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 the capacity of an existing container terminal, and its operations would be consistent with other uses and container terminals in the proposed project area.

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

- Aesthetics;
- Air Quality and Meteorology;
- Biological Resources;
- Greenhouse Gas Emissions; and
- Noise.

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

- Air Quality and Meteorology;
- Biological Resources; and

- Noise.

Alternative 3 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. Alternatives 1 and 2 would contribute to fewer cumulatively considerable impacts than the proposed Project under CEQA. Alternative 1 is not applicable to NEPA and Alternative 2 would not result in any impact under 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" (State CEQA Guidelines Section 15355).

Cumulative impacts are further described as follows:

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

(b) The cumulative impacts from several projects are the 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 State CEQA Guidelines, Section 15355(b)).

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

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

In addition, as stated in the State CEQA Guidelines, Section 15064(i)(5):

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

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

> *Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other*

actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

USACE, 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 and Meteorology, Noise, Greenhouse Gas Emissions, and Ground Transportation 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 2012 Air Quality Management Plan (SCAQMD 2013) and the SCAQMD 2008 *Multiple Air Toxics Exposure Study* (MATES-III) (SCAQMD 2008). The Ground Transportation cumulative analysis uses future traffic growth forecasts for the area from the SCAG Regional Travel Demand Forecasting Model and the Port Area Travel Demand Model, which are described in Section 3.7. 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 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-foot section of the breakwater was completed, and the Main Channel was widened to 800 feet and dredged to a depth of 30 feet to accommodate the largest vessels of that era. Concurrently, Southern Pacific Railroad completed its first major wharf in San Pedro, allowing railcars to efficiently load and unload goods simultaneously. The Port continued to grow through the twentieth century.

Following World War II, the LAHD 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 Proposed Project Area

As described in Chapter 2, Section 2.5.5, Berths 212–224 have served a variety of tenants including oil companies, lumber companies, shipbuilding and dismantling operations, and cargo terminals. The facilities at Berths 212–214 were originally constructed in the 1920s, and from about 1941 through 1945, wartime ships were manufactured at the site. Following the war, the site served as a final destination for many decommissioned United States Navy ships to be dismantled and exported as scrap metal. Starting in 1949, Berth 214 was also used by a yacht builder and later served as a boat shop through the mid-1980s. Proctor and Gamble also occupied a portion of the Berth 214 backland for warehousing operations from about 1961 through the mid-1980s. Berth 215 once housed a liquid bulk transfer/storage facility, and included oil storage tanks, office, storage, and pump buildings.

As early as 1927, Berths 216–217 were occupied by California Petroleum Corporation, with other tenants at Berths 216–218 including Texaco, Dow Chemical, and the Western Walker Company. After having served as a site for a lumber company's operations, around 1963, Berths 220–224 began operations as a cargo terminal, and in the mid-1980s, cargo operations expanded to include Berths 216–218. YTI began operation at Berths 211–215 in 1990 and took over operation of Berths 216–224 in 1996.

The 1979 Port Master Plan (PMP) described the short-term and long-term plans for the planning area where YTI Terminal is located (Terminal Island/Main Channel) as continuing orientation toward commercial shipping, liquid bulk handling, and heavy

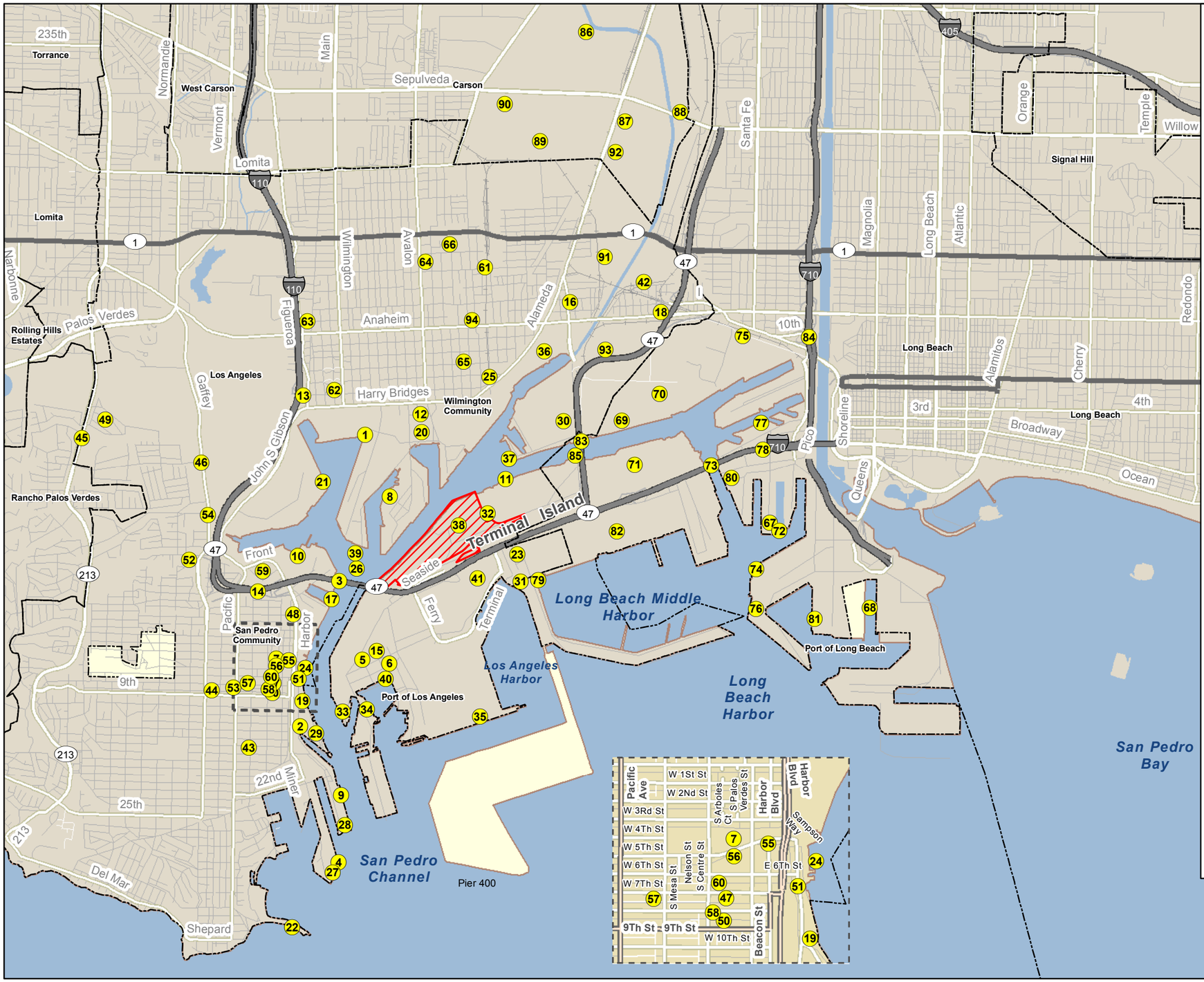
industrial and commercial activities. This area has been primarily used for commercial shipping and related maritime activities, with 29% of the area dedicated to general cargo. In August 2013, the LAHD Board of Harbor Commissioners adopted an update of the PMP. The update to the PMP is intended to serve as a long-range plan to establish policies and guidelines for future use of Port lands within the coastal zone, as required under the California Coastal Act, and consolidates areas characterized by predominant land use patterns, thereby allocating a single allowable land use to most sites. Nine previously identified planning areas are now consolidated into five new planning areas, with the YTI Terminal now being located in Planning Area 3 of the update to the PMP: Terminal Island. Planning Area 3 is the largest planning area and focuses on container operations. The Terminal Island Land Use Plan optimizes cargo-handling operations on Terminal Island while restricting non-cargo and non-water dependent uses.

Historical development of the proposed 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 94 present or reasonably foreseeable future projects (approved or proposed) were identified within the general vicinity of the proposed Project that could contribute to cumulative impacts. 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 2012–2026 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.



Port of Los Angeles Projects

1. Berths 136-147 Marine Terminal, West Basin
2. San Pedro Waterfront Project
3. Channel Deepening Project
4. Cabrillo Way Marina, Phase II
5. Berth 226-236 (Evergreen) Container Terminal Improvements Project and Canners Steam Demolition
6. Canners Steam Demolition
7. Port of Los Angeles Charter School and Port Police Headquarters, San Pedro
8. Ultramar Lease Renewal Project
9. Westway Decommissioning
10. Berths 97-109, China Shipping Development Project
11. Berths 206-209 Interim Container Terminal Reuse Project
12. Wilmington Waterfront Master Plan (Avalon Blvd. Corridor Project)
13. "C" Street/Figueroa Street Interchange
14. I-110 / SR 47 Connector Improvement Program
15. Terminal Island Rail Redevelopment
16. Adaptive Reuse of Warehouses 9 and 10
17. Alternative Maritime Power (AMP™)
18. Southern California International Gateway Project (SCIG)
19. San Pedro Waterfront Enhancements Project
20. South Wilmington Grade Separation
21. Berths 121-131 (Yang Ming) Container Terminal Improvements Project
22. Inner Cabrillo Beach Water Quality Improvement Program
23. Port of Los Angeles Master Plan Update.
24. USS Iowa Battleship
25. WWL Vehicle Services Cargo Terminal
26. Maintenance Dredging
27. Outer Harbor Cruise Terminal and Outer Harbor Park
28. City Dock No. 1 Marine Research Project
29. Ports O'Call Redevelopment
30. Anchorage Road Soil Storage Site (ARSSS) Open Space
31. Trucking Support Center
32. Relocation of SA Recycling
33. Relocation of Jankovich Marine Fueling Station
34. Al Larson Boat Shop Improvement Project
35. Berth 302-305 (APL) Container Terminal Improvements Project
36. International Longshore and Warehouse Union Local 13 Dispatch Hall Project
37. Wilmington Youth Sailing and Aquatic Center
38. Solar Panel Installation Program
39. MOTEMS Upgrade Program
40. Fish Processing in Fish Harbor

Port of Los Angeles and/or Port of Long Beach Potential Port-Wide Operational Projects

41. Navy Way/Seaside Avenue Interchange

ICTF Joint Powers Authority

42. Union Pacific Railroad ICTF Modernization Project

Community of San Pedro Projects

43. 15th Street Elementary School
44. Pacific Corridors Redevelopment Project
45. Condominiums, 28000 Western Ave
46. Target (Gaffey Street)
47. La Salle Lofts
48. Condominiums, 319 N. Harbor Blvd
49. Ponte Vista/Naval Site
50. 8th Street Lofts
51. San Pedro Plaza Park
52. Cabrillo Avenue Extension
53. A-Delta Realty
54. Single Family Homes (Gaffey Street)
55. Palos Verdes Urban Village
56. Vue (Pacific Trade Center), 255 5th St
57. Bank Lofts
58. Mixed-use development, 281 W 8th St
59. Temporary Little League Park
60. Centre Street Lofts

Community of Wilmington Projects

61. Distribution center and warehouse
62. Dana Strand Public Housing Redevelopment Project
63. Vermont Christian School Expansion
64. LASUD SR Span K-8 School
65. Wilmington Redevelopment Plan Amendment/Expansion Project
66. Banning Museum and Banning Park

Port of Long Beach Projects

67. Middle Harbor Terminal Redevelopment
68. Piers G & J Terminal Redevelopment Project
69. Pier A West Remediation Project
70. Pier A East, Port of Long Beach
71. Pier S Marine Terminal
72. Administration Building Replacement Project
73. Gerald Desmond Bridge Replacement Project
74. Chemoil Marine Terminal, Tank Installation
75. Pier B Rail Yard Expansion (On- Dock Rail Support Facility
76. Mitsubishi Cement Corporation Facility Modifications
77. Eagle Rock Construction Aggregate Terminal Development
78. Cemera Long Beach Aggregate Terminal
79. Terminal Island Rail Projects
80. Polaris Aggregate Terminal
81. Sulex Demolition Project
82. Pier T, TTI (formerly Hanjin) Terminal, Phase III

Alameda Corridor Transportation Authority and Caltrans Projects

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

Wilmington/Carson

86. BP Carson Refinery Safety, Compliance and Optimization Project
87. Kinder Morgan Terminal Expansion
88. Chemoil Terminals Corporation
89. ConocoPhillips Refinery Tank Replacement Project
90. BP Logistics Project
91. Ultramar Inc., Olympic Tank Farm
92. WesPac Smart Energy Transport System Project
93. Tesoro Reliability Improvement and Regulatory Compliance Project
94. Warren Oil WTU Central Facility and New Equipment Project

Berths 212-224 [YTI] Container Terminal Improvements Project

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Miles

Source: ESRI (2010)

Figure 4-1
Related and Cumulative Projects
Berths 212-224 [YTI] Container Terminal Improvements Project

