater treatment facilities, require new landfills, or exceed existing landfill capacities – Less than Cumulatively Considerable

Cumulative Impact PS-4 represents the potential of the proposed Project 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 generations of wastewater and solid waste. These demands and generations 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. The LADWP, in Chapter 6 of the UWMP, which is hereby incorporated by reference, determined an existing water demand within the DWP service area that can be accommodated by the planned water supply of the same amount (LADWP, 2010). The UWMP projects overall water supply reliability within the DWP service area through 2035; the LADWP forecast specifically includes anticipated demand from projects that are included in the Port's Community Plan or the PMP, including all past, present and reasonably foreseeable future Port related projects (LADWP, 2010). The LADWP expects it will be able meet the demand through 2035 with a combination of existing supplies, planned supplies, and MWD purchases (existing and planned). The California Urban Water Management Planning Act requires water suppliers to develop water management plans every 5 years. Because of this, the

LADWP would continue to project future water demands and supply through new UWMPs every 5 years. The planning horizon for the current UWMP would include the project horizon of 2027. Because the LADWP will continue to plan and provide water supply for its customers, the past, present, and reasonably foreseeable future related projects would not result in a significant cumulative impact on the provision of water.

The TIWRP has a capacity of 30 mgd and currently operates at 58 percent capacity. The City projects that by 2020, wastewater flows in the TIWRP service area will grow from the current 17.5 mgd to 19.9 mgd (LADWP, 2006); therefore, approximately 10 mgd in daily capacity at TIWRP would remain unused and available for future years. Wastewater from the related projects would not significantly affect existing or future capacity at TIWRP due to the substantial remaining capacity at TIWRP beyond 2020, which, based on the growth rate of the wastewater flow projected between 2006 and 2020, is estimated to adequately handle 2027 wastewater flow demands. Consequently, the past, present, and reasonably foreseeable future related projects would not result in a significant cumulative impact to wastewater treatment capacity. The three landfills that serve the City, including the Port area, are the Chiquita Canyon Landfill, the Sunshine Canyon Landfill, and the El Sobrante Landfill. As described in Section 3.13.2.2.4, the Chiquita Canyon Landfill has an allotted daily throughput capacity of 6,000 tons and is expected to operate until 2019 (CIWMD/CalRecycle, 2010a). The Sunshine Canyon Landfill has a daily throughput capacity of 5,500 tons allotted for City use and is expected to accommodate demands until 2037 (CIWMD/CalRecycle, 2010b). The City diverts approximately 600 tons per day to the El Sobrante Landfill, which has a maximum daily permitted capacity of 16,054 tons per day, and its projected closure date is 2045 (CIWMD/CalRecycle, 2010c). Approximately 4,000 tons per day of capacity is reserved for refuse generated in Riverside County (City of Lake Elsinore, 2006).

The 2009 County Integrated Waste Management Plan Annual Report indicates that the landfills currently serving the county as whole do not have adequate capacity to accommodate the solid waste needs over the next 15 year planning period (2010 through 2014) unless additional steps are taken (County of Los Angeles, 2011). However, with actions that are currently being pursued by the county and local jurisdictions, including the City, the county could accommodate the demand through the planning period. Such actions include the development of alternative technologies, expanding existing landfill facilities (including Chiquita Canyon), increasing recycling and waste diversion, and facilitating transfers to out of county landfills, including establishment of a waste-by-rail program to transport waste from Los Angeles to Mesquite Landfill in Imperial County.

According to the Bureau of Sanitation's 2009-2010 Year at a Glance Report, the City achieved a recycling/diversion rate of 65 percent (LADPW, Bureau of Sanitation, 2010). In 2010, the diversion rate of the Port was approximately 96 percent, or 62,323.95 tons (POLA, 2010). Currently, the city has a goal of achieving a diversion rate of 75 percent by 2013, 90 percent by 2025, and an ultimate goal of zero waste by 2030 citywide. (City's website: www.zerowaste.lacity.org). To meet these goals, the City is developing alternative technologies such as Conversion Technologies that involve converting post-recycled residual solid waste into useful products, including fuels, chemicals, marketable products, and other sources of clean energy; combustion technologies; or waste-to-energy facilities.

With the remaining capacity of Sunshine Canyon City/County Landfill, along with the anticipated recycle diversion rates for the area, and planned county and city actions to

meet anticipated demand, solid waste removal and disposal would be adequately provided for past, current, and future projects, and impacts would not be cumulatively significant.

Many of the related projects identified in Table 4-1 involve new or expanded land uses and/or cargo throughput that may result in additional utility demands. These related projects include the TraPac Marine Terminal [#1], the San Pedro Waterfront Project [#2], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], Pasha Marine Terminal Improvements [#15], SCIG [#17], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32]. The number of related projects would increase the demands for water as well as generation of wastewater and solid waste. Based on the above, the past, present, and reasonably foreseeable future related projects would not result in a significant cumulative impact on the provision of water, would not result in a cumulatively considerable impact on wastewater treatment capacity, or solid waste capacity.

Contribution of the Proposed Project

The proposed Project would result in minimal increased water demands, and wastewater and solid waste generations that would not exceed the capacity of existing facilities. The proposed Project would operate at full capacity in 2027 and would generate a maximum water demand of approximately 74.46 afy, which represents 0.0105 percent of the anticipated LADWP water demand (710,800 acre-ft). The proposed Project's estimated water demand is relatively minor because it would not include water-intensive uses, such as manufacturing. The WSA completed for the proposed Project, and approved by the LADWP's Board of Commissioners on April 5, 2011, confirmed that adequate supplies exist to serve the proposed Project, and that the associated increase in demand would not significantly or negatively impact the LADWP's future supply, and, therefore, the proposed Project 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.

Wastewater generation would be 0.066 million gpd, contributing 0.22 percent to the TIWRP daily capacity. Because the TIWRP currently operates at 58 percent capacity, this increase would be considered negligible. The amount of wastewater generated by the proposed Project would not significantly affect existing or future capacity at TIWRP due to the limited operational Project flows and the adequate remaining capacity at TIWRP beyond 2020 (to 2027), as described above. Therefore, impacts to the TIWRP wastewater treatment facility would be less than significant and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to wastewater capacity under CEQA or NEPA.

The proposed Project would generate 129 tons of solid waste per year, which would represent 0.0059 percent of the Chiquita Canyon Landfill permitted daily capacity, 0.006 percent of the Sunshine Canyon Landfill permitted daily capacity, and 0.003 percent of the available permitted El Sobrante Landfill daily capacity. Solid waste generated from Project operations after the closure dates for the Chiquita Canyon Landfill (should the proposed expansion of the landfill not occur) would not represent a significant impact to landfill capacity because Sunshine Canyon Landfill, and the El Sobrante Landfill landfills have adequate capacity to handle this waste. Further, as discussed previously, the city

and county are in the process of implementing actions that would increase land fill disposal options (increasing capacity and increasing out of county transport) while at the same time decrease the percentage of waste disposed in landfills. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative solid waste impact under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to water supply, wastewater capacity, or solid waste. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Although the proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact related to solid waste/landfill capacity under both CEQA and NEPA, standard conditions of approval (SCs) would be implemented to for the proposed Project and Alternatives 4 through 6 to minimize impacts to the solid waste stream as a result of demolition debris.

Through implementation of standard conditions of approval **SC PS-1** (Recycling of Construction Materials), demolition and/or excess construction materials would be separated on-site for reuse/recycling or proper disposal. During grading and construction, separate bins for recycling of construction materials would be provided on-site. Through implementation of **SC PS-2** (Materials with Recycled Content), materials with recycled content would be used in Project construction where feasible. Chippers on-site during construction would be used to further reduce excess wood for landscaping cover. Additionally, Air Quality, Meteorology, and Greenhouse Gases mitigation measure **MM AQ-19** requires that a minimum of 40 percent of all waste generated in all terminal buildings is recycled by 2014 and 60 percent of all waste generated in all terminal buildings is recycled by 2016. This mitigation measure would further reduce solid waste generation. The proposed Project and all alternatives would be consistent with the General Plan or adopted environmental goals or policies contained in other applicable plans.

Implementation of standard conditions of approval **SC PS-1** and **SC PS-2** and mitigation measure **MM AQ-9** would reduce the incremental increase of solid waste associated with the proposed Project and Alternatives 4 through 6. Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

4.2.13.6 Cumulative Impact PS-5: The proposed Project would not contribute to cumulatively considerable impacts on energy demands, supply facilities, and distribution infrastructure – 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 water and generations of wastewater and solid waste. These demands and generations are currently accommodated by existing facilities as provided by the LADWP and Gas Company. Many of the related projects identified in Table 4-1 involve new or expanded land uses and/or cargo throughput that may result in additional demand on electricity and natural gas. These related projects include the TraPac Marine Terminal [#1], the San Pedro Waterfront Project [#2], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], Pasha Marine Terminal Improvements [#15], SCIG [#17], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32]. These related projects would place an additional demand on electricity and natural gas.

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. LADWP is required to meet operational, planning reserve and reliability criteria standards of the Western Electricity Coordinating Council (WECC) and the North American Electric Reliability Corporation (NERC). The LADWP prepared an Power Integrated Resources Plan (Power IRP) in 2000, 2006, and most recently in 2010 to provide a framework to assure that future energy needs of LADWP customers are reliably met at competitive rates while exercising environmental stewardship (LADWP, 2010c). In 2002, SB 1078 implemented a Renewable Portfolio Standard, which established a goal that 20 percent of the energy sold to customers be generated by renewable resources by 2017. The IRP provides objectives and recommendations to reliably supply LADWP customers with power and to meet the 20 percent renewable energy goal by 2010 and work towards meeting the recently enacted state Renewable Energy Standard of 20 percent by 2020.

As of the 2010 Power IRP, LADWP prepared a Load Forecast that predicted that LADWP customers' electricity consumption will increase at an average rate of 1.3 percent per year (100 megawatts per year) over the next 20 years with less growth over the next few years due to the current economic recession. For 2027, LADWP predicts that peak demand will reach 7,445 megawatts.