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
PORT OF LOS ANGELES PROJECTS			
1	Berth 136–147 Marine Terminal, West Basin, Port of Los Angeles	Element of the West Basin Transportation Improvement Projects. Expansion and redevelopment of the TraPac Container Terminal to 243 acres, including improvement of Harry Bridges Boulevard and a 30-acre landscaped area, relocation of an existing rail yard and construction of a new on-dock rail yard, and reconfiguration of wharves and backlands (includes filling of the Northwest Slip, dredging, and construction of new wharves.	The Harbor Board of Commissioners certified the EIR and approved the project on December 6, 2007. Construction started in 2009 and ongoing through 2016.
2	San Pedro Waterfront Project, Port of Los Angeles	The "San Pedro Waterfront" Project involved development 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 Harbor Board of Commissioners certified the EIR and approved the project on September 29, 2009. Construction expected 2010–2020.
3	Channel Deepening Project, Port of Los Angeles	Dredging and sediment disposal. This project deepened the Port of Los Angeles Main Channel to a maximum depth of -53 feet mean lower low water (MLLW; lesser depths are considered as project alternatives) by removing between approximately 3.94 million and 8.5 million cubic yards of sediments. The sediments were disposed at several sites for up to 151 acres (61 hectares) of landfill. The EIR/ EIS certified for the project identified significant biology, air, and noise impacts. A Supplemental EIS/EIR is being prepared for new fill locations. The Additional Disposal Capacity Project would provide approximately 4 million cubic yards of disposal capacity needed to complete the Channel Deepening Project and maximize beneficial use of dredged material by constructing lands for eventual terminal development and provide environmental enhancements at various locations in the Port of Los Angeles.	The Harbor Board of Commissioners certified the EIR and approved the project on April 29, 2009. Project was completed in 2013.
4	Cabrillo Way Marina, Phase II, Port of Los Angeles	Redevelopment of the old marinas in the Watchorn Basin and development of the backland areas for a variety of commercial and recreational uses.	EIR certified December 2, 2003. Construction started in 2009 and was completed in 2011.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
5	Berth 226–236 (Evergreen) Container Terminal Improvements Project	Proposed redevelopment of existing container terminal, including improvements to wharves, adjacent backland, crane rails, lighting, utilities, new gate complex, grade crossings, and modification of adjacent roadways and railroad tracks.	Conceptual Planning Stage
6	Canners Steam Demolition.	Project includes demolition of two unused buildings and other small accessory structures at the former Canner's Steam Plant in the Fish Harbor area of the Port.	On hold.
7	Port of Los Angeles Charter School and Port Police Headquarters, San Pedro, Port of Los Angeles	LAHD is leasing property for the Port of Los Angeles Charter School and constructed a Port Police Headquarters and office at 330 S. Centre Street, San Pedro.	Construction completed.
8	Ultramar Lease Renewal Project, Port of Los Angeles	Proposal to renew the lease between the Port of Los Angeles and Ultramar Inc., for continued operation of the marine terminal facilities at Berths 163–164, as well as associated tank farms and pipelines. Project includes upgrades to existing facilities to increase the proposed minimum throughput to 10 million barrels per year (mby), compared to the existing 7.5 mby minimum.	On hold.
9	Westway Decommissioning	Decommissioning of the Westway Terminal along the Main Channel (Berths 70–71). Work includes decommissioning and removing 136 storage tanks with total capacity of 593,000 barrels and remediation of the site.	Decommissioning completed 2012. Remediation is in conceptual planning phase.
10	Berths 97–109, China Shipping Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, landfill and terminal construction, and backland development.	EIR certified and project approved on December 8, 2009. Construction started in 2009 and ongoing through 2013.
11	Berth 206–209 Ports America Container Terminal Project, Port of Los Angeles	Proposal involves building demolition/repairs, pavement improvements, striping, signage, fendering and bollard upgrades, new cranes, and related electrical service upgrades for new breakbulk and container terminal operations.	Conceptual planning stage.
12	Wilmington Waterfront Master Plan (Avalon Boulevard Corridor Project)	Planned development intended to provide waterfront access and promoting development specifically along Avalon Boulevard.	EIR certified project and approved on June 18, 2009. Construction schedule TBD.
13	I-110/C Street Interchange Project	Realignment of Harry Bridges and John S. Gibson Blvd. and combining of C Street/Figueroa intersection and Gibson/Bridges/Figueroa intersections into one intersection with connection to I-110 freeway.	MND adopted June 2012. Construction expected 2014–2017.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
14	John S. Gibson Boulevard/ I-110 Access Ramps and SR-47/I-110 Connector Improvement Program	Improvement of NB I-110 ramps at John S. Gibson Blvd. and the NB I-110/SB SR-47/NB I-110 connector.	MND adopted April 2012. Construction expected 2013–2016.
15	Terminal Island Rail Redevelopment	Redevelopment and expansion of on-dock rail on Terminal Island.	On hold.
16	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. Property leased to Crafted at the Port of Los Angeles.	Addendum to San Pedro Waterfront EIR completed. The first phase opened in summer of 2012; full build-out schedule TBD.
17	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. AMP facilities are being constructed at container terminals throughout the Port to support ARB regulations and CAAP policy.	Construction anticipated to be complete by end of 2013.
18	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.	Final EIR certified May 2013. Construction on hold.
19	San Pedro Waterfront Enhancements Project	Project includes improving existing and development of new pedestrian corridors along the waterfront (4 acres), landscaping, parking, increased waterfront access from upland areas, and creating 16 acres of public open space.	MND approved in April 2006. Construction has been completed.
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: 2012–2014.
21	Berths 121–131 (Yang Ming) Container Terminal Improvements Project	Wharf modifications at the Yang Ming Marine Terminal Project involves wharf upgrades and backland reconfiguration, including new buildings.	Conceptual planning stage.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
22	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.
23	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.	EIR certified in August 2013. Coastal Commission certification pending.
24	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.	Draft EIR released January 2012. Open for operation.
25	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.	MND approved August 2012.
26	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.
27	Outer Harbor Cruise Terminal and Outer Harbor Park, Port of Los Angeles	Construction of two new, cruise terminals that would total up to 200,000 square feet (approximately 100,000 square feet each) and parking at Berths 45–47 and 49–50 in the Outer Harbor. The terminals would be designed to accommodate the berthing of a Freedom Class or equivalent cruise vessel (1,150 feet in length). A proposed Outer Harbor Park would encompass approximately 6 acres at the Outer Harbor. This project was evaluated in the San Pedro Waterfront Project EIS/EIR.	The Board certified the Final EIS/EIR and approved this project on September 29, 2009. Construction is on hold.
28	City Dock No. 1 Marine Research Project (AltaSea), Port of Los Angeles	This project includes development of a marine research center within a 28-acre area located between Berths 57–72. This project would change the break bulk areas east of East Channel (Berths 57–72) to institutional uses.	The Board certified the Final EIR and approved this project on October 18, 2012. Construction anticipated 2014–2017.
29	Ports O' Call Redevelopment, Port of Los Angeles	This project includes redevelopment of the 30-acre Ports O' Call Village with up to 300,000 square feet of visitor-serving commercial uses and up to a 75,000 square feet conference center. This project would involve changing the industrial uses along Harbor Boulevard to commercial. This project also includes a waterfront promenade and 3 acres of open space. This project was evaluated in the San Pedro Waterfront Project EIS/EIR.	The Board certified the Final EIS/EIR and approved this project on September 29, 2009. Conceptual planning by private developer ongoing.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
30	Anchorage Road Soil Storage Site (ARSSS) Open Space, Port of Los Angeles	This project would create approximately 30 acres of passive open space at the ARSSS. The project may also include undergrounding utilities and roadway improvements at the Anchorage and Shore Road intersection.	On hold.
31	Trucking Support Center, Port of Los Angeles	This project would utilize approximately 33 acres at the former Navy Reserve site to provide a new trucking support center and restaurant. The project would allow fueling for new clean-technology drayage vehicles.	On hold.
32	Relocation of SA Recycling, Port of Los Angeles	This project would relocate the existing 26-acre dry bulk facility currently located at Berths 210–211 eastward to a similar sized facility at Berths 206–207.	Conceptual planning stage.
33	Relocation of Jankovich Marine Fueling Station, Port of Los Angeles	This project would develop a new fueling station at Berth 240 on Terminal Island. The proposed improvements would include new storage tanks and approximately 6,400 linear feet of new wharf construction. This project was evaluated in the San Pedro Waterfront Project EIS/EIR.	Part of the San Pedro Waterfront Project EIR/EIS. The Board certified the Final EIS/EIR and approved this project on September 29, 2009. Conceptual planning ongoing.
34	Al Larson Boat Shop Improvement Project, Port of Los Angeles	Modernization of existing boat yard and 30-year lease extension.	The Board certified the EIR and approved the project on April 29, 2009. Currently on hold.
35	Berths 302–306 APL Container Terminal Project, Port of Los Angeles	Improvements and expansion of the existing terminal, including the addition of cranes, modifications to the main gate, converting an existing dry container storage unit to a refrigerated unit, and the expansion of the terminal onto 41 acres adjacent to the existing terminal.	The Board certified the EIR and approved the project on May 7, 2012. Design underway.
36	International Longshore and Warehouse Union Local 13 Dispatch Hall Project, Port of Los Angeles	The project will accommodate current and anticipated needs of the International Longshore and Warehouse Union by providing a meeting space and administrative offices for dispatching longshore workers to cargo terminals within the Port and Port of Long Beach.	The Board certified the EIR and approved the project on May 19, 2011. Construction: 2012–2014.
37	Wilmington Youth Sailing and Aquatic Center, Port of Los Angeles	Construction of a facility that includes a sailing center and adjacent boat dock and launch ramp at Berth 204 in Wilmington.	Mitigated Negative Declaration (MND) approved November 15, 2012. Construction anticipated 2014–2015.
38	Solar Panel Installation Program, Port of Los Angeles	Installation of 10 MW of solar power within the Port.	Construction at some sites began 2009. Construction ongoing through at least 2015.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
39	MOTEMS Upgrade Program	Upgrade of several marine oil terminals to meet MOTEMS requirements	Conceptual planning stage.
40	Fish Processing in Fish Harbor	Upgrades of existing facilities and construction of new facilities for fish processing operations	Conceptual planning stage.
PORT OF LOS ANGELES AND/OR PORT OF LONG BEACH POTENTIAL PORT-WIDE OPERATIONAL PROJECTS			
41	Navy Way/Seaside Avenue Interchange, Port of Los Angeles and Port of Long Beach	Construction of a new flyover connector from northbound Navy Way to westbound Seaside Avenue.	Conceptual planning stage.
ICTF JOINT POWERS AUTHORITY			
42	Union Pacific Railroad ICTF Modernization and Expansion Project	Union Pacific proposal to modernize existing intermodal yard 4 miles from the Port.	Project EIR under preparation. Draft EIR expected early 2013.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
COMMUNITY OF SAN PEDRO PROJECTS			
43	15th Street Elementary School, San Pedro	Los Angeles Unified School District construction of additional classrooms at 15th Street Elementary School.	Construction completed and school operating. Completed in 2006.
44	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.
45	Condominiums, 28000 Western Avenue	Construct 136 condominium units. 28000 S. Western Avenue, San Pedro.	Construction completed in 2008.
46	Target (Gaffey Street)	Construct 136,000 square foot discount superstore. 1605 North Gaffey Street, San Pedro (at W. Capitol Drive).	Construction completed.
47	La Salle Lofts	Construct 26 units of 8,000 square foot ground floor commercial at 255 W. 7th St., San Pedro	Construction completed according to Community Redevelopment Agency of Los Angeles.
48	319 N. Harbor Blvd	Construction of 94 unit residential condominiums.	Construction has not started according to LADOT Planning Department.
49	Ponte Vista/Naval Site	Construct 1,135 residential units, including single family homes, apartments, and condominiums, and open space.	NOP released in October 2010.
50	8th Street Lofts	Loft apartments at southeast corner of 8th Street and Pacific Ave.	Construction completed.
51	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.
52	Cabrillo Avenue Extension	This project will widen Cabrillo Avenue to 36-foot of roadway and 9-foot of sidewalk from Miraflores Avenue to existing alley. It will also widen the existing alley to 25 feet 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.
53	A-Delta Realty 731–741 S. Pacific Ave	Artist's Lofts and retail space.	Construction completed.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
54	Single Family Homes 1427 N. Gaffey St, San Pedro (at Basin St)	Construction of 135 single-family homes—about 2 acres.	Project approved; construction pending.
55	Palos Verdes Urban Village 550 South Palos Verdes St, San Pedro	Construction of 251 condominiums and 4,000 square feet of retail space. 550 South Palos Verdes Street, San Pedro.	No construction has started.
56	Vue (Pacific Trade Center) 255 5th St, San Pedro (near Centre St)	Construction of 220 housing unit apartments.	Construction completed.
57	Bank Lofts 407 7th St	Construction of an 89-unit apartment complex with ground floor commercial.	Construction completed.
58	Mixed-use development, 281 W 8th Street, San Pedro	Project to construct 72 condominiums and 7,000 square feet 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).
59	Temporary Little League Park, San Pedro	Project to construct temporary baseball fields for the Eastview Little League. Baseball fields will be at current location of Knoll Hill Dog Park in San Pedro.	Construction pending.
60	Centre Street Lofts, San Pedro	Project to construct 116 residential units and 20,000 square feet ground floor commercial at 285 W 6th Street, San Pedro.	Construction completed.
COMMUNITY OF WILMINGTON PROJECTS			
61	Distribution Center and Warehouse 755 E. L St, Wilmington (at McFarland Avenue)	Construction of a 135,000-square-foot distribution center and warehouse on a 240,000-square-foot lot with 47 parking spaces.	No construction has started; lot is vacant and bare. LADOT Planning Department has no estimated completion year.
62	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.
63	931 N. Frigate	Private school expansion for 72 students increase for a total of 350 students.	Construction has not started according to LADOT Planning Department.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
64	LAUSD SR Span K-8 School. 1234 N. Avalon Blvd	Construction of 1278-student elementary school	Construction has not started according to LADOT Planning Department.
65	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 square feet) of commercial development and up to 333 acres (14.5 million square feet) of industrial development.	NOP for Program EIR out for public review August 2010. Currently on hold.
66	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. 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.	Construction began in November 2010 and completed in 2012.
PORT OF LONG BEACH PROJECTS			
67	Middle Harbor Terminal Redevelopment, Port of Long Beach	Consolidation of two existing container terminals into one 345-acre (138-hectare) terminal. Construction includes approximately 54.6 acres of landfill, dredging, and wharf construction; construction of an intermodal rail yard; and reconstruction of terminal buildings.	Approved project. Construction underway 2010–2019.
68	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine container terminals into one terminal. The Piers G and J redevelopment project is in the Southeast Harbor Planning District area of the Port of Long Beach. The project will develop a marine terminal of up to 315 acres by consolidating two existing terminals on Piers G and J and several surrounding parcels. Construction will occur in four phases and will include approximately 53 acres of landfills, dredging, concrete wharves, rock dikes, and road and railway improvements.	Approved project. Construction underway (2005–2015).
69	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).

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
70	Pier A East, Port of Long Beach	Redevelopment of 32 acres of existing auto storage area into container terminal.	Conceptual planning.
71	Pier S Marine Terminal, Port of Long Beach	Development of a 150-acre container terminal and construction of navigational safety improvements to the Back Channel.	DEIS/DEIR released 9/2011. Final EIS/EIR completed Oct. 2013.
72	Administration Building Replacement Project, Port of Long Beach	Replacement of the existing Port Administration Building with a new facility on an adjacent site.	Approved project. Construction on hold.
73	Gerald Desmond Bridge Replacement Project, Port of Long Beach and Caltrans/FHWA	Replacement of the existing 4-lane Gerald Desmond highway bridge over the Port of Long Beach Back Channel with a new 6- to 8-lane bridge.	FEIR/EA certified. Approved project, construction ongoing
74	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.
75	Pier B Rail Yard Expansion (On-Dock Rail Support Facility)	Expansion of the existing Pier B Rail Yard in two phases, including realignment of the adjacent Pier B Street and utility relocation.	DEIR being prepared.
76	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.	EIR on hold.
77	Eagle Rock Construction Aggregate Terminal Development	Construct a new marine terminal for importing aggregate on Pier D.	DEIR/EIS being prepared.
78	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.
79	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).
80	Polaris Aggregate Terminal	Construction and operation of a sand, gravel, and aggregate receiving, storage, and distribution terminal on Pier D.	NOP being prepared.
81	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.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
82	Total Terminal International (TTI) 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.
ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY AND CALTRANS PROJECTS			
83	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 [PCH]).	Project approved, construction pending.
84	I-710 (Long Beach Freeway) Major Corridor Study	Develop multi-modal, timely, cost-effective transportation solutions to traffic congestion and other mobility problems along approximately 18 miles of the I-710, between the San Pedro Bay ports and SR 60. Early Action Projects include: a) Port Terminus: Reconfiguration of SR 1 (PCH) 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.	NOP/NOI released August 2008. DEIR/EIS circulated. Comment period ended September 28, 2013
85	Cerritos Channel Bridge	New rail bridge adjacent to existing Badger Avenue Rail Bridge	Project delayed; start date undetermined.
WILMINGTON/CARSON			
86	BP Carson Refinery Safety, Compliance and Optimization Project	The proposed project will involve physical changes and additions to multiple process units and operations as well as operational and functional improvements within the confines of the existing Refinery.	Completed.
87	Kinder Morgan Terminal Expansion	The project involves the construction of 18 new, 80,000-barrel product storage tanks and one new, 30,000-barrel transmix storage tank with related piping, pumps, and control systems on the southwestern portion of the existing Carson Terminal facility.	Construction activities for the Kinder Morgan Terminal Expansion project are expected to occur over a 10-year period.
88	Chemoil Terminals Corporation	The proposed project includes constructing five 50,000-barrel tanks and two 20,000-barrel tanks for the storage of organic liquids such as ethanol, crude oil, gasoline, naphtha, cycle oils, marine and non-marine diesel oils, and residual fuel oils.	The project is currently under construction, nearly complete.
89	ConocoPhillips Refinery Tank Replacement Project	ConocoPhillips operators are in the process of removing seven existing petroleum storage tanks and replacing them with six new tanks, four at the Carson Plant, and two new tanks at the Wilmington Plant.	A Negative Declaration has been prepared for this project.

Table 4-1: Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
90	BP Logistics Project	The project involves the construction and operation of two 260-foot diameter covered external floating roof crude oil storage tanks. The two crude oil storage tanks have a capacity of 500,000 barrels each, and will require related piping and process control systems.	Final EIR has been prepared and certified by City of Carson. Project on hold.
91	Ultramar Inc., Olympic Tank Farm	The project will relocate the entire operations from the Ultramar Marine Tank Farm in the Port of Los Angeles to the Olympic Tank Farm.	As of November 2011, SCAQMD was reviewing a Notice of Preparation/Initial Study for the facility.
92	WesPac Smart Energy Transport System Project	WesPac is proposing to construct a jet fuel pipeline system to support airport operations at Los Angeles International Airport (LAX) and other airports in the western United States.	Phase 1 is proposed to begin upon resolution of court case.
93	Tesoro Reliability Improvement and Regulatory Compliance Project	The project involves physical changes and additions to multiple process units and operations as well as operational and functional improvements within the confines of the existing Refinery, including replacing an existing cogeneration system with a new cogeneration system and replacing multiple, existing steam boilers with new equipment.	EIR certified April 10, 2009. Construction activities scheduled 2010 through 2012.
94	Warren Oil WTU Central Facility and New Equipment Project 625 E. Anaheim St., Wilmington	Proposed project would make modifications to an existing oil production facility to remove and replace an existing flare, add a heater-treater, and add microturbines to generate electricity on-site.	Neg Dec release April 15, 2009. Final Neg Dec under preparation. Construction expected 3rd quarter 2010 through 2013.

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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 discussion of impacts of past, present, and reasonably foreseeable future projects refers to the list of projects and reference numbers as shown in Table 4-1. The three alternatives listed below are also analyzed relative to the related projects under CEQA and two alternatives (Alternatives 2 and 3) are analyzed relative to NEPA.

Alternative 1 – No Project

Alternative 2 – No Federal Action

Alternative 3 – Reduced Project: Improve Berths 217–220 Only

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 the 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 proposed project site are primarily available from the higher elevations to the west in San Pedro and the Palos Verdes Peninsula. Views toward the proposed project site from these locations encompass the Port as well as intervening development and the ocean and horizons at higher elevations.

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 constitutes 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 continue to 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 Berth 136–147 Marine Terminal (#1 as listed in Table 4-1), Evergreen Container Terminal (#5), and China Shipping Development Project (#10) 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 replace some existing cranes and add new cranes; however, this action 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, the proposed project site is within a highly industrialized area within the Port and views from the surrounding viewpoints, including scenic routes and scenic vantage points, are often fleeting, distant, and/or obstructed by intervening topography and development. Further, the replacement cranes, new cranes, and backlands improvements 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 proposed Project would be to increase the size of container ships that could dock at the YTI Terminal and add to the complex scene in the middleground zone of most views. The replacement cranes would be identical to the existing cranes and 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. 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 AES-1. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to scenic vistas under CEQA. Cumulative Impact AES-1 is not a NEPA issue of concern.

Contribution of the Alternatives

For the same reasons as described above for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to scenic vistas. Cumulative Impact AES-1 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-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 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 Angeles has City-designated scenic highways 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 characterization of views from John S. Gibson Boulevard, Harbor Boulevard, and Front Street towards the proposed project area is of a busy working port and transportation infrastructure. The features of these views from the local scenic highways in the proposed project area that are most vivid are undoubtedly the existing tall cranes, container-laden ships at container terminals such as the TraPac Marine Terminal (#1), Evergreen Container Terminal (#5), China Shipping Development Project (#10), and Yang Ming Container Terminal (#21), 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 the City of Los Angeles, and by the 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 (#10), Yang Ming Terminal (#21), and I-110/SR-47 Connector Improvement Program (#17). The projects would add to the visual clutter and obstruction of 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 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 fleeting views available to motorists 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 feature 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 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 is discussed in detail in Section 3.1.4.3 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 proposed Project and would not substantially change the views of the proposed project area or block scenic resources. 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. Cumulative Impact AES-2 is not a NEPA issue of concern.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 3 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 Cumulatively Considerable 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 receptors. This criterion is related to the State 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 cranes or other equipment would not create shade or shadows on sensitive uses. Shading produced by cranes, containers, or other structures would be limited to within the proposed project site and adjacent waterways and industrial uses. Cumulative Impact AES-3 is not a NEPA issue of concern.

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 State 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 and street and roadway lighting. Other sources include high-intensity boom lights on top of cranes and floodlights attached to the bottom and sides of the cranes that illuminate the cranes, the vessels, 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, lighted backlands, or other uses that need extra lighting include Berth 136–147 Marine Terminal (#1), Evergreen Container Terminal (#5), China Shipping Development Project (#10), SCIG (#18), and Yang Ming Container Terminal (#21). 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.

However, since the existing levels of ambient lighting in the area are already high, adding new light sources would generally result in an incremental increase in ambient lighting conditions. As such, 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 under AES-4, the incremental change in ambient lighting conditions associated with the proposed Project as a result of up to two additional cranes and four additional operating cranes at the proposed project site would not create a substantial change in existing levels of ambient light in sensitive areas in the proposed 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 proposed project lighting would not adversely affect nearby light-sensitive areas.

Since much of the area near the proposed 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. Further, lighting design 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 crane lighting from the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact under CEQA. Cumulative Impact AES-4 is not a NEPA issue of concern.

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, design guidelines and regulations would minimize lighting effects and keep lighting impacts of Alternative 3 below significance, but Alternative 3 would make a cumulatively considerable contribution to a significant light and glare 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 proposed 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 Alternative 3 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 proposed 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 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 locally designated scenic highways (Front Street and Harbor Boulevard) and public viewpoints (the Catalina Express terminal and Wilmington Waterfront 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 proposed project site is within a highly industrialized area within the Port and views from surrounding viewpoints, 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 YTI Terminal at Berths 212–224. The development would support similar activities that are currently occurring at the proposed 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 and 3 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-5 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 and Meteorology

4.2.2.1 Scope of Analysis

The region of analysis for cumulative effects on regional air quality (Cumulative Impacts AQ-1 and AQ-3) is the SCAB. For localized effects of air quality (Cumulative Impacts AQ-2 and AQ-4), the SCAQMD typically assesses cumulative projects within one mile of a project site. For health effects (Impact AQ-7), the area of influence includes the cumulative projects within the Port complex and their effects on the surrounding communities of San Pedro, Wilmington, and Long Beach.

4.2.2.2 Significance Criteria

Criteria Pollutants

As described in Section 3.2, air quality within the SCAB has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly due to lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by SCAQMD. This trend towards cleaner air has occurred despite continued population growth. However, stationary industrial and mobile emission sources and topographical/meteorological conditions that inhibit atmospheric dispersion combine to create adverse pollution effects in the SCAB. The SCAB is an "extreme" nonattainment area for ozone (8-hour standard) and a nonattainment area for fine particulate matter ($PM_{2.5}$) (24-hour standard) in regard to the National Ambient Air Quality Standards (NAAQS). The SCAB is in attainment of the NAAQS for PM_{10}, carbon monoxide (CO), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). In regard to the California Ambient Air Quality Standards (CAAQS), the SCAB

is presently in nonattainment for ozone, PM_{10}, $PM_{2.5}$, NO_2, and lead. The SCAB is in attainment of the CAAQS for SO_2, CO, and sulfates and is unclassified for hydrogen sulfide and visibility-reducing particles (CARB 2013). In addition, the 2012 AQMP predicts attainment of all NAAQS within the SCAB, including $PM_{2.5}$ by 2014 and ozone by 2023 (SCAQMD 2013). However, the predictions for $PM_{2.5}$ and ozone attainment are speculative at this time.

Contribution of the proposed Project and alternatives to cumulative impacts was assessed using SCAQMD's guidance, which states that projects that exceed SCAQMD's project-level significance thresholds are considered by SCAQMD to be cumulatively considerable. Conversely, projects that do not exceed the project-level thresholds are generally not considered to be cumulatively considerable. Significance thresholds are presented in Section 3.2.4.4. SCAQMD guidance does not distinguish between attainment and nonattainment pollutants and this analysis assumes that (for Cumulative Impacts AQ-1, AQ-2, AQ-3, AQ-4, and AQ-5) exceedance of any project-level threshold would also constitute a cumulatively considerable impact. Cumulative Impact AQ-6 is addressed qualitatively, in accordance with SCAQMD's qualitative threshold.

Toxic Air Contaminants

SCAQMD's MATES III study (SCAQMD 2008) showed that the cancer risk in 2005 from toxic air contaminants was estimated at 1,000 to 2,000 in a million in the San Pedro and Wilmington areas. In the Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach, CARB also estimated that elevated levels of cancer risk due to operational emissions from port-area sources occur within and near the ports (CARB 2006). To reduce port-related cancer risks in proximate communities, the Ports of Los Angeles and Long Beach approved port-wide air pollution control measures through implementation of the CAAP, designed with the goal of reducing diesel particulate matter (DPM) emissions by 85% (POLA and POLB 2010). In developing the San Pedro Bay Standards, the Port recognized the importance of ensuring that new projects are designed to be consistent with the CAAP as well as with other applicable regulations allowing the Port to meet long-term health risk and emission reduction goals.

Contribution of the proposed Project and alternatives to cumulative impacts was, for the most part, assessed using SCAQMD's guidance, which states that projects that exceed the project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable (SCAQMD 2003). However, given the existing elevated cancer risk in communities proximate to the Port, this analysis conservatively assumes that (for Cumulative Impact AQ-7) impacts that would be below the SCAQMD threshold but above the CEQA or NEPA baseline would be cumulatively considerable.

4.2.2.3 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

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

In the time period between 2015 and 2016, several large construction projects would occur concurrently at the Port and surrounding areas (see Table 4-1). The construction impacts of these 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 (PM_{10}, $PM_{2.5}$, nitrogen oxides [NO_X], sulfur oxides [SO_X], CO, and volatile organic compounds [VOCs]), the related projects would result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, NO_X, SO_X, CO and VOC.

Contribution of the Proposed Project (Prior to Mitigation)

Proposed project construction emissions would exceed SCAQMD significance thresholds for PM_{10}, $PM_{2.5}$ NO_X, CO, and VOC in 2015 and for $PM_{2.5}$, NO_X, CO, and VOC in 2016 under CEQA. Construction emissions would also exceed SCAQMD significance thresholds for $PM_{2.5}$, NO_X, CO, and VOC in 2015 and 2016 under NEPA. These impacts would combine with cumulatively significant impacts from concurrent related construction projects. As a result, without mitigation, proposed project construction emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for PM_{10}, $PM_{2.5}$, NO_X, CO, and VOC emissions under CEQA and for $PM_{2.5}$, NO_X, CO, and VOC under NEPA.

Proposed project overlapping construction and terminal operational emissions during the construction period would exceed SCAQMD significance thresholds for PM_{10}, $PM_{2.5}$, NO_X, CO, and VOC under CEQA. Overlapping construction and terminal operational emissions would also exceed SCAQMD significance thresholds for $PM_{2.5}$, NOx, CO, and VOC under NEPA. These impacts would combine with cumulatively significant impacts from concurrent related construction projects. As a result, without mitigation, the proposed project overlapping construction and operational emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for PM_{10}, $PM_{2.5}$, NO_X, CO, and VOC under CEQA and for $PM_{2.5}$, NO_X, CO, and VOC under NEPA.

Contribution of the Alternatives

Alternative 1 would have no construction activities and would therefore not make a cumulatively considerable contribution to an existing significant cumulative impact.

Alternative 2 construction emissions would exceed SCAQMD significance thresholds for NO_X and VOC in 2015 under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively considerable. As a result, without mitigation, Alternative 2 construction emissions would make a cumulatively considerable contribution to a significant cumulative impact for

NO_X and VOC emissions under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in emissions between Alternative 2 and the NEPA baseline and no impact under NEPA.

Alternative 2 overlapping construction and terminal operational emissions during the construction period would exceed SCAQMD significance thresholds for NO_X and VOC under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 2 overlapping construction and operational emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for NO_X and VOC under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in emissions between Alternative 2 and the NEPA baseline and no impact under NEPA.

Alternative 3 construction emissions would exceed SCAQMD significance thresholds for PM_{10}, $PM_{2.5}$ NO_X, CO, and VOC in 2015 and for NO_X in 2016 under CEQA. Construction emissions would exceed SCAQMD significance thresholds for $PM_{2.5}$, NO_X, CO, and VOC in 2015 and for NO_X in 2016 under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 3 construction emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for PM_{10}, $PM_{2.5}$, NO_X, CO, and VOC emissions under CEQA and for $PM_{2.5}$, NO_X, CO, and VOC under NEPA.

Alternative 3 overlapping construction and terminal operational emissions during the construction period would exceed SCAQMD significance thresholds for PM_{10}, $PM_{2.5}$, NO_X, CO, and VOC under CEQA; and for $PM_{2.5}$, NO_X, CO, and VOC under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 3 overlapping construction and operational emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for PM_{10}, $PM_{2.5}$, NO_X, CO, and VOC under CEQA; and for $PM_{2.5}$, NO_X, CO, and VOC under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation, proposed project construction emissions would be reduced but would continue to exceed SCAQMD significance thresholds for $PM_{2.5}$ NO_X, CO, and VOC in 2015 and for NO_X in 2016 under CEQA. Proposed project construction emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X, CO, and VOC in 2015 and for NO_X in 2016 under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, construction of the proposed Project would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for $PM_{2.5}$, NO_X, CO, and VOC emissions under CEQA; and for NO_X, CO, and VOC under NEPA.

After mitigation, proposed project overlapping construction and operational emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X, CO, and VOC under CEQA and NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be

cumulatively significant. Therefore, after mitigation, construction of the proposed Project would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_X, CO, and VOC emissions under CEQA and NEPA.

Alternative 1 would have no construction activities and would therefore not make a considerable contribution to an existing significant cumulative impact.

After mitigation, Alternative 2 construction emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X and VOC in 2015 under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, construction of Alternative 2 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_X and VOC emissions under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in emissions between Alternative 2 and the NEPA baseline and no impact under NEPA.

After mitigation, Alternative 2 overlapping construction and operational emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X and VOC under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, overlapping construction and operation of Alternative 2 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_X and VOC emissions under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in emissions between Alternative 2 and the NEPA baseline and no impact under NEPA.

After mitigation, Alternative 3 would have the same impact determination as the proposed Project.

4.2.2.4 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

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

In the time period between 2015 and 2016, several large construction projects would occur concurrently at the Port and surrounding areas (see Table 4-1). The construction impacts of these related projects would be cumulatively significant if their combined construction ambient pollutant concentrations would exceed the ambient concentration thresholds for 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 PM_{10}, and $PM_{2.5}$, and NO_2 and are unlikely to exceed the

thresholds for CO. Consequently, construction of the related projects would result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, and NO_2.