Through implementation of strategies identified in the IRP, electricity resources and reserves at LADWP will adequately provide electricity for the Port, including past, present, and reasonably foreseeable future projects (LADWP, 2010c). LADWP is

required by the Charter to provide a reliable supply of electricity for its customers and because LADWP is moving toward increasing renewable energy supplies in its resource portfolio, the electricity demand of the past, present, and reasonably foreseeable future projects would not result in the need to construct a new unplanned off-site power station or facility. As a result, past, present, and reasonably foreseeable future related projects would not result in a significant cumulative impact related to the provision of energy under CEQA and NEPA.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would result in minimal increased demands for electricity and natural gas. Electricity demands at the proposed Project site would be related to industrial uses, including crane operations, AMP, facility and backlands operations, site and security lighting, and general site maintenance. However, the increase in electricity demands associated with the Berths 302-306 Container Terminal operations would not exceed existing supplies or result in the need for major new facilities. The proposed Project would provide new energy distribution infrastructure that is required to support proposed Project operations. The new electricity distribution facilities would be designed to support future full automation of the 41-acre backlands. All light fixtures would be replaced during proposed Project construction with more efficient lamps. The proposed Project would incorporate energy conservation measures in compliance with California Building Code CCR Title 24 that requires building energy efficient standards for new construction (including requirements for new buildings, additions, alterations, and, in non-residential buildings, repairs). In addition to complying with California Code, the proposed Project buildings would be constructed to meet, at minimum, LEED silver certification, which would further reduce energy demands and use.

Project operations would generate demands for electricity (in excess of demand under the CEQA baseline) associated with crane operations, facility and backlands operations, site and security lighting, new on-site buildings, general site maintenance, and AMP at Berth 306. Electrical power for Berth 302-305 conventional terminal combined with the automated backlands of Berth 306 would be an approximately 56 percent increase compared to the electricity usage for the conventional terminal of Berths 302-306. However, the electric automated operations could reduce diesel power. With the increase in electrical energy and decline in diesel power usage that would occur with automated backlands at Berth 306 combined with conventional operations at Berth 302-305, the energy demand would be approximately 15 percent higher than would occur under conventional operations for the entire terminal. The LADWP has ample generation capacity to meet the needs of its customers, including the proposed Project, and will continue to do so with proper planning and development of facilities in accordance with the City Charter. 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 proposed Project by itself would not result in the need to construct a new off-site power station or facility.

Additionally, the proposed Project would generate minimal demands for natural gas associated with space and water heating. These site buildings represent a minor component of container terminal operations; the increased demand for natural gas would be accommodated by Gas Company via the existing infrastructure located adjacent to and within the proposed Project site. Therefore, the proposed Project would not make a

cumulatively considerable contribution to a significant cumulative impact related to electricity and natural gas demand, under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to electricity and natural gas demand. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.14 Water Quality, Sediments, and Oceanography

4.2.14.1 Scope of Analysis

The geographic scope of analysis for cumulative impacts to water and sediment quality is the Los Angeles and Long Beach Harbor (Inner and Outer Harbor areas), as these areas represent the receiving waters for all cumulative projects considered. The geographic scope for surface water hydrology and flooding is the proposed Project backlands and immediately adjacent lands within the Harbors subwatershed, because this represents the drainage area that would be influenced by the proposed Project and other cumulative projects.

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project and alternatives in Section 3.14.4. 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 contribute to a cumulatively considerable creation of pollution, contamination, or a nuisance as defined in Section 13050 of the CWC or causing regulatory standards to be violated in Harbor waters – Less than Cumulatively Considerable

Cumulative Impact WQ-1 represents the potential of the proposed Project, along with other cumulative projects, to create pollution, cause nuisances, or violate applicable standards.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Water and sediment quality within the geographic scope are affected by activities within the Harbor (i.e., shipping, wastewater discharges from the TIWRP, inputs from the watershed including aerial deposition of particulate pollutants, and effects from historical

(legacy) inputs to the Harbor). As discussed in Section 3.14, portions of the Los Angeles and Long Beach Harbor 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, the Los Angeles RWQCB amended the Basin Plan (Resolution No. 2004-011) to incorporate a TMDL for bacteria at Los Angeles Harbor, including Inner Cabrillo Beach and the Main Channel (effective 2005). On May 5, 2011, the Los Angeles RWQCB also approved an amendment to the Basin Plan that incorporated a TMDL for Water Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Los Angeles RWQCB and USEPA, 2011). As a result, the Los Angeles RWQCB is considering a proposed resolution that would approve an amendment to the Water Quality Control Plan to incorporate a TMDL for indicator bacteria in the Los Angeles River Watershed. TMDLs will be developed that will specify load allocations from the individual input sources, such that the cumulative loadings to the Harbor would be below levels expected to adversely affect water quality and beneficial uses of the water body. However, these TMDL studies are not planned until the year 2019 (see Section 3.14.2.1). Thus, in the absence of restricted load allocations, the impairments would be expected to persist.