Contribution of the Proposed Project (Prior to Mitigation)

Construction of the proposed Project would exceed the federal 1-hour, state 1-hour and state annual NO_2, the 24-hour and annual PM_{10}, and the 24-hour $PM_{2.5}$ ambient air thresholds under CEQA and NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, impacts from proposed project construction would make a cumulatively considerable contribution to an existing significant cumulative impact related to ambient NO_2, PM_{10}, and $PM_{2.5}$ levels under CEQA and NEPA.

Overlapping construction and operations of the proposed Project would exceed the federal 1-hour, state 1-hour and state annual NO_2, the 24-hour and annual PM_{10}, and the 24-hour $PM_{2.5}$ ambient air thresholds under CEQA and NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, impacts from proposed project overlapping construction and operations would make a cumulatively considerable contribution to an existing significant cumulative impact related to ambient NO_2, PM_{10}, and $PM_{2.5}$ levels under CEQA and NEPA.

Contribution of the Alternatives

Alternative 1 would have no construction activities and would therefore not make a considerable contribution to an existing significant cumulative impact.

Construction of Alternative 2 would exceed the federal 1-hour and state 1-hour NO_2 and the 24-hour PM_{10} ambient air thresholds under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, impacts from Alternative 2 construction would make a cumulatively considerable contribution to an existing significant cumulative impact related to ambient NO_2 and PM_{10} levels under CEQA. Overlapping construction and operations of Alternative 2 would exceed the federal 1-hour NO_2 and 24-hour PM_{10} ambient air thresholds under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. As a result, without mitigation, impacts from Alternative 2 overlapping construction and operations would make a cumulatively considerable contribution to an existing significant cumulative impact related to ambient NO_2 and PM_{10} levels under CEQA. Alternative 2 would have the same conditions as the NEPA baseline, therefore there would be no impacts under NEPA.

Alternative 3 would have the same impact determinations during construction as the proposed Project, except that overlapping construction and operations impacts would not exceed state annual NO_2 ambient air thresholds prior to mitigation under either CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation, proposed project construction impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour and state 1-hour NO_2,

and for 24-hour PM_{10} under CEQA. Impacts would also be reduced but would continue to exceed significance thresholds for the federal 1-hour and state 1-hour NO_2 under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, construction of the proposed Project would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 and PM_{10} under CEQA and for NO_2 under NEPA.

After mitigation, proposed project overlapping construction and operations impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour and state 1-hour NO_2, and for 24-hour PM_{10} under CEQA. Impacts would also be reduced but would continue to exceed significance thresholds for the federal 1-hour and state 1-hour NO_2 under NEPA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, overlapping construction and operations of the proposed Project would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 and PM_{10} under CEQA and for NO_2 under NEPA.

Alternative 1 would have no construction activities and would therefore not make a cumulatively considerable contribution to an existing significant cumulative impact.

After mitigation, Alternative 2 construction impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour and state 1-hour NO_2 and 24-hour PM_{10} under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, construction of Alternative 2 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 and PM_{10} under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in impacts between Alternative 2 and the NEPA baseline and no impact under NEPA.

After mitigation, Alternative 2 overlapping construction and operations impacts would be reduced but would continue to exceed significance thresholds for the 24-hour PM_{10} under CEQA. These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, overlapping construction and operation of Alternative 2 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for PM_{10} under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in impacts between Alternative 2 and the NEPA baseline and no impact under NEPA.

After mitigation, Alternative 3 would have the same impact determination as the proposed Project.

4.2.2.5 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

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Concurrent related projects at the Port and surrounding areas (see Table 4-1) would contribute to cumulatively considerable impacts. The operational impacts of related 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 and precursors, the related projects would result in a significant cumulative air quality criteria pollutant impact.

Contribution of the Proposed Project (Prior to Mitigation)

Proposed Project operational emissions would exceed SCAQMD significance thresholds for NO_X, CO, and VOC in 2017, 2020, and 2026 under CEQA. Operational emissions would also exceed SCAQMD significance thresholds for NO_X in 2017, 2020, and 2026 and for VOC in 2020 and 2026 under NEPA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, proposed project operational emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for NO_X, CO, and VOC under CEQA and for NO_X and VOC under NEPA.

Contribution of the Alternatives

Alternative 1 operational emissions would exceed SCAQMD significance thresholds for VOC and NO_X in 2017, 2020, and 2026 under CEQA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 1 impacts would make a cumulatively considerable contribution to an existing significant cumulative impact for VOC and NO_X under CEQA. NEPA does not require analysis of Alternative 1.

Alternative 2 operational emissions would exceed SCAQMD significance thresholds for VOC and NO_X in 2017, 2020, and 2026 under CEQA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 2 impacts would make a cumulatively considerable contribution to an existing significant cumulative impact for VOC and NO_X under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in emissions between Alternative 2 and the NEPA baseline, and no impact under NEPA.

Alternative 3 operational emissions would exceed SCAQMD significance thresholds for VOC and NO_X in 2017, 2020, and 2026 and for CO in 2020 and 2026 under CEQA. Operational emissions would also exceed SCAQMD significance thresholds for NO_X in 2017, 2020, and 2026 and for VOC, CO, and $PM_{2.5}$ in 2020 and 2026 under NEPA.

These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 3 operational emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for VOC, NO_X, and CO under CEQA and for NO_X, VOC, CO, and $PM_{2.5}$ under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation, proposed project operational emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X, CO, and VOC in 2017, 2020, and 2026 under CEQA. Proposed project operational emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO_X in 2017, 2020, and 2026 and for VOC in 2020 under NEPA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. Therefore, after mitigation, the proposed Project would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_X, CO, and VOC emissions under CEQA and for NO_X and VOC under NEPA.

Mitigation is not required under Alternative 1 because there would be no discretionary action under CEQA. Alternative 1 operational emissions would continue to exceed SCAQMD significance thresholds for VOC and NO_X in 2017, 2020, and 2026 under CEQA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, after mitigation, Alternative 1 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for VOC and NO_X under CEQA. NEPA does not require analysis of Alternative 1.

After mitigation, Alternative 2 operational emissions would be reduced but would continue to exceed SCAQMD significance thresholds for VOC and NO_X in 2017, 2020, and 2026 under CEQA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, after mitigation, Alternative 2 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for VOC and NO_X under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in emissions between Alternative 2 and the NEPA baseline and no impact under NEPA.

After mitigation, Alternative 3 operational emissions would be reduced but would continue to exceed SCAQMD significance thresholds for VOC and NO_X in 2017, 2020, and 2026 and for CO in 2020 and 2026. Alternative 3 operational emissions would be reduced but would continue to exceed SCAQMD significance thresholds for VOC and NO_X in 2020 and 2026. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. Therefore, after mitigation, Alternative 3 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for VOC, NO_X, and CO under CEQA and for VOC and NO_X under NEPA.

4.2.2.6 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

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Concurrent related projects at the Port and surrounding areas (see Table 4-1) would contribute to cumulatively considerable impacts. The operations impacts of related projects would be cumulatively significant if their combined operations ambient pollutant concentrations would exceed the 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 PM_{10}, $PM_{2.5}$, and NO_2, and are unlikely to exceed the thresholds for CO. Consequently, operation of the related projects would result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, and NO_2.

Contribution of the Proposed Project (Prior to Mitigation)

Operation of the proposed Project would exceed the federal 1-hour NO_2 and the 24-hour and annual PM_{10} ambient air thresholds under CEQA and NEPA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, impacts from proposed project operations would make a cumulatively considerable contribution to an existing significant cumulative impact related to ambient NO_2 and PM_{10} levels under CEQA and NEPA.

Contribution of the Alternatives

Alternative 1 and Alternative 2 operations would exceed the federal 1-hour NO_2 and the 24-hour and annual PM_{10} ambient air thresholds under CEQA. Impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, impacts from Alternative 1 and Alternative 2 operations would make a cumulatively considerable contribution to an existing significant cumulative impact related to ambient NO_2 and PM_{10} levels under CEQA. NEPA does not require analysis of Alternative 1. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in impacts between Alternative 2 and the NEPA baseline, and no impact under NEPA. Impact determinations would be the same for Alternative 3 as for the proposed Project.

Mitigation Measures and Residual Cumulative Impacts

After mitigation, proposed project impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour NO_2 and the 24-hour and annual PM_{10} ambient air thresholds under CEQA and NEPA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. Therefore, after mitigation, the proposed Project would make a cumulatively

considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 and PM_{10} under CEQA and NEPA.

Mitigation is not required under Alternative 1 because there would be no discretionary action under CEQA. Alternative 1 impacts would continue to exceed significance thresholds for the federal 1-hour NO_2 and the 24-hour and annual PM_{10}. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. Therefore, Alternative 1 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 and PM_{10} under CEQA. NEPA does not require analysis of Alternative 1.

After mitigation, Alternative 2 impacts would be reduced but would continue to exceed significance thresholds for the federal 1-hour NO_2 and the 24-hour and annual PM_{10} ambient air thresholds under CEQA. These impacts would combine with impacts from concurrent related projects, which would already be cumulatively significant. Therefore, after mitigation, Alternative 2 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_2 and PM_{10} under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in impacts between Alternative 2 and the NEPA baseline and no impact under NEPA.

After mitigation, Alternative 3 would have the same impact determination as the proposed Project.

4.2.2.7 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

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Concurrent related projects at the Port and surrounding areas (see Table 4-1) would result in significant cumulative impacts to air quality if they generate traffic levels that cause exceedances of the ambient air quality standards for CO near roadways and intersections. Although it is possible that localized CO concentrations could exceed standards, on a regional basis the air basin is in attainment of CO standards, and that condition is likely to continue in the future as more stringent vehicle emission standards are implemented and older vehicles are gradually replaced with newer, cleaner vehicles. The impacts of related projects would therefore be less than cumulatively significant.

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 proposed project operation are not anticipated because CO standards would not be exceeded. As a result, proposed project operations would not make a cumulatively considerable contribution to cumulative CO hot spot impacts under CEQA or NEPA.

Contribution of the Alternatives

As with the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to cumulative CO hot spot impacts 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 cumulative CO hot spot impacts.

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

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. Some individuals may find that diesel combustion emission odors are objectionable in nature, although quantifying the odorous impacts of these emissions on the public is difficult. Due to the mobile nature of Project emission sources and the distance between residents (sensitive receptors) and the Project site, odorous emissions in the proposed project region would be less than cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

Operation of the proposed Project would increase diesel emissions within and near the Port. The mobile nature of most Project emission sources would serve to disperse proposed project emissions. Additionally, the distance between proposed project emission sources and the nearest residents is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. As a result, proposed project operations would not make a considerable contribution to cumulative odor impacts under CEQA or NEPA.

Contribution of the Alternatives

As with the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to cumulative 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 a cumulatively considerable contribution to cumulative odor impacts.

4.2.2.9 Cumulative Impact AQ-7: The proposed Project would expose receptors to significant levels of toxic air contaminants—Cumulatively Considerable and Unavoidable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The Multiple Air Toxics Exposure Study (MATES-II) conducted by SCAQMD in 2000 estimated the existing cancer risk from toxic air contaminants in the SCAB to be 1,400 in a million (SCAQMD 2000). In MATES III, completed by SCAQMD (SCAQMD 2008), the cancer risk from TACs was estimated at 1,000 to 2,000 in a million in the San Pedro and Wilmington areas. In the Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach, CARB estimated that elevated levels of cancer risks due to operational emissions from port-area sources occur within and near the Ports (CARB 2006). Based on this information, cancer risk from TAC emissions within the project region, including the past, present, and reasonably foreseeable future projects and the proposed Project, is considered a significant cumulative impact. Non-cancer impacts associated with past, present, and reasonably foreseeable projects in the proposed project area were also assumed to have significant cumulative impacts.

The Port has approved port-wide air pollution control measures through their CAAP (LAHD 2010). Implementation of these measures would reduce the health risk impacts from the proposed Project and future projects at the Port. Currently adopted regulations and future rules proposed by CARB and EPA 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 proposed Project. Therefore, it is unknown at this time how these future measures would reduce cumulative health risk impacts within the proposed project area and, therefore, airborne cancer and non-cancer impacts within the proposed project region must be considered to be cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

Prior to mitigation, proposed project construction and operation emissions of TACs would increase cancer risks above the significance threshold for occupational receptors in comparison to the CEQA baseline and for marina-residential and occupational receptors in comparison to the cumulative 2026 CEQA baseline. The proposed Project would not increase residential incremental cancer risk in excess of the significance threshold at any land-based residential areas, nor at any other sensitive receptor under CEQA. The proposed Project would also not increase cancer risk for any receptor above the significance threshold under NEPA. However, although proposed project cancer risk would be below SCAQMD's project-level significance thresholds, the impacts would be greater than the CEQA and NEPA baselines and would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, the proposed Project would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk under CEQA and NEPA.

The proposed Project would not increase non-cancer chronic or acute impacts above significance thresholds under CEQA or NEPA. As a result, without mitigation, the proposed Project would not make a considerable contribution to cumulative non-cancer chronic or acute health impacts under CEQA or NEPA.

Contribution of the Alternatives

Alternative 1 cancer risk would exceed the significance threshold for occupational receptors in comparison to the CEQA baseline and the cumulative 2026 CEQA baseline. Alternative 1 would not increase residential incremental cancer risk in excess of the significance threshold at any residential areas nor at any other sensitive receptor under CEQA. However, although Alternative 1 cancer risk would be below SCAQMD's project-level significance thresholds, the impacts would be greater than the CEQA baseline and would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 1 would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk under CEQA. NEPA does not require evaluation of Alternative 1.

Alternative 1 would not increase non-cancer chronic or acute impacts above significance thresholds under CEQA. As a result, without mitigation, Alternative 1 would not make a cumulatively considerable contribution to cumulative non-cancer chronic or acute health impacts under CEQA. NEPA does not require evaluation of Alternative 1.

Alternative 2 cancer risk would exceed the significance threshold for occupational receptors in comparison to the CEQA baseline and the cumulative 2026 CEQA baseline. Alternative 2 would not increase residential incremental cancer risk in excess of the significance threshold at any residential areas nor at any other sensitive receptor under CEQA. However, although Alternative 2 cancer risk would be below SCAQMD's project-level significance thresholds, the impacts would be greater than the CEQA baseline and would combine with impacts from concurrent related projects, which would already be cumulatively significant. As a result, without mitigation, Alternative 2 would make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in impacts between Alternative 2 and the NEPA baseline and no impact under NEPA.

Alternative 2 would not increase non-cancer chronic or acute impacts above significance thresholds under CEQA. As a result, without mitigation, Alternative 2 would not make a cumulatively considerable contribution to cumulative non-cancer chronic or acute health impacts under CEQA. Alternative 2 would have the same conditions as the NEPA baseline. Therefore, there would be no incremental difference in impacts between Alternative 2 and the NEPA baseline and no impact under NEPA.

Alternative 3 would have the same impact determinations as the proposed Project.

Mitigation Measures and Residual Cumulative Impacts

Although overall emissions would be reduced with mitigation, mitigation would not result in substantial reduction at maximally impacted receptors. Therefore, the proposed Project and Alternatives 1 through 3 would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for cancer risk under CEQA, after mitigation. The proposed Project and Alternative 3 would also make

a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for cancer risk under NEPA, after mitigation.

4.2.2.10 Cumulative Impact AQ-8: The proposed Project would not conflict with or obstruct the implementation of an applicable AQMP—Less than Cumulatively Considerable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Concurrent related projects at the Port and surrounding areas (see Table 4-1) would result in significant cumulative impacts if they result in population growth or operational emissions that exceed the assumptions in the 2012 AQMP (SCAQMD 2013). 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. Since the 2012 AQMP accounts for population projections that were developed by SCAG and accounts for planned land use and transportation infrastructure growth, the related projects would be consistent with the AQMP. Therefore, 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 2012 AQMP proposes mobile source control measures and clean fuel programs that are designed to bring the SCAB into attainment of the state and national ambient air quality standards. Many of these AQMP control measures are adopted as SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the region. Proposed sources would have to comply with all applicable SCAQMD rules and regulations; therefore, the proposed Project would not conflict with or obstruct implementation of the AQMP.

LAHD regularly provides SCAG with its Port-wide cargo forecasts for development of the AQMPs. Therefore, the attainment demonstration included in the 2012 AQMP accounts for the emissions generated by projected future growth at the Port. As a result, the proposed Project would not make a cumulatively considerable contribution to a 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 3 would not make a cumulatively considerable contribution to a 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.

4.2.3 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 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-round 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, pile driving, 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, or protected species, 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 reduced 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. 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.

Periodic maintenance dredging (#26), 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 (#22), and other projects that involve dredging such as the TraPac Marine Terminal (#1), San Pedro Waterfront Project (#2), which includes the Outer Harbor Cruise Terminal Project (#27) and Relocation of Jankovich Marine Fueling Station (#33), Cabrillo Way Marina (#4), Evergreen Container Terminal (#5), China Shipping Development Project (#10), APL Container Terminal (#35), Yang Ming Container Terminal (#21), Al Larson Boat Shop Improvement Project (#34), Middle Harbor Terminal Redevelopment (#67), Piers G & J (#68), Pier S (#71) and Eagle Rock Construction Aggregate Terminal (#77) have the potential to adversely affect California least tern foraging during construction activities. These activities have affected or could affect a small portion of the Harbor during any single episode and are of limited duration for each project. 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 near the nesting colony would not be expected to have cumulatively significant effects on the California least tern. For these reasons, impacts to the California least tern would not be cumulatively significant. With respect to other special-status bird species (Table 4-2), it is not expected that any nesting or foraging habitat or individuals would be lost as a result of backland developments.

Table 4-2: Threatened and Endangered and Special-Status Bird Species in the Proposed Project Area

Species	Status	Notes
Belding's savannah sparrow	CDFW: E	Inhabits pickleweed marsh. No individuals observed in 2007–2008.
Black oystercatcher	USFWS: BCC	Nested in Port Complex in 2007–2008; no individuals observed near YTI in 2007–2008.
Black skimmer	CDFW: SSC, USFWS: BCC, etc.	No nesting in the harbor in 2008; no individuals observed near YTI in 2007–2008.
Brant	CDFW: SSC	Six individuals observed during February 2008 in Long Beach Outer Harbor; no observations near YTI.
Burrowing owl	CDFW: SSC, USFWS: BCC	Observed on Pier 400 in 2007–2008; nesting status within the Port Complex unknown.
California least tern	CDFW: E, USFWS: E	Breeds on Pier 400 from about approximately April through August; forages preferentially over shallow waters; six sightings near YTI in May 2008.
California brown pelican	CDFW: FP	Abundant throughout Port Complex.
Caspian tern	USFWS: BCC	Nested on Pier 400 in 2011 and 2012. One to six individuals observed at a time off YTI in summer 2008.
Common loon	CDFW: SSC	Thirteen individual observed throughout Port Complex in 2007–2008; no observations near YTI.
Double-crested cormorant	CDFW: Watch List	Nested in transmission towers in Long Beach Harbor in 2007–2008; among most abundant birds in the harbor.
Elegant tern	CDFW: Watch List	Nested on Pier 400 in 1998–2005 and 2012; very abundant, forages over water near nests.
Loggerhead shrike	CDFW: SSC, USFWS: BCC	Observed in Inner Harbor areas of Port Complex in 2001–2002; no observations near YTI in 2007–2008.
Long-billed curlew	CDFW: Watch List, USFWS: BCC	No observations near YTI in 2007–2008.
Merlin	CDFW: Watch List	One individual observed on riprap in Long Beach Outer Harbor in December 2007; no observations near YTI in 2007–2008.
Osprey	CDFW: Watch List	Observed in Port Complex during all surveys in 2007–2008, but no observations near YTI.
Peregrine falcon	CDFW: FP, USFWS: BCC	Nests on the Schuyler Heim and Gerald Desmond Bridges. Usually observed near nesting sites; observed off YTI during two surveys in 2008.
Western snowy plover	USFWS: T, BCC	Infrequent visitor to harbor; observed on Pier 400. No observations during 2007–2008 surveys.

Note: USFWS = U.S. Fish and Wildlife Service; CDFW = California Department of Fish and Wildlife; E = Endangered; T = Threatened, SSC = Species of Special Concern; FP = Fully Protected; BCC = USFWS Birds of Conservation Concern. Data in Notes from SAIC (2010) and Keane (2009, 2010).

In-water/over-water construction activities (i.e., TraPac Marine Terminal [#1], San Pedro Waterfront [#2], including the Outer Harbor Cruise Terminal Project [#27], Port's O' Call Redevelopment [#29], Relocation of Jankovich Marine Fueling Station [#33], Channel Deepening Project [#3], Cabrillo Way Marina [#4], Evergreen Container

Terminal [#5], China Shipping Development Project [#10], APL Container Terminal [#35], Yang Ming Container Terminal [#21], Inner Cabrillo Beach Water Quality Improvement Program [#22], Middle Harbor Terminal [#67], Piers G & J Redevelopment [#68], Pier S Marine Terminal [#71], Eagle Rock Construction Aggregate Terminal [#77], Gerald Desmond Bridge [#73], Schuyler F. Heim Bridge [#83], and Cerritos Channel Bridge [#85]) 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 construction. 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. 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, gray whale, minke whale, killer 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. 2009; NMFS 2010). The blue whale, fin whale, humpback whale, sperm whale, gray whale, killer whale, southern sea otter, and all of the sea turtles are all listed as threatened or 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. Additionally, blue whales have historically been a target of commercial whaling activities worldwide, which has reduced the population. 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% 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 more than 90% 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 traffic to and from the Harbor; therefore, the related projects could potentially increase whale mortalities from vessel strikes, which is considered to be a cumulatively 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], Outer Harbor Cruise Terminal [#27], Channel Deepening [#3], Evergreen Container Terminal [#5], Ultramar Lease Renewal Project [#8], China Shipping Development Project [#10], Interim Container Terminal [#1], Yang Ming Container Terminal [#21], APL Container Terminal [#35], Middle Harbor Terminal Redevelopment [#67], Piers G & J [#68], Pier S [#71] and Eagle Rock Construction Aggregate Terminal [#77]) 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 the total number of vessels calling in the Port of Los Angeles from the cumulative projects identified in Table 4-1 would increase underwater noise levels. However, the increase is not expected to result in a significant cumulative impact, as a measurable change of 3 dBA would require that the number of vessels would need to double in the Harbor. Therefore, no significant cumulative in-water noise impacts would be expected to 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 vicinity of Port construction projects would likely avoid the disturbance areas and thus would not be injured. In addition, in-water construction of related projects (San Pedro Waterfront Projects [#2, 29, 31, 35], Evergreen Terminal Project [#5], APL Container Terminal [#35] and Al Larson Boat Shop Improvement Project [#34]) 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 in order to avoid any disturbance. As a consequence, construction of the related projects would not be expected to result in significant cumulative impacts to marine mammals.

Contribution of the Proposed Project (Prior to Mitigation)

Construction of the proposed Project is not likely to result in the loss of individuals or the reduction of existing critical habitat of a state or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a Species of Special Concern. No designated or proposed critical habitat is present in or adjacent to the proposed project area. In-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. Implementation of required water quality monitoring during dredging according to the requirements of the RWQCB, and implementation of standard dredging BMPs via adaptive management of the dredging, would keep these impacts to a less-than-significant level. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from construction activities under CEQA and NEPA.

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 operations. Noise from impact pile driving could cause seals and sea lions to avoid construction areas during pile driving but would not result in the loss of individuals or habitat. Impacts would be significant; however, impacts on marine mammals resulting from noise associated with pile driving would be reduced with implementation of **MM BIO-1**. This 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.

Pile driving associated with other projects in the vicinity of the proposed Project (i.e., San Pedro Waterfront Projects [#2, #29, #31, #35] and Evergreen Terminal Project [#5], across and down the main channel from the proposed project site, respectively, and at the APL Container Terminal [#35] and Al Larson Boat Shop Improvement Projects [#34], south of the proposed Project), is expected to occur more than one mile away, and there is adequate area in the harbor for marine mammals to avoid pile driving should it be occurring in multiple locations concurrently. As such, possible concurrent pile driving activities are not expected to be cumulatively significant. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to pile driving.

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. The small increase in vessels calling at the YTI Terminal relative to the total number of vessels calling in the Port of Los Angeles would not result in a measurable change in overall noise (the number of vessels would need to double to increase sound in the harbor by 3 dBA). Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from over-water noise under CEQA and NEPA.

The increase in vessel traffic associated with the proposed Project (an increase of up to 44 vessels annually) would also increase the likelihood of a vessel collision with a marine mammal or sea turtle, which could result in injury or mortality. However, implementation of **MM AQ-10** would reduce the potential for vessel collision with marine mammals and sea turtles. 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, Alternative 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact related to special-status species or critical habitat, from construction activities, pile driving, and noise from increased vessel traffic under CEQA and NEPA. Alternative 3 would not include dredging and pile driving at Berths 214–216, but it would include dredging and pile driving at Berths 217–220; however, because pile driving associated with other projects in the Harbor is expected to occur more than one mile away, possible concurrent pile driving activities are not expected to be cumulatively significant.

In addition, for the same reasons as discussed for the proposed Project, Alternative 3 could make a cumulatively considerable contribution to a significant cumulative impact

to marine mammals in terms of potential contribution to whale mortality from vessel strikes, under CEQA and NEPA.

Because under Alternative 1 there would be no new construction at the proposed project site resulting in loss of individuals or habitat of special-status species, no impacts for construction would occur under CEQA. Operations under Alternative 1 would increase vessel traffic. Thus, for the same reasons as discussed for the proposed Project, Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from noise from increased vessel traffic, but it could make a cumulatively considerable contribution to a significant cumulative impact to marine mammals in terms of potential contribution to whale mortality from vessel strikes under CEQA. Alternative 1 is not required to be analyzed under NEPA.

Because under Alternative 2 only minor backlands improvements would occur on the existing developed proposed project site, there would be no loss of individuals or habitat of special-status species, and thus no impacts for construction would occur under CEQA. Operations under Alternative 2 would increase vessel traffic. Thus, for the same reasons as discussed for the proposed Project, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from noise from increased vessel traffic, but it could make a cumulatively considerable contribution to a significant cumulative impact to marine mammals in terms of potential contribution to whale mortality from vessel strikes, under CEQA. Alternative 2 would result in no impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Mitigation measure **MM BIO-1** requires the establishment of a 300-meter-radius safety zone and the monitoring for marine mammals within the zone, which would reduce potential cumulative effects from sheet pile driving to marine mammals and ensure that the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to pile driving. 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 operations, and impacts would be expected to be significant. However, impacts on marine mammals resulting from noise associated with pile driving would be reduced with implementation of **MM BIO-1**. This would ensure that marine mammals would be readily able to avoid pile driving areas, and injury to marine mammals from pile driving sounds would not be expected. This would reduce impacts to less-than-significant levels during construction, and no impacts related to pile driving would occur during the operational phase. Residual impacts would be less than significant.

The proposed Project and Alternative 3 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 to marine mammal mortalities from vessel traffic under CEQA (Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 is the same as the NEPA baseline so there is no incremental difference between them). Mitigation measure **MM AQ-9** requiring ships calling at Berths 212–220 to participate in the VSRP would reduce the potential for

vessel collision with marine mammals for the proposed Project and Alternative 3; 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 Alternative 3 to contribute to a cumulatively considerable residual impact related to vessel strikes under CEQA or NEPA would remain. Similarly, operation of Alternative 2 would contribute a residual impact related to vessel strikes under CEQA. No additional mitigation would be available for the proposed Project and Alternatives 2 and 3 to reduce cumulative impacts related to vessel strikes to below the level of significance. No mitigation would be applicable to Alternative 1 because no discretionary action regarding the existing terminal lease that could implement mitigation would occur. Therefore, the potential for operation of Alternative 1 to make a residual cumulatively considerable contribution to significant cumulative impact related to vessel strikes under CEQA 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 or an alternative 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 have resulted in or could result in a loss of EFH include TraPac Marine Terminal (#1), Channel Deepening Project (#3), China Shipping Development Project (#10), Al Larson Boat Shop Improvement (#34), Middle Harbor Terminal (#67), Piers G & J Terminal (#68), Schuyler Heim Bridge (#83), and Cerritos Channel Bridge (#85). The loss of EFH since 1996 is significant but can be mitigated under CEQA and NEPA through the use of mitigation bank credits for the loss of marine habitat that offset the losses of EFH. Temporary disturbances within EFH may also occur during in-water construction activities from cumulative projects including: TraPac Marine Terminal (#1), San Pedro Waterfront (#2, #27, #33), Channel Deepening Project (#3), Cabrillo Way Marina (#4), Evergreen Container Terminal (#5), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), Inner Cabrillo Beach Water Quality Improvement Program (#22), Al Larson Boat Shop Improvement (#34), APL Container Terminal (#35), Middle Harbor Redevelopment Project (#67), Piers G & J Redevelopment (#68), Pier S (#71), Gerald Desmond Bridge Replacement (#73), Eagle Rock Construction Aggregate Terminal (#77), Schuyler F. Heim Bridge (#83), and Cerritos Channel Bridge (#85). These disturbances 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 could further degrade the habitat or ultimately result in significant increases in significant cumulative impacts because they would be relatively short in duration, and effects from dredging and other localized construction activities diminish rapidly with distance from the in-water activity. Further, 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 upland construction and operations resulting from the cumulative projects would not be expected to 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 nearest eelgrass bed to the proposed project site is more than 2.5 miles from the nearest (southwestern) edge of the proposed dredging and in-water construction area. The nearest kelp beds to the proposed project site are near the Main Channel entrance (adjacent to the USCG Base and Berth 72) and more than 1.8 miles away. Because the majority of kelp distribution in the Port Complex is located at the outer breakwaters and riprap structures in the Outer Harbors that face harbor entrances (SAIC 2010), giant kelp is not expected to occur in areas adjacent to the proposed Project. The wetland closest to the proposed project site is the Anchorage Road Wetland, which is a mitigation site that has been contoured and enhanced with native plant species to mitigate for the loss of salt marsh habitat in the Northwest Slip (Weston Solutions 2013). This site is about 0.6 mile from the proposed project site and is connected to the Inner Harbor through an open culvert. While recent marine habitat losses have been mitigated pursuant to existing mitigation credit/debit systems, earlier losses of eelgrass, mudflats, and salt marsh from early landfill projects that occurred as a result of the physical changes/development at the Port are considered significant.