Past, present, and reasonably foreseeable future related projects with in-water and over-water construction components, such as dredging, dike placement, fill, pile driving, and pier upgrades, would result in temporary and localized effects to water quality that would be individually comparable to those associated with proposed Project. Water quality impacts associated within-water/over-water construction projects would not persist for the same reasons discussed in Section 3.14. Therefore, cumulative impacts would occur only if the spatial influences of concurrent projects overlapped. Of the cumulative related projects listed in Table 4-1, only the TraPac Marine Terminal [#1], San Pedro Waterfront [#2], Channel Deepening Project [#3], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32] are located in the vicinity of the proposed Project and involve in-water construction activities. Dredging for the Channel Deepening Project [#3] is set for completion in 2013, whereas Project #1 and #24 are still in the planning phases. A number of projects within the Port of Long Beach, including the Middle Harbor Terminal Redevelopment [#90] and Piers G and J Redevelopment [#91], involve dredging and/or in-water construction. However, as described in Section 3.14, water quality impacts from dredging would be limited, and therefore, the water quality effects of these projects would be limited to the immediate dredging or construction area. As a result, in-water and over-water construction of the present and reasonably foreseeable future projects would not result in a significant cumulative impact to water quality.

Wastewater discharges associated with project operations and runoff from project sites would be regulated by NPDES or stormwater permits. The permits would specify constituent limits and/or mass emission rates that are intended to protect water quality and beneficial uses of receiving waters. In addition, related projects in the Port Complex would be operated in accordance with industrial SWPPPs that require monitoring and compliance with permit conditions. SUSMP requirements would also be implemented via the planning, design, and building permit processes. As standard regulatory compliance measures would apply to the related projects, which would minimize their pollutant contributions to the Harbor, a significant cumulative impact to water quality would not occur.

Development of port facilities associated with the cumulative related projects, including TraPac Marine Terminal [#1], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Pier 500 Container Terminal Development [#32], Middle Harbor Terminal Redevelopment [#90], and Piers G & J Terminal [#91], are expected to contribute to a greater number of ship visits to the Port Complex. Assuming that the potential for accidental spills, illegal vessel discharges, and leaching of contaminants from vessel hulls would increase in proportion to the increased vessel traffic, waste loadings to the Harbor would also be expected to increase. The significance of this increased loading would depend on the volumes and composition of the releases, as well as the timing and effectiveness of spill response actions. The Oil Spill Prevention, Control, and Countermeasure (SPCC) regulations require that the Port have in place measures that help ensure oil spills do not occur, but if they do, that there are protocols in place to contain the spill, and neutralize the potential harmful impacts and thus significant cumulative impacts relative to vessel spills would not occur. However, because these related projects would contribute to pollutant loadings through pollutant leaching from vessel hull coatings, these related projects could result in significant cumulative water quality impacts.

Contribution of the Proposed Project (Prior to Mitigation)

The proposed Project would not result in any direct discharges of wastes or wastewaters to the Harbor. However, stormwater runoff from the onshore portions of the Project area would flow into the Harbor, along with runoff from adjacent areas of the large, primarily urbanized watershed. Stormwater runoff from the backland and wharf areas within the proposed Project site would be governed by a permit, similar to those required for the other cumulative related 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 both CEQA and NEPA baseline conditions, the proposed Project operations would contribute higher volumes of runoff (due to the greater relative impervious surface areas associated with the backlands), but no substantial differences in pollutant discharges due to implementation of regulatory control measures. The inputs from the proposed Project would be negligible compared with those from the entire watershed; the runoff could contain contaminants (i.e., metals) that have been identified as stressors for portions of the Port Complex. In addition, the proposed Project would be operated in accordance with industrial SWPPPs that require monitoring and compliance with permit conditions. SUSMP requirements would also be implemented via the planning, design, and building permit processes. With SWPPP and SUSMP compliance, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative water quality impact relative to both the CEQA and NEPA baselines.

In-water construction activities, such as dredging and wharf construction, would suspend bottom sediments. Dissolved oxygen (DO) levels in Harbor waters could be reduced in the immediate vicinity of dredging and pile removal activities by the introduction of suspended sediments and associated oxygen demand on the surrounding waters. Reductions in DO concentrations, however, would be brief. A study in New York Harbor measured a small reduction in DO concentrations near a dredge, but no reductions in DO levels 200 to 300 ft away from the dredging operations (Lawler et al., 1983). These results are consistent with the findings and conclusions from studies of the potential environmental impacts of open water disposal of dredged material conducted as part of the USACE Dredged Material Research Program (Lee et al., 1978; Jones and Lee,

1978). Previous monitoring conducted 90 ft and 300 ft from dredging operations at Southwest Slip did not exhibit any reductions in DO concentrations (USACE and LAHD, 2008). Therefore, it is expected that reductions in DO levels below 5 mg/L associated with proposed Project construction and dredging activities would not persist or cause detrimental effects to biological resources.

Changes in pH may occur in the immediate vicinity of dredging operations due to reducing conditions in sediments resuspended into the water column. Seawater, however, is a buffer solution (Sverdrup et al., 1942) that acts to repress any change in pH. Therefore, any measurable change in pH would likely be highly localized and temporary, and would not result in persistent changes to ambient pH levels of more than 0.2 units. As discussed for the China Shipping Berth 100 Project in 2002, mean pH levels at the compliance station remained within 0.02 units and slightly higher than found at the control site (MBC, 2002). Thus, the water quality objective for pH would likely not be exceeded outside the mixing zone during proposed Project construction.