Contribution of the Proposed Project (Prior to Mitigation)

Impacts to EFH during construction would be localized and temporary, and operational activities on land and in the water would not be expected to substantially reduce or alter EFH. 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 YTI Terminal and there are no mudflats or marshes near the proposed project site that would be affected by proposed project construction or operation. In the unlikely event that eelgrass is found in the vicinity of any of the in-water construction areas, a plan would be developed to ensure that there would be no net loss of eelgrass habitat, consistent with the Southern California Eelgrass Mitigation Policy (SCEMP; NMFS 1991 as amended). Runoff from the re-paved areas of the proposed project site would be routed to existing on-site storm drains, treated via BMP devices, and discharged to the East Basin Channel. The runoff is not expected to adversely affect eelgrass beds, kelp beds, or wetlands in the Harbor. 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, including wetlands, 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, Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to natural habitats, special aquatic sites, or plant communities.

Because under Alternative 1 there would be no new construction at the proposed project site resulting in substantial reduction or alteration of special habitats, aquatic sites, or biological communities, no impacts for construction would occur under CEQA. Operations under Alternative 1 would not result in a substantial reduction or alteration of special habitats, aquatic sites, or biological communities, including wetlands, EFH, and eelgrass, and thus no impacts would occur for operations under CEQA. Therefore, Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to natural habitats, special aquatic sites, or plant communities. Alternative 1 is not required to be analyzed under NEPA.

Because under Alternative 2 only minor backlands improvements would occur on the existing developed proposed project site, there would be no reduction or alteration of special habitats, aquatic sites, or biological communities, and no impacts for construction would occur under CEQA. Operations under Alternative 2 would not result in a substantial reduction or alteration of special habitats, aquatic sites, or biological communities, including wetlands, EFH, and eelgrass, and thus no impacts would occur for operations under CEQA. Therefore, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to natural habitats, special aquatic sites, or plant communities. 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, such as the California least tern, rest or breed 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.

Sound pressure waves from pile driving could result in temporary avoidance of the construction areas by fish in the Coastal Pelagics FMP or Pacific sanddab, the only fish species in the Pacific Groundfish FMP that is likely to occur commonly in the proposed project area, as well as cause their mortality. Cumulative projects that could include pile or sheet pile driving include the San Pedro Waterfront Projects (#2, #27, #29, #33), Evergreen Terminal Project (#5), APL Container Terminal (#35) and Al Larson Boat Shop Improvement Project (#34). Concurrent construction activities in the Harbor are unlikely to have an adverse cumulative effect on coastal pelagic fish species, because ample area exists in the Harbor for individuals to move to avoid any disturbance and projects in proximity are not expected to occur concurrently. As a consequence, construction of the related projects would not result in a significant cumulative impact to coastal pelagic fishes.

Turbidity and temporary disturbances to coastal pelagic fishes may also occur during in-water construction activities from cumulative related projects including: TraPac Marine Terminal (#1), San Pedro Waterfront (#2, #27, #33), Channel Deepening Project (#3), Cabrillo Way Marina (#4), Evergreen Container Terminal (#5), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), Inner Cabrillo Beach Water Quality Improvement Program (#22), Al Larson Boat Shop Improvement (#34), APL Container Terminal (#35), Middle Harbor Redevelopment Project (#67), Piers G & J Redevelopment (#68), Pier S (#71), Gerald Desmond Bridge Replacement (#73), Eagle Rock Construction Aggregate Terminal (#77), Schuyler F. Heim Bridge (#83), and Cerritos Channel Bridge (#85). These disturbances in the Harbor occur at specific locations that are scattered in space and time. The concurrent construction activities at these sites would be short in duration, and potential effects from dredging and localized construction activities would diminish rapidly with distance from in-water activity.

Thus, construction of related cumulative projects would not be expected to increase impacts to managed fish species and would not be expected to have a significant cumulative effect related to wildlife movement or migration corridors.

Contribution of the Proposed Project (Prior to Mitigation)

There are no wildlife movement or migration corridors at the proposed project site. Construction activities within the proposed project site would not block or interfere with migration or movement of any bird species covered under the Migratory Bird Treaty Act because the work would be in a small portion of the harbor area where the birds occur, and the birds could easily fly around or over the work. Further, proposed project-related construction vessel traffic to and from the Harbor would not interfere with whale migrations along the coast, as these vessels would represent a small proportion of the total Port-related commercial traffic in the area, and each vessel would have a low probability of encountering migrating whales during transit through coastal waters because these animals are generally sparsely distributed offshore and rarely enter the Port Complex (LAHD and USACE 2007). Therefore, construction and operation of the proposed Project would not affect any migration, including aerial and marine mammal movement or migration corridors in the Harbor or along the coast.

The sound pressure waves from pile driving could result in temporary avoidance of the construction areas by fish in the Coastal Pelagics FMP or Pacific sanddab, as well as cause their mortality. With implementation of **MM BIO-1**, pile driving would initiate with a soft start, which would minimize potential impacts on fish. Avoidance of the area by fish would be temporary, lasting for a few days at a time. There would be no physical barriers to movement, and the baseline conditions for fish and wildlife access would be essentially unchanged. With implementation of **MM BIO-1**, and due to the limited potential impact area, this would not be considered a substantial disruption.

Turbidity and effects related to possible resuspension of contaminants during dredging would be temporary and localized. Implementation of required water quality monitoring during dredging (according to the requirements of the Los Angeles RWQCB), and standard dredging BMPs via adaptive management of the dredging, would result in less-than-significant impacts. Water quality conditions would be expected to quickly return to baseline once dredging and in-water construction activities are completed. Consequently, construction and operation of the proposed Project would not be expected to make a cumulatively considerable contribution to a significant cumulative impact on wildlife movement or migration corridors under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to wildlife migration or movement corridors.

No significant wildlife corridors exist on or near the proposed project site, and because under Alternative 1 there would be no new construction at the proposed project site resulting in interference with wildlife movement or migration corridors, no impacts for construction would occur under CEQA. Continuing operations under Alternative 1 would not introduce any new structures at the proposed project site, and thus no interference with wildlife movement or migration as a result of ongoing operations at the proposed project site would occur, and no impacts for operations would occur under CEQA. Therefore, Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to wildlife migration or movement corridors. Alternative 1 is not required to be analyzed under NEPA.

No significant wildlife corridors exist on or near the proposed project site, and because under Alternative 2 there would be only minor backlands improvements on the existing developed proposed project site, there would be no interference with wildlife movement or migration corridors, and no impacts for construction would occur under CEQA. Continuing operations under Alternative 2 would not interfere with wildlife movement or migration, and no impacts for operations would occur under CEQA. Therefore, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to wildlife migration or movement corridors. Alternative 2 would result in no impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

Condition of approval **MM BIO-1**, which requires the establishment of a 300-meter-radius safety zone and the monitoring for marine mammals within the zone, would reduce potential cumulative effects from sheet pile driving to fish species. Initiation of pile driving with a soft start would also minimize potential impacts to fish and ensure that the

proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to pile driving. This would reduce impacts to less-than-significant levels during construction, and no impacts related to pile driving would occur during the operational phase. Residual impacts would be less than significant.

Turbidity and effects related to possible resuspension of contaminants during dredging would be temporary and localized. Water quality conditions would be expected to quickly return to baseline conditions once dredging and in-water construction activities are completed. Implementation of required water quality monitoring during dredging (according to the requirements of the Los Angeles RWQCB), and standard dredging BMPs via adaptive management of the dredging, would result in less-than-significant impacts, and ensure that the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Neither the proposed Project nor any alternative would make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

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, and 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, #27, #33), Channel Deepening Project (#3), Cabrillo Way Marina (#4), Evergreen Container Terminal (#5), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), Inner Cabrillo Beach Water Quality Improvements (#22), Al Larson Boat Shop Improvement Project (#34), APL Container Terminal (#35), Middle Harbor Terminal Redevelopment (#67), Piers G & J (#68), Pier S (#71), and Rock Construction Aggregate Terminal (#77). Because recolonization of dredged areas and new riprap and piles begins immediately, and within a short time provides a food source for other species such as fish, multiple projects that are spread over time and space

within the Harbor would not be expected to substantially disrupt benthic communities. Construction disturbances caused by the cumulative projects at specific locations in the water and at different times can cause fish and marine mammals to avoid the work area but are not expected to substantially alter the distribution and abundance of these organisms in the Harbor and would not substantially disrupt biological communities. Turbidity results from in-water construction activities occurring in the immediate vicinity of the work and lasts for short durations after the activities that disturb bottom sediments have been completed. Effects on marine biota are thus localized to relatively small areas of the Harbor and are of limited duration for each project. Thus, those projects that are occurring at the same time but that are not nearby would not be expected to have additive effects.

The invasive green alga *Caulerpa* has the potential to spread by fragmentation. Prior to in-water work (including dredging), underwater surveys for *Caulerpa* have been (and would be) conducted to ensure that no *Caulerpa* is present at the proposed project site. In the unlikely event that *Caulerpa* is detected during preconstruction surveys, an eradication program would be implemented per the requirements of the *Caulerpa* Control Protocol (NMFS and CDFG 2008). Construction would commence only after the area is certified to be free of this invasive species. Since 2008, *Caulerpa* surveys have been conducted in the harbor as a standard procedure prior to sediment-disturbing activities, and no *Caulerpa* has been found. Considering the *Caulerpa* survey requirement and absence of *Caulerpa* to date, and with implementation of the aforementioned *Caulerpa* protocols, the potential for cumulative underwater construction activities to spread this species is unlikely.

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], Ultramar Lease Renewal Project [#8], China Shipping Development Project [#10], Yang Ming Container Terminal [#21], Inner Cabrillo Beach Water Quality Improvements [#22], Al Larson Boat Shop Improvement Project [#34], APL Container Terminal [#35], Middle Harbor Terminal Redevelopment [#67], Piers G & J [#68], Pier S [#71], and Rock Construction Aggregate Terminal [#77]) 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 have not and would not be expected to 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 (this includes all projects in Table 4-1 because all drainage from the area that contains the listed cumulative projects is ultimately to the Harbor). Construction runoff would only occur during construction activities, so 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 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 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 be expected to result in significant cumulative biological resources impacts related to runoff.

Cumulative 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), Adaptive Reuse of Warehouses 9 and 10 (#16), Ultramar Lease Renewal Project (#8), Interim Container Terminal (#11), South Wilmington Grade Separation (#20), I-110/C Street/Figueroa Street/Realigned Harry Bridges Interchange (#13), APL Container Terminal (#35), Yang Ming Container Terminal (#21), Pier A East (#70), Schuyler Heim Bridge Replacement (#83), and Cerritos Channel Bridge (#85). 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.

Based on this, past, present, and reasonably foreseeable future projects would not be expected to 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, #27], Channel Deepening [#3], Evergreen Container Terminal [#5], Ultramar Lease Renewal Project [#8], China Shipping Development Project [#10], Interim Container Terminal [#1], Yang Ming Container Terminal [#21], APL Container Terminal [#35], Middle Harbor Terminal Redevelopment [#67], Piers G & J [#68], Pier S [#71] and Eagle Rock Construction Aggregate Terminal [#77]) 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 invasive 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 invasive exotic species are present in the Harbor, there is no evidence that these species have disrupted the biological communities in the Harbor. Biological 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 exotic species to Harbor waters.

In addition, operation of the related cumulative 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 would not be considered to be significant.

Contribution of the Proposed Project (Prior to Mitigation)

Dredging and Wharf Work

The proposed Project would result in dredge work and installation of in-water structures (sheet piles) at Berths 214–220 that would disturb the benthic community, but the community would begin recolonization soon after in-water construction is completed. 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 potential 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 in the East Basin Channel adjacent to the proposed project site. Also, the distance between pile-driving activities associated with the installation of in-water structures (sheet piles) at Berths 214–220 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 be expected to result from proposed project construction. Considering the *Caulerpa* survey requirement and absence of *Caulerpa* in the Harbor to date, and with implementation of the aforementioned *Caulerpa* protocols, the potential for proposed underwater construction activities to spread this species at the proposed project site is unlikely. As a result, the proposed Project construction activities would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological community under CEQA and NEPA.

Backland Construction and Operations

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 proposed project permits and contract specifications.

Vessel Traffic

The increase in vessel traffic in the Harbor (an increase of up to 44 vessels annually relative to the CEQA 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 proposed 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 of Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological communities under CEQA and NEPA. Similarly, upland construction of Alternative 3 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. However, Alternative 3 could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA and NEPA.

Because under Alternative 1 there would be no construction at the proposed project site resulting in any disruption of local biological communities related to construction, no impacts for construction would occur under CEQA. Therefore, Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological communities under CEQA related to construction. Further, though there would be an increase of vessel calls to the site under Alternative 1, for the same reasons as described for the proposed Project, the potential for an accidental vessel spill under Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact on biological communities under CEQA. Also, for the same reasons as described for the proposed Project, Alternative 1 could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA. Alternative 1 is not required to be analyzed under NEPA.

Because under Alternative 2 there would be no dredging or in-water construction, and only minor construction on the existing terminal, there would be no disruption of local biological communities related to construction, and no impacts related to construction would occur under CEQA. Therefore, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact to the local biological communities under CEQA related to construction. Further, though there would be an increase of vessel calls to the site under Alternative 2, for the same reasons as described for the proposed Project, the potential for an accidental vessel spill under Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact on biological communities under CEQA. Also, for the same reasons as described for the proposed Project, Alternative 2 could make a cumulatively considerable contribution to a significant cumulative impact related to the introduction of non-native species under CEQA. Alternative 2 would result in no impact under NEPA.

Mitigation Measures and Residual Cumulative Impacts

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

Due to the lack of a proven technology, no feasible mitigation beyond legal requirements is currently available to entirely prevent introduction of invasive exotic species via vessel hulls or ballast water to prevent the cumulatively considerable contribution to the significant cumulative impacts to biological resources related to the potential introduction of invasive exotic species by the proposed Project and Alternative 3 under CEQA and NEPA, and Alternatives 1 and 2 under CEQA. 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 Alternative 3 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 Cumulatively Considerable 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 sheet and king piles would be added to the water column, this could be considered to be a benefit from a marine habitat standpoint, as the addition of hard substrate in the water column provides another potential marine habitat type.

As there would be no proposed 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 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 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, CR-2, and CR-3 apply to both the CEQA and NEPA analysis.

4.2.4.2 Cumulative Impact CR-1: The proposed Project would have no potential to make a cumulatively considerable contribution to a significant cumulative impact on built environment historical resources—No Cumulatively Considerable Impact

Cumulative Impact CR-1 represents the potential of the proposed Project along with related cumulative projects to have a substantial adverse change in the significance of an historical resource or a significant impact on an historical resource by altering, directly or indirectly, any of the characteristics of an historic property that qualify the property for inclusion in the CRHR or NRHP.

As described in Section 3.4.4.3 (Impact CR-1), the proposed Project and alternatives would not result in any direct or indirect impacts to built environment historical resources, since no built environment historical resources exist in the proposed project area. Because the proposed Project or any alternative would have no impact on built environment historical resources, they would not make a cumulatively considerable contribution to a significant cumulative impact on built environment historical resources under CEQA or NEPA.

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

4.2.4.3 Cumulative Impact CR-2: The proposed Project would have a low potential to make a cumulatively considerable contribution to an adverse effect on known or unknown prehistoric and/or historic archaeological or ethnographic resources included, or qualified for inclusion, on the CRHR or NRHP—Less than Cumulatively Considerable

Cumulative Impact CR-2 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 CRHR or NRHP.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

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

assessment and systematic collection of information beforehand. As prehistoric sites are non-renewable resources, the direct and indirect impacts of these actions are cumulatively significant. Such projects have eliminated the 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 past, present and future Port projects (TraPac Marine Terminal [#1], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], China Shipping Development Project [#10], Yang Ming Container Terminal [#21], Outer Harbor Cruise Terminal [#27], Al Larson Boat Shop Improvement Project [#34], Navy Way/Seaside Avenue Interchange [#41], and Piers G & J [#68]) would potentially require excavation. These activities, however, would be in areas that were submerged before modern fill activities were carried out using imported fill, and therefore would not affect prehistoric or historic archaeological or ethnographic resources.

Although much of the area has been previously disturbed, there is the potential for other related upland Port projects (the San Pedro Waterfront Project [#2, #19], and South Wilmington Grade Separation [#20] 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 (the Community of San Pedro [#43 through #60], Community of Wilmington [#61 through #66], Port of Long Beach [#67 through #82], Alameda Corridor Transportation Authority and Caltrans Projects [#83 through 857], and Wilmington/Carson Projects [#86 through #94]) could disturb unknown, intact subsurface prehistoric or historical archaeological resources and potentially contribute to this impact. Therefore, impacts of these upland projects could result in significant cumulative impacts.

Contribution of the Proposed Project (Prior to Mitigation)

As documented in Section 3.4.4.3 (Impact CR-2), no prehistoric or archaeological resources or historic resource eligible for listing in the NRHP or CRHR are recorded within the proposed 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, known marine resources have been removed from the waters along Berths 212–220 and additional significant marine cultural resources are not likely to be present. 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. The activities associated with the proposed Project and alternatives would not affect prehistoric or historical archaeological or ethnographic resources and, therefore, would not contribute to an overall significant cumulative impact. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact on known archaeological or ethnographic resources under CEQA or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1, 2, and 3 would not make a cumulatively considerable contribution to a significant cumulative impact on known archaeological or ethnographic resources under CEQA and Alternative 3 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.

Mitigation Measures and Residual Cumulative Impacts

Although proposed project-level impacts are not anticipated, standard conditions of approval **SC CR-1**: Stop Work in the Area if Prehistoric and/or Archaeological Resources are Encountered, as described in Section 3.4.4.3 (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 at the proposed project site that could be significantly affected by the proposed Project or Alternatives 1, 2, and 3; therefore, the proposed Project or alternatives would not be expected to make a cumulatively considerable contribution to a significant cumulative impact on archaeological and ethnographic resources under CEQA or NEPA. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impact under NEPA.

There are no cumulative impacts on archaeological or ethnographic resources associated with the proposed Project or alternatives; therefore, there would be no cumulative residual effect under CEQA or NEPA.

4.2.4.4 Cumulative Impact CR-3: The proposed Project would have no potential to contribute to a cumulatively considerable loss of, or loss of access to significant paleontological resources—No Cumulatively Considerable Impact

Cumulative Impact CR-3 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 (Impact CR-3), the proposed project site would not be expected to yield significant paleontological resources or unique geologic features. The geologic formation within the proposed project site consists of imported/modern fill material (i.e., dredged material) constructed in the early twentieth century. Any soil excavation would be in artificial soils in a previously disturbed area, and therefore would not be expected to adversely impact unique paleontological resources or geologic features. In addition, dredging would occur within a previously disturbed channel area, and the potential to encounter sensitive paleontological resources there 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 CEQA or NEPA.

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 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 to the cumulative projects listed in Table 4-1 as 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% (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, incorporation of modern construction engineering design and safety standards and compliance with building codes adopted by the by LAHD and LABC 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 Section 3.5.4.4, 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 property. 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternative 3 would not be expected to 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 would expose 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 3.5.2.1, abrupt sea level changes associated with tsunamis in the past had a great impact on human life. In the process of bore/surge-type run-up, the onshore flow can cause tremendous dynamic loads on the structures onshore in the form of impact forces and drag forces, in addition to hydrostatic loading. The subsequent draw-down of the water after run-up exerts the often crippling opposite drags on the structures and washes loose/broken properties and debris to sea; the floating debris brought back on the next onshore flow have been found to be a significant cause of extensive damage after successive run-up and draw-down. The potential loss of human life in this process can be great if such events occur in populated areas. 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, LAHD 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 ten 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 and similar to Impact GEO-1, 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 proposed 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 Section 3.5.3.6, any development on or near the shore in Southern California, including at the proposed project site, would involve some risk of impacts from a tsunami or seiche and the risks of such events occurring would not be increased by

construction or operation of the proposed Project. According to the Moffatt and Nichol study conducted in 2007, the lowest deck elevations near the proposed Project are adjacent to the East Basin Channel at approximately 11.2 feet above MSL; therefore, no substantial risk of flooding from earthquake based tsunamis and seiches are likely at the proposed project site. Under the theoretical worst-case scenario, maximum wave action (landslide-based tsunami) would not likely breach the proposed project site. The Port Complex model predicts maximum tsunami wave heights in the proposed project area of approximately 5.2 to 6.6 feet above MSL for the earthquake scenario and approximately 7.2 to 23.0 feet above MSL for the landslide scenario. Therefore, no substantial risk of flooding from earthquake based tsunamis or seiches are likely at the proposed project site. 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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.

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 proposed project site have required excavation and fill, and therefore have affected the risk of subsidence/settlement on the proposed project site. Although this is the case, preliminary design phases of the proposed Project are expected to evaluate settlement potential in areas where future structures may be located, and design those structures to withstand anticipated settlement. Additionally, past projects are no

longer present on the proposed project site. As a consequence, past, present, and reasonably foreseeable future projects would not be expected to 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 applicable sections of the Los Angeles Municipal Code, and in conjunction with criteria established by LAHD and LABC, 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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 would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving expansive soils—Less than Cumulatively Considerable

Cumulative Impact GEO-4 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 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 proposed project site could have contributed to fill, and therefore potential risk of expansive soils, depending on the fill characteristics. Although this is the case, preliminary design phases of the proposed Project are expected to evaluate expansive soil potential in areas where future structures may be located, and design those structures to withstand anticipated expansion. Additionally, past projects are no longer present on the proposed project site. As a consequence, past, present, and reasonably foreseeable future projects would not be expected to result in a significant cumulative impact related to expansive soils.

Contribution of the Proposed Project (Prior to Mitigation)

Expansive soil impacts in the proposed Project's 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 all applicable sections of the Los Angeles Municipal Code, and in conjunction with criteria established by LAHD and LABC, 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 soil expansion 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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 be expected to 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 Cumulatively Considerable Impact

Cumulative Impact GEO-5 addresses the degree to which the proposed Project along with other cumulative projects could expose people or property to a substantial risk of landslides or mudslides.

Because the topography in the cumulative geographic area and the proposed project area is flat and not subject to landslides or mudflows, the proposed Project would not expose places, structures, or people to substantial damage or substantial risk of harm. As there would be no proposed 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 result in or expose people or property to a substantial risk of unstable soil conditions from excavation, grading or fill—Less than Cumulatively Considerable

Cumulative Impact GEO-6 addresses the degree to which the proposed Project 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 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 feet below ground surface. 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 to the risk of unstable soil conditions. Although this is the case, preliminary design phases of the proposed Project are expected to evaluate soil stability in areas where future structures may be located, and design those structures accordingly. Additionally, past projects are no longer present on the proposed project site. 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

unstable soils would be expected to be less than significant under CEQA and NEPA. 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 be expected to 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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 be expected to 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 substantial soil erosion or the loss of topsoil—Less than Cumulatively Considerable

Cumulative Impact GEO-7 addresses the degree to which the proposed Project along with other cumulative projects could result in substantial soil erosion or the loss of topsoil.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past projects on the site of the proposed project site could have contributed to the loss of soil during construction phases by exposing soils and adding additional water to the soil from irrigation and runoff from impervious surfaces. Although this is the case, implementation of BMPs during construction of the proposed Project are expected to minimize the amount of soil erosion and soil loss from the proposed project area. Additionally, past projects are no longer present on the proposed project site. As a consequence, past, present, and reasonably foreseeable future projects would not be expected to result in a significant cumulative impact related to soil erosion or the loss of topsoil.

Contribution of the Proposed Project (Prior to Mitigation)

Soil erosion impacts in proposed Project's backland areas would be less than significant under both CEQA and NEPA because the proposed Project would be designed and constructed using all appropriate construction BMPs and consistent with implementation of all applicable sections of the Los Angeles Municipal Code. Compliance with these BMPs and any applicable standards and policies would ensure that the proposed Project would not result in a substantial risk of soil erosion. 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 erosion at the proposed project site, nor could development associated with the proposed project site increase risk of soil erosion at locations outside of the proposed project area. Therefore, the proposed Project would not be expected to 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 3 would not expose people or property to substantial risk related to soil erosion individually or cumulatively and therefore would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

Mitigation Measures and Residual Cumulative Impacts

Neither the proposed Project nor any alternative would be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

4.2.5.9 Cumulative Impact GEO-8: 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 Cumulatively Considerable Impact

Cumulative Impact GEO-8 addresses the degree to which the proposed Project along with other cumulative projects could result in one or more distinct and prominent geologic or topographical features being destroyed, permanently covered, or materially and adversely modified. Such features include hilltops, ridges, hillslopes, canyons, ravines, 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 operation 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.

4.2.5.10 Cumulative Impact GEO-9: The proposed Project would not result in substantial damage to structures or infrastructure or expose people to substantial risk of injury from sea level rise—Less than Cumulatively Considerable

Cumulative Impact GEO-9 addresses the degree to which the proposed Project along with other cumulative projects could expose people and structures to substantial risk from SLR.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects would not change the risk of SLR 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 SLR. 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 potential for SLR 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 3.5.2.1, the risk of potential future SLR 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. Additionally, the Pacific Institute (2009) data suggests that SLR of 1.4 meters (55.11 inches) would have a limited effect on the proposed project site and surroundings. The SLR of 1.4 meters would have a more significant impact on the area southeast of the proposed Project. The 1.4 meter SLR scenario depicted by the Pacific Institute was developed by the California Energy Commission's Public Interest Energy Research (PIER) Climate Change Research Program project that, under medium to medium-high emissions scenarios, mean sea level along the California coast will rise from 1.0 to 1.4 meters by the year 2100.

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 as such, would limit the effects of sea level rise. Additionally, it is expected that any future construction activities would reference the appropriate studies, such as the RAND report mentioned above, and implement recommended strategies during the design phase. Therefore, the proposed Project would not expose people or property to substantial risk or injuries related to SLR individually or cumulatively and 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 3 would not expose people or property to substantial risk or injuries related to SLR individually or cumulatively and therefore would not be expected to 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 Greenhouse Gas Emissions

Scientific evidence indicates a trend of warming global surface temperatures over the past century due at least partly to the generation of greenhouse gas (GHG) emissions from human activities, as further discussed in Section 3.6, Greenhouse Gas Emissions. 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 could 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. 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 448.11 million metric tons or 0.5 gigatonnes in 2011 (CARB 2013).

4.2.6.1 Cumulative Impact GHG-1: The proposed Project would generate GHG that would exceed the SCAQMD threshold—Cumulatively Considerable and Unavoidable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, and reasonably foreseeable future projects in the area (Table 4-1) have generated and will continue to generate GHGs from the combustion of fossil fuels and the use of coatings, solvents, refrigerants, and other products. Current and future projects will incorporate a variety of GHG reduction measures in response to federal, state, and local mandates and initiatives, and these measures are expected to reduce GHG emissions from future projects. However, because of the long-lived nature of GHGs in the atmosphere and the global nature of GHG emissions impacts, no specific quantitative level of GHG emissions from related projects in the region or state-wide has been identified below which no impacts would occur. It is therefore conservatively assumed that related projects represent a significant cumulative impact.

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. SCAQMD developed a project-level significance threshold for GHGs. For the purposes of this cumulative discussion, it is conservatively assumed that an exceedance of the project-level threshold could result in a cumulatively considerable contribution to the overall GHG burden.

Construction and operation impacts of the proposed Project would exceed SCAQMD's threshold in all analysis years. Proposed project impacts would combine with impacts

from related projects, which would already be cumulatively significant. As a result, without mitigation, impacts from proposed project construction and operation would make a cumulatively considerable contribution to an existing significant cumulative impact related to GHG and global climate change under CEQA.

USACE has not adopted the SCAQMD significance threshold and has established the position that there are no science-based GHG significance thresholds, nor has the federal government or the state adopted any by regulation. In the absence of an adopted or science-based GHG standard, in compliance with the Council on Environmental Quality (CEQ) and USACE NEPA implementing regulations, a significance determination regarding GHG emissions is not made under NEPA.

Contribution of the Alternatives

Alternatives 1 through 3 GHG emissions would exceed the SCAQMD GHG significance thresholds under CEQA. Alternative 1 through 3 impacts would combine with impacts from related projects, which would already be cumulatively significant. As a result, without mitigation, impacts from Alternatives 1 through 3 would make a cumulatively considerable contribution to an existing significant cumulative impact related to GHG and global climate change under CEQA. A significance determination regarding GHG emissions is not made under NEPA.

Mitigation Measures and Residual Cumulative Impacts

After mitigation, proposed project impacts and Alternatives 2 and 3 impacts would be reduced but would continue to exceed the significance threshold under CEQA. Mitigation is not required under Alternative 1 because there would be no discretionary action under CEQA; Alternative 1 impacts would continue to exceed the significance threshold.

Proposed project and alternatives impacts would combine with impacts from related projects, which would already be cumulatively significant. As a result, after mitigation, impacts from the proposed Project and alternatives would make a cumulatively considerable contribution to an existing significant cumulative impact related to GHG and global climate change under CEQA. A significance determination regarding GHG emissions is not made under NEPA.

4.2.6.2 Cumulative Impact GHG-2: The proposed Project would not conflict with state or local plans and policies adopted for the purpose of reducing GHG emissions and climate change impacts—Less than Cumulatively Considerable

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The State of California has adopted laws and policies to regulate and reduce GHG emissions. AB 32, which specifically aimed to reduce statewide GHG emissions to 1990 levels by 2020, instructed CARB to adopt regulations that reduce emissions from significant sources of GHGs and establish a mandatory GHG reporting and verification program. AB 32 and resulting regulations are discussed in Section 3.6. However, it cannot be reasonably expected that all past, present, and reasonably foreseeable future

projects will be consistent with all state and local plans and policies regarding climate change. Therefore, these related projects are considered to represent a significant cumulative impact. In addition, although GHG emission reductions from federal, state, and local initiatives may be achieved, GHG emissions are still projected to increase globally and sea level-rise (SLR) is expected to occur in the proposed project vicinity. SLR is reasonably expected to have an impact on past, present, and reasonably foreseeable future projects.