Contaminants, including metals and organics, could be released into the water column during the dredging and pile driving operations. However, like pH and turbidity, any increase in contaminant levels in the water is expected to be localized in the mixing zone and of short duration. The magnitude of contaminant releases would be related to the bulk contaminant concentrations of the disturbed sediments, as well as the organic content and grain size that affect the binding capacity of sediments for contaminants. Because the sediment characteristics vary across the Project site, the magnitude of contaminant releases, and water quality effects, would also vary. Sediments containing contaminants that are suspended by the dredging and pile installations would settle back to the bottom in a period of hours to one day. Transport of suspended particles by tidal currents would result in some redistribution of sediment contaminants. The amount of contaminants redistributed in this manner would be small, and the distribution localized in the channel adjacent to the work area. Monitoring efforts associated with previous dredging projects in the Harbor have shown that resuspension followed by settling of sediments is low (generally 2 percent or less). Consequently, concentrations of contaminants in sediments of the Harbor waters adjacent to the dredged area are not expected to be measurably increased by dredging activities and other in-water activities.

As discussed in Section 3.14, changes to water quality associated from in-water construction are not expected to exceed applicable standards outside the mixing zone. During dredge and pile-driving operations, an integrated multi-parameter monitoring program would be implemented by the Port Environmental Management Division in conjunction with USACE and Los Angeles RWQCB permit requirements, wherein dredging performance would be is measured in situ. The monitoring program involves adaptive management of the dredging operations whereby potential exceedances of water quality objectives can be measured and dredging operations subsequently modified. Monitoring data are used by the Port dredger to demonstrate that water quality limits specified in the permit are not exceeded. The dredging permit would identify corrective or adaptive actions, such as use of silt curtains, which would be implemented if the monitoring data indicate that water quality conditions outside the mixing zone could be below the permit-specified limits. This would keep temporary impacts from construction within permit limits, and because similar effects are not expected to substantially overlap in time and space with those from other related projects, in-water construction of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to water quality during in-water work under CEQA and NEPA. Results from previous dredge

receiving water monitoring studies in Los Angeles Harbor indicate that TSS concentrations would drop to levels approaching measured background concentrations within a few hundred meters of the dredge.

In-water and over-water construction of the proposed Project has the potential to result in spills directly to Harbor waters. These project-level spills during construction would be subject to SPCC regulations (that would contain and neutralize the spill) and spill responses by the dredging contractors (deploy floating booms to contain and absorb the spill and use pumps to assist the cleanup) that would prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor, accidental spills during construction. Any spills from past, present or reasonably foreseeable future related projects would be subject to the same regulations. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative water quality impact if spills from other in-water/over-water construction projects also occur.

Accidental spills of petroleum hydrocarbons, hazardous materials, and other pollutants from proposed Project-related upland operations are expected to be limited to small volume releases because large quantities of those substances are unlikely to be used, transported, or stored on the site. In addition, the terminal operator would be required to implement SPCC and OSCP Plans that ensure that facilities include containment and other countermeasures that would prevent oil spills that could reach navigable waters. Because of this, upland operations of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to spills.

The increased number of ship calls associated with operation of the proposed Project could contribute to a comparatively higher number of spills or illegal discharges from vessels compared to baseline conditions. Spill events would be addressed according to procedures described in the SPCC, for oceangoing vessels that carry substantial amounts of fuel, as would other vessels transiting the Harbor. As a result, the proposed Project's vessel operations not make a cumulatively considerable contribution to a significant cumulative water quality impact related to accidental spills or illegal discharges from oceangoing vessels relative to both the CEQA and NEPA baselines.

The leaching of metals from vessel hull coatings may occur as a result of additional vessels docking at the terminal facility as a result of the proposed Project. However, the APL Terminal no longer uses tributyltin (TBT) in hull coatings on 100 percent of their vessels, and based on this, even though the proposed Project would result in increased vessel traffic, water quality impacts related to leaching of TBT from hull coatings would therefore not occur and thus the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to leaching from vessel hull coatings.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to causing regulatory standards to be violated in Harbor waters. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA relative to water quality. Therefore, no mitigation measures would be required.

4.2.14.3 Cumulative Impact WQ-2: The proposed Project would not contribute to a cumulatively considerable increase in flooding that would have the potential to harm people or damage property or sensitive biological resources– Less than Cumulatively Considerable

Cumulative Impact WQ-2 addresses the potential of the proposed Project along with other cumulative projects to cause flooding sufficient to harm people or damage property or sensitive biological resources.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The proposed Project and adjacent areas of the Port are within the 100-year flood zone. As discussed in Section 3.14, the 41-acre backlands area has not been mapped for flood risk by FEMA, but is at the same elevation as the existing terminal and would be developed at or above current elevation. Most of the terminal is designated by FEMA as Flood Zone X (defined as areas of 0.2 percent annual chance flood; areas of one percent annual chance flood with average depths of less than one ft or with drainage areas less than one square mile; and, areas protected by levees from one percent annual chance flood).

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 stormwater runoff. This system has mitigated the impacts of past development with respect to flooding potential. Cumulative related 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. Cumulative projects near the proposed Project with the potential to affect drainage patterns and runoff volumes include the following related projects: TraPac Marine Terminal [#1], San Pedro Waterfront [#2], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32]. Similar to the proposed Project, these cumulative related projects are located on flat terrain, such that minor grading and paving associated with project construction would not substantially alter runoff patterns, velocities, or volumes sufficiently to increase risks of local flooding or harm to people, property, or biological resources. Consequently, the past, present, and reasonably foreseeable future projects would not result in a significant cumulative flooding impact.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Section 3.14, the proposed Project would not increase the potential for flooding because on-site storm drains would be installed, BMPs would be employed to

control site runoff during construction, site elevations and the flat site topography would remain generally the same, and the site is located adjacent to Harbor waters. However, operation of the proposed Project would result in an increase in containers stored at the site compared to baseline conditions, which would subject the containers to some sheet flow or ponding of water if a large enough storm occurred, generating more rainfall than could be accommodated by the capacity of the drainage system. However, flood water on the proposed Project site from a large storm event is not expected to be deep enough to cause employees to be harmed or to cause substantial damage to property within stored containers on-site. Further, because site runoff during a large storm event would flow directly to Harbor waters, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative flooding impact.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to flooding. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.14.4 Cumulative Impact WQ-3: The proposed Project would not contribute to a cumulatively considerable permanent adverse change in the movement of surface water in the Harbor– 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 and cause adverse changes in water or sediment quality.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The proposed Project site is within a commercial harbor environment that has been highly modified by past dredging, filling, and shoreline development in support of the maritime operations. Past, present, and reasonably foreseeable future related projects such as TraPac Marine Terminal [#1], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], Al Larson Boat Shop Improvement Project [#29], and Pier 500 Container Terminal Development [#32], would add fill additional, which, since the Port was established, has already totaled over 1,000 acres. Construction of fill areas reduces the overall amount of surface water within the Harbor.

Past dredging, filling, and shoreline development operations have altered surface water movement in the Harbor through alterations to landforms and bathymetry. For example, water circulation patterns have been altered by the past, present, and future cumulative

projects that include dredging and/or placement of fill (i.e., TraPac Marine Terminal [#1], San Pedro Waterfront [#2], Channel Deepening Project [#3], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], , Yang Ming Container Terminal [#24], Al Larson Boat Shop Improvement Project [#29], Pier 500 Container Terminal Development [#32], and Middle Harbor Terminal Redevelopment [#90]). Changes to the hydro-morphology of the Harbor could affect water quality by inhibiting the exchange of waters between different portions of the Harbor that, in turn, could limit mixing and dilution of runoff. However, baseline studies and other routine monitoring efforts, 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 Harbor complex. This is reasonable because fill would not be placed for any project in an area that disrupts vessel navigation. The channels and waterways that are maintained for vessel navigation provide for adequate water exchanges between different areas of the Harbor complex that are adequate to avoid stagnation. As a consequence, the related projects would not result in a significant cumulative impact related to surface water movement in the Harbor.

Contribution of the Proposed Project (Prior to Mitigation)

Dredging would slightly increase the tidal prism in the waters off the proposed Berth 306. Placement of pilings for the new wharf at Berth 306 would displace some water beneath the wharf, but due to the distance between pilings and the continual tidal action in the Harbor, the piles would not result in stagnation or cause adverse impacts to marine water quality within the project area or vicinity. Further, because construction of the proposed Project and the other cumulative projects would not interfere with vessel navigation, the placement of piles would not restrict water movement within the Pier 300 Channel or other areas of the Harbor. Thus, impacts from construction on surface water movement would not be significant, and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative water quality impact relative to both the CEQA and NEPA baselines.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not contribute to cumulatively considerable impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to surface water movement. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.14.5 Cumulative Impact WQ-4: The proposed Project would not result in the cumulatively considerable acceleration of rates of erosion and sedimentation – Less than Cumulatively Considerable

Cumulative Impact WQ-4 represents the potential for the proposed Project along with other cumulative projects to increase the rates of soil erosion within onshore portions of the project site and sedimentation within the site or in adjacent properties and receiving waters.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Although past projects have disturbed soils within upland areas of the watershed that drain to the Harbor, the erosive effects of these disturbances have passed. Cumulative past, present, and future related projects with construction operations similar to those of the proposed Project will disturb soils within upland areas of the watershed that drain to the Harbor. Cumulative related projects such as TraPac Marine Terminal [#1], the San Pedro Waterfront Project [#2], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], Plains All American Oil Marine Terminal [#10], China Shipping Development Project [#14], YTI Container Terminal [#23], Yang Ming Container Terminal [#24], and Pier 500 Container Terminal Development [#32], have or are expected to disturb soils and make them temporarily (during construction) subject to erosion by wind or runoff, and increase the potential for transport to and accumulation in waterways. Other cumulative related projects with a dredging component, such as Channel Deepening Project [#3], have removed watershed-derived sediments that accumulated with navigational channels and new project areas. Soils exposed by construction activities would be subject to erosion, transport off-site, and deposition in the Harbor. However, construction SWPPPs would incorporate BMPs to minimize erosion and off-site transport of soils and solids from construction and project sites. In addition, the related projects would result in additional impervious coverings over much of their respective sites, which would limit site erosion and sedimentation. Because of this, the related projects would not result in significant cumulative impacts related to erosion or sedimentation.

Contribution of the Proposed Project (Prior to Mitigation)

Construction activities associated with the proposed Project would not accelerate natural processes of wind and water erosion and off-site sedimentation impacts in the Harbor. The proposed Project would implement as standard soil management procedures, BMP structures such as sediment basins, barriers, and inlet protection. Runoff from general construction activities would cause short-term, localized changes in receiving water quality. However, the SWPPP BMPs would reduce erosion and minimize the potential for sedimentation within the Harbor. Operations associated with the proposed Project would not affect soil erosion or sedimentation in the Harbor or the watershed. The proposed Project impacts on rates of erosion and sedimentation would not be cumulatively considerable, and the proposed Project would not make a cumulatively considerable contribution to a significant cumulative erosion and sedimentation impact under CEQA or NEPA.

Runoff from general construction activities would cause short-term, localized changes in receiving water quality, and impacts would be less than cumulatively considerable under CEQA and NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternatives 3 through 6 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to erosion and sedimentation. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.3 Alternatives

The Alternatives 4 through 6 would result in similar cumulative impacts as the proposed Project because they are all involve expanding operations of the existing container terminal, and have construction and operational characteristics similar to the proposed Project with the same or similar throughputs. Alternative 3 would result in fewer cumulative impacts when compared to the proposed Project, as it would only include adding 4 A-frame cranes. Alternatives 1 and 2 would not include new cranes, wharf extension, new backlands, or upland improvements that the proposed Project would include (except Alternative 2 would include AMP and conversion of dry storage to refrigerated storage). These two alternatives would result in minimal or no construction impacts, and fewer operational impacts than the proposed Project because cargo throughput would increase relative to the CEQA and NEPA baseline. However, Alternative 1 under CEQA would result in a cumulatively considerable and unavoidable significant cumulative impact relative to Ground Transportation that would not occur under the proposed Project. General summaries of the resource areas to which the alternatives would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact after mitigation are provided below and are based on the discussions in Section 4.2 above.

4.3.1 Alternative 1 – No Project

Alternative 1 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact after mitigation in the following resource areas:

- Air Quality
    - GHG emissions associated with operation of Alternative 1 would contribute to existing levels and, therefore, would make a cumulatively considerable and unavoidable impact to a significant cumulative impact relative global climate change under CEQA.

- Biological Resources
    - Alternative 1 could make a cumulatively considerable and unavoidable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes and relative to the potential introduction of non-native species via vessel hulls under CEQA.
- Ground Transportation
    - Alternative 1 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact at the intersection of Navy Way and Reeves Avenue under CEQA. Mitigation is not applicable to Alternative 1 because there would be no discretionary actions subject to CEQA.

Alternative 1 would contribute to fewer cumulative impacts under CEQA than the proposed Project. NEPA impacts do not apply to Alternative 1 because NEPA does not require analysis of a CEQA No Project Alternative.

4.3.2 Alternative 2 – No Federal Action

Alternative 2 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact after mitigation in the following resource areas:

- Air Quality
    - Emissions from Alternative 2 construction would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under CEQA.
    - GHG emissions from Alternative 2 would contribute to existing levels and, therefore, would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to global climate change under CEQA.
- Biological Resources
    - Alternative 2 could make a cumulatively considerable and unavoidable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes and relative to the potential introduction of non-native species via vessel hulls under CEQA.

Alternative 2 would contribute to fewer cumulative impacts under CEQA due to smaller site size, a reduced level of operations, and a lack of expanded wharf operations. Alternative 2 is the NEPA baseline and as such would not contribute to any cumulative impacts.

4.3.3 Alternative 3 – Reduced Project: Four New Cranes

Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact in the following resource areas:

- Aesthetics
    - Because the cumulative context is significant relative to new sources of lighting and glare, the new backlands and crane lighting associated with Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact under CEQA.
- Air Quality
    - Construction emission sunder Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs, CO, NOX, SOX, PM10, and PM2.5 emissions under CEQA and NEPA.
    - Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2, PM_{10}, and $PM_{2.5}$ levels during construction under CEQA and NEPA.
    - Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2 levels during project operation under CEQA and NEPA.
    - Emissions from construction and operation would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to airborne cancer and chronic non-cancer levels at all receptor types under NEPA, and a acute non-cancer levels at all receptor types under CEQA and NEPA.
    - Construction and operation of Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to global climate change under CEQA.
- Biological Resources
    - Alternative 3 could make a cumulatively considerable and unavoidable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes and relative to the potential introduction of non-native species via vessel hulls under CEQA and NEPA.
- Noise
    - Ambient noise levels at Reservation Point and Fish Harbor would temporarily increase during construction activities which would make a cumulatively considerable and unavoidable contribution to a significant cumulative noise impact at Reservation Point and Fish Harbor under CEQA and NEPA.

Alternative 3 would contribute to the same cumulatively considerable impacts under CEQA and NEPA as the proposed Project, but the intensity of the contributions to the

cumulative impacts would be less than the proposed Project due to no new wharf construction, slightly reduced site size, fewer new cranes, and lower TEU throughput.

4.3.4 Alternative 4 – Reduced Project: No New Wharf

Alternative 4 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact after mitigation in the following resource areas:

- Aesthetics
    - Because the cumulative context is significant relative to new sources of lighting and glare, the new backlands and crane lighting under Alternative 4 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact under CEQA.
- Air Quality
    - Alternative 4 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions during construction under CEQA and NEPA.
    - Alternative 4 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2, PM_{10}, and $PM_{2.5}$ levels during construction under CEQA and NEPA.
    - Alternative 4 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2 levels during operations under CEQA and NEPA.
    - Increased $PM_{2.5}$ concentrations during Alternative 4 operations would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to $PM_{2.5}$ levels under NEPA.
    - emissions from construction and operation would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to airborne cancer and chronic non-cancer levels at all receptor types under NEPA, and a acute non-cancer levels at all receptor types under CEQA and NEPA.
    - GHG emissions from the alternatives would contribute to existing levels and, therefore, would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to global climate change.
- Biological Resources
    - Alternative 5 could make a cumulatively considerable and unavoidable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes and relative to the potential introduction of non-native species via vessel hulls under CEQA and NEPA.
- Noise
    - Ambient noise levels at Reservation Point and Fish Harbor would temporarily increase during construction activities which would make a

cumulatively considerable and unavoidable contribution to a significant cumulative noise impact at Reservation Point and Fish Harbor under CEQA and NEPA.

Alternative 4 would contribute to the same cumulatively considerable impacts under CEQA and NEPA as the proposed Project, but the intensity of the contributions to the cumulative impacts would be slightly less than the proposed Project due to no new wharf construction, slightly reduced site size, fewer new cranes, and slightly lower TEU throughput.

4.3.5 Alternative 5 – Reduced Project: No Space Assignment

Alternative 5 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact after mitigation in the following resource areas:

- Aesthetics
  - Because the cumulative context is significant relative to new sources of lighting and glare, the new backlands and crane lighting associated with Alternative 5 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact under CEQA.
- Air Quality
  - Alternative 5 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions during construction under CEQA and NEPA.
  - Alternative 5 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2, PM_{10}, and $PM_{2.5}$ levels during construction under CEQA and NEPA.
  - Emissions from Alternative 5 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs under CEQA and VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under NEPA
  - Alternative 5 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2 levels during operations under CEQA and NEPA.
  - Increased $PM_{2.5}$ concentrations during Alternative 5 operations would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to $PM_{2.5}$ levels under NEPA.
  - Emissions from construction and operation would make a cumulatively considerable contribution to a significant cumulative impact relative to airborne cancer and chronic non-cancer levels at all receptor types under NEPA, and a acute non-cancer levels at all receptor types under CEQA and NEPA.
  - Construction and operation of Alternative 5 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to global climate change under CEQA.

- Biological Resources
    - Alternative 5 could make a cumulatively considerable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes and relative to the potential introduction of non-native species via vessel hulls under CEQA and NEPA.
- Noise
    - Ambient noise levels at Reservation Point and Fish Harbor would temporarily increase during construction activities, including pile driving, which would make a cumulatively considerable and unavoidable contribution to a significant cumulative noise impact at Reservation Point and Fish Harbor under CEQA and NEPA

Alternative 5 would contribute to the same cumulatively considerable impacts under CEQA and NEPA as the proposed Project, while the slightly reduced site size may slightly reduce some impacts (i.e., amount on-site lighting would be somewhat less), the majority of impact would be similar to the proposed Project as the throughput levels would be the same for Alternative 5.

4.3.6 Alternative 6 – Proposed Project with Expanded On-Dock Railyard

Alternative 6would make a cumulatively considerable contribution to a significant cumulative impact in the following resource areas:

- Aesthetics
    - Because the cumulative context is significant relative to new sources of lighting and glare, the new backlands and crane lighting associated with Alternative 6 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact under CEQA.
- Air Quality
    - Alternative 6 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions during construction under CEQA and NEPA.
    - Alternative 6 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2, PM_{10}, and $PM_{2.5}$ levels during construction under CEQA and NEPA.
    - Emissions from Alternative 6 would make a cumulatively considerable contribution to a significant cumulative impact for VOCs under CEQA and VOCs, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$ emissions under NEPA
    - Alternative 6 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2 levels during operations under CEQA and NEPA.

- Increased $PM_{2.5}$ concentrations during Alternative 5 operations would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to $PM_{2.5}$ levels under NEPA.
- Emissions from construction and operation would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to airborne cancer and chronic non-cancer levels at all receptor types under NEPA, and a acute non-cancer levels at all receptor types under CEQA and NEPA.
- Construction and operation of Alternative 6 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to global climate change under CEQA.

- Biological Resources
  - Alternative 6 could make a cumulatively considerable contribution to a significant cumulative impact to marine mammals (the potential contribution to whale mortality) from vessel strikes and relative to the potential introduction of non-native species via vessel hulls under CEQA and NEPA.
- Noise
  - Ambient noise levels at Reservation Point and Fish Harbor would temporarily increase during construction activities, including pile driving, which would make a cumulatively considerable and unavoidable contribution to a significant cumulative noise impacts at Reservation Point and Fish Harbor under CEQA and NEPA

Alternative 6 would contribute to the same cumulative considerable impacts under CEQA and NEPA as the proposed Project, and the intensity of the contributions to the cumulative impacts would be slightly greater or slightly reduced depending on the resource area due to the expanded on-dock railyard.