Contribution of the Proposed Project

The proposed Project would use stationary and mobile equipment that would be compliant with state and federal emissions requirements and adhere to control measures adopted by the State of California during construction and operation. The proposed Project would therefore not conflict with the goals of AB 32 or regulations adopted since AB 32 and would not make a cumulatively considerable contribution to an existing significant cumulative impact.

With respect to adaptation to climate change effects, the Rand Corporation completed a study (Lempert et al. 2012) of potential SLR impacts on Port facilities that focused on four areas at different elevations and their potential exposure to SLR. The conclusions from the Rand study, when applied to the proposed project area, demonstrate that additional protection from SLR is not warranted at this time. The proposed Project is not in an area that warrants additional protection from SLR.

Contribution of the Alternatives

As with the proposed Project, Alternatives 1 through 3 would not conflict with the goals of AB 32 or regulations adopted since AB 32 and would not make a cumulatively considerable contribution to an existing significant cumulative impact. Like the proposed Project, Alternatives 1 through 3 are not in an area that warrants additional protection from SLR.

Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project and alternatives would not make a considerable contribution to an existing significant cumulative impact relative to GHG emissions and global climate change.

4.2.7 Ground Transportation

4.2.7.1 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 YTI 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 (10 segments) and intersections (17 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 3.7.2.

4.2.7.2 Methodology

Cumulative impacts are assessed by quantifying differences between future baseline conditions and future conditions with the proposed Project to determine the proposed Project's contribution to the cumulative impact. This comparison differs from the analysis in Section 3.7, Ground Transportation, in that it considers the proposed Project in the context of the regional conditions that will exist in the future, given normal growth and the traffic generated by the related projects in Table 4-1.

The NEPA analysis 2026 No Project scenario (NEPA 2026 baseline) includes cumulative projected land use and transportation conditions where the on-site conditions for the proposed project site are those that would be present without the issuance of a federal permit. The CEQA analysis 2026 No Project scenario represent 2026 operating conditions without the proposed Project, but accounts for growth in container movements up to the existing capacity of the terminal. In the case of this EIS/EIR, the CEQA analysis is the same as the NEPA analysis 2026 No Project scenario since both scenarios represent the terminal operating at its existing capacity by 2026 (1,692,000 TEUs). While the NEPA baseline fluctuates among study years, only 2026 conditions were analyzed because they represent the maximum capacity and operating conditions at the terminal; because no significant impacts were identified for 2026, detailed analyses for other NEPA baseline interim study years (2017 and 2020) were not conducted.

Traffic conditions for the year 2026 were estimated by adding traffic that would be associated with regional traffic growth and traffic increases resulting from increases in the Port throughput to CEQA baseline conditions in the Port area. Local traffic growth was forecast based on a computerized traffic analysis tool known as the Port Area Travel Demand Model, which includes regional traffic growth as well as growth for the Port and the local area, and supplements the growth factors described below.

Background traffic growth occurs as a result of regional growth in employment, population, schools, and other activities. Most of the past, present, and reasonably foreseeable future projects are covered by the growth forecasts of the Port Area Travel Demand Model. Other local projects are not included in the SCAG Regional Model and were thus separately accounted for in the Port Area Travel Demand Model (e.g., the San Pedro Waterfront Project). All Port and Port of Long Beach projected container and non-container terminal traffic growth are included in the Port Area Travel Demand Model.

The background future intersection traffic volumes (which account for cumulative non-project growth) were developed based on SCAG socioeconomic projections for the year 2026, with amendments as reflected in the Port Area Travel Demand Model. The background future freeway traffic volumes along I-110, I-405, I-710, and SR-91 were also obtained from the Port Area Travel Demand Model.

Port of Los Angeles and Port of Long Beach Trip Generation

Future trip generation by the Port of Los Angeles and Port of Long Beach for the year 2026 was estimated by adding traffic resulting from the terminal expansion and associated throughput growth under the current Port of Los Angeles Plan. The 2009 San Pedro Bay Cargo Forecast (The Tioga Group and HIS Global Insight 2009) was used to determine the total Port throughput for each future analysis year, as described in Chapters 1 and 2. Port-related trip generation was developed using the Port's "QuickTrip" truck generation model.

The future year analysis was defined by changing operating parameters as follows: modified weekend activity; expanded terminal operating hours; increased on-dock rail use; and, increased dual transactions within the terminal. These operating parameters affect the amount of truck traffic generated by the terminals to their estimated maximum capacity. Cargo volume (throughput) would increase over the years, and terminals would also change their operations to accommodate the increase in containers. Accordingly, these operational changes are already being put into place. It should be noted that increased throughput does not directly translate into increased truck trips proportionately due to the different terminal operating parameters over the years. For example, truck trips could actually decrease at certain terminals in the future due to the implementation and expansion of on-dock rail, even with greater throughput. This is because the increase in on-dock capacity is even greater than the increase in throughput, thus resulting in fewer truck trips but more containers processed through the terminal. A rail yard capacity analysis was conducted to ensure that the proposed Project could accommodate the projected on-dock container volumes.

The key operating parameters used in the trip generation estimate are presented in Section 3.7.4.3.

The additional vehicle trips generated by the proposed Project in 2026 are listed in Table 4-3. The proposed Project trip generation was determined by using the proposed Project's TEU projections and QuickTrip outputs.

Table 4-3: Trip Generation Estimates for the Proposed Project

Time	Vehicle	2012 Baseline			2026 No Project			2026 With proposed Project		
Period	Type	In	Out	Total	In	Out	Total	In	Out	Total
A.M. Peak Hour	Auto	28	11	39	131	44	175	147	49	196
	Bob-Tails	49	54	103	84	81	165	93	90	183
	Other Trucks	77	66	143	172	163	335	190	180	370
	Pces	236	202	438	567	459	1,026	629	507	1,136
Mid-Day Peak Hour	Auto	11	24	35	39	46	85	43	52	95
	Bob-Tails	33	60	93	61	60	121	68	67	135
	Other Trucks	94	109	203	126	120	246	138	132	270
	Pces	235	308	543	358	353	711	395	390	785
P.M. Peak Hour	Auto	83	118	201	84	203	287	94	228	322
	Bob-Tails	30	33	63	31	37	68	34	41	75
	Other Trucks	37	74	111	63	72	135	69	79	148
	PCEs	190	302	492	242	387	629	269	431	700

Port-Area Transportation Improvements

Numerous transportation projects are planned for implementation in the Port area by the year 2026. These projects are either included in the RTP and Regional Transportation Improvement Program or were developed as part of Port Planning and implementation efforts. Several of the transportation projects contained in the study have been reviewed by Caltrans. Caltrans is the agency that owns, operates, and controls many of these

transportation facilities. Thus, implementation of any improvements at those locations must be approved by Caltrans before they can proceed. A major project development milestone is called the Project Study Report (PSR), which outlines the need for the project, describes the project components, analyzes the project, and assesses project alternatives. After approval of the PSR, the project is considered to be approved by Caltrans for purposes of proceeding to the development of geometric plans, right-of-way maps, environmental studies, and then construction.

All of the noted projects have been taken through the PSR process and the PSR documents were approved by Caltrans. Additionally, funds have been designated for these projects. The remaining steps to implementation of the projects include preparation of engineering plans, environmental documentation, funding, and construction. Because these projects were approved by Caltrans through the PSR process, are planned to be environmentally cleared via the use of a Negative Declaration, and have committed funding, they are reasonably foreseeable projects and are therefore included in the transportation analysis as related projects and assumed to be in place during the proposed Project's cumulative analysis year.

The related transportation projects include:

- Sepulveda Boulevard Widening: This project consists of widening Sepulveda Boulevard from Alameda Street to the east Carson City limits from two lanes to four lanes. The project will widen Sepulveda Boulevard near the current entrance/exit of the ICTF site and the exit of the proposed ICTF Modernization project, which is used for ICTF access to/from Alameda Street. The project lead agency is the City of Carson.
- Wilmington Avenue/223rd Street Interchange Improvements: Construction will consist of: 1) an additional traffic lane on Wilmington Avenue northbound from 223rd Street to the existing I-405 northbound off-ramp; 2) construction of a new two lane I-405 on-ramp from southbound Wilmington Avenue; 3) construction of an additional lane to the existing two-lane I-405 southbound on-ramp from Wilmington Avenue; and, 4) construction of an additional lane to the existing two-lane I-405 southbound off-ramp to Wilmington Avenue. The project lead agency is the City of Carson.
- Navy Way/Seaside Avenue Interchange: This project entails the removal of the traffic signal and the construction of new northbound Navy Way-to-westbound Seaside Avenue trumpet-style connector ramp. The Port will monitor traffic regularly at this location to determine when this project will be implemented. Recent studies have determined that this project would not be needed until after the year 2025. The project is also contained in the SCAG 2012 RTP.
- Wilmington ATSAC/ATCS Project: Improvements to 70 signalized intersections within the Wilmington city limits are being undertaken through implementation of computer-based, real-time traffic signal monitoring and control systems. Developed in 1995, the Adaptive Traffic Control System (ATCS) is the latest enhancement to the Automated Traffic Surveillance and Control (ATSAC) system and uses a personal computer-based traffic signal control software program that provides fully adaptive traffic signal control based on real-time traffic conditions. The ATCS will automatically adjust traffic signal timing in response to current traffic demands. Although ATCS implementation will not increase the capacity of the roadway,

review of prior before and after studies conducted demonstrates that implementation of the ATSAC and ATCS projects would provide congestion relief by improving travel times, travel speeds, and traffic progression and by reducing delay time at intersections. Based on these improvements in travel speeds, progression, and delay, LADOT has determined that the ATCS retrofit is equivalent to improving the V/C ratio by at least seven to ten percent.

The ATCS allows for an automatic-adjustment-to-traffic signal timing strategy and control pattern in response to current traffic demands by controlling all three critical components of traffic signal timing simultaneously: cycle length, phase split, and offset. In this analysis of future operating conditions for the proposed Project and alternatives, a capacity increase of ten percent (0.10 V/C adjustment) was applied to reflect the benefits of ATSAC/ATCS control at all signalized study intersections, as approved by LADOT. Of the 15 analysis intersections, the study intersection of Anaheim Street/Alameda Street is currently operating under the ATSAC system. Horizon year for ATSAC/ATCS implementation is year 2014.

For the purposes of this analysis, all study intersections within the City of Los Angeles, the project lead agency, are assumed to be operating with the ATSAC/ATCS system by the future year 2015 scenario.

- Gerald Desmond Bridge Replacement Project: The Port of Long Beach, in cooperation with Caltrans, will be replacing the existing Gerald Desmond Bridge, which connects SR-710 to Terminal Island, in the City of Long Beach. The Gerald Desmond Bridge Replacement Project will improve existing traffic flows across the bridge, replace the physically deteriorated existing structure, and increase the vertical clearance beneath the bridge for the shipping traffic that passes below. In terms of capacity, the bridge will be expanded to include six travel lanes plus full standard shoulders, in comparison to the existing bridge which has three lanes on the ascending portions of the bridge and two lanes on the descending portions, and has limited shoulders. The new bridge and Ocean Boulevard will be the westerly extension of SR-710 to SR-47 (Terminal Island Freeway).

The following major planned regional improvements are not included as part of the cumulative analysis; however, their construction would alter the regional roadway capacity near the Port by affecting roadways utilized by both cumulative background trips and proposed project trips.

- I-710 (Long Beach Freeway) Corridor Project (#85): LAHD is collaborating with Caltrans, SCAG, Metro, Gateway Cities Council of Governments, and the Port of Long Beach on the I-710 Corridor Project. The Port is a funding and technical partner to Caltrans and Metro for the Project Approval/Environmental Documentation phase. The recently released Draft EIR/EIS identifies improvements to the entire 20-mile corridor to accommodate all year 2035 Port of Los Angeles/Port of Long Beach and regional traffic. The corridor area includes the mainline freeway and adjacent arterial street system. The proposed improvements include: a separate truckway with zero emission technology; additional lanes on the mainline in various locations; improved/reconstructed freeway-freeway and arterial street interchanges; and, extensive arterial street/intersection improvements throughout the entire corridor area.

- The Schuyler Heim Bridge Replacement: The Schuyler Heim Bridge Replacement is currently under construction, by Caltrans. This project is merely a replacement, and will not add additional lanes to the existing six lane bridge.
- SR-47 Expressway: This proposed ACTA project consists of a new, four-lane elevated roadway connecting the new Heim Bridge on the south end, with Alameda Street on the north end, just south of PCH. This new viaduct would provide a bypass of three signalized intersections and five at grade railroad crossings between along Henry Ford Avenue and Alameda Street between Pier A Way and PCH. This planned ACTA project is presently awaiting the resolution of environmental litigation, which has caused the postponement of final design. Moreover, due to the decline in cargo volumes and corresponding revenue, this project is unfunded at this time.

4.2.7.3 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, and 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)

The total number of construction-related trips would vary during construction of the proposed Project. It is anticipated that the majority of construction materials (i.e., aggregate, concrete, asphalt, sand, and slurry) would be provided by local suppliers and stored at the contractors' existing facilities. The majority of construction materials would be imported during off-peak traffic hours (the main exception being cement trucks, which have a limited window for delivery times). Construction haul routes would be via the I-110 to SR-47 across the Vincent Thomas Bridge or via the I-710 to Ocean Boulevard across the Gerald Desmond Bridge to Pier S Avenue/New Dock Street via Seaside Avenue/Ocean Boulevard.

Workers would be required to arrive at the construction site prior to the A.M. peak period and depart prior to the P.M. peak period. Therefore, significant traffic impacts from construction workers' vehicles would not occur during the A.M. or P.M. peak periods.

Further, as a standard practice, LAHD 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, identification of temporary alternative bus routes, advanced notice of temporary parking loss, identification of 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 2015 and 2017. 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 Evergreen Container Terminal (#5), Berths 206–209 Interim Container Reuse (#11), Terminal Island Rail Redevelopment (#15), APL Terminal (#36), Relocation of SA Recycling (#33), Schuyler Heim Bridge Replacement and SR 47 Terminal Island Expressway (#84), Pier S Marine Terminal (#72), and Pier T, TTI Terminal (#83). 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 most of the traffic associated with construction would occur outside of the peak periods, 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA and Alternative 3 would not be expected to make a

cumulatively considerable contribution to a significant cumulative impact under NEPA related to proposed project-related construction traffic impacts. 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.

4.2.7.4 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 V/C ratios or LOS 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 projects would result in a cumulative effect on the operating conditions of area intersections and roadways. Table 4-4 summarizes future intersection operating conditions of the CEQA 2026 No Project conditions, which include the related projects in Table 4-1 (e.g., Wilmington Waterfront Development Project [#21], and TraPac Marine Terminal [#1]) at each study intersection. As indicated in the table, 15 of the 17 study intersections would operate at LOS D or better during the A.M. peak hour, while all 17 study intersections would operate at LOS D or better during both the midday and P.M. peak hours in the future without the proposed Project. The remaining two intersections would operate at LOS F during the A.M. peak hour and include: Henry Ford Avenue and Anaheim Street (study intersection #7) and Terminal Island Freeway (SR-47) and Ocean Boulevard Eastbound (study intersection #14). Cumulative impacts are expected to occur at the following study intersections:

- Alameda Street and PCH Ramp (on Alameda): A.M. peak hour
- Henry Ford Avenue and Denni Street: A.M. peak hour
- Henry Ford Avenue and Anaheim Street: A.M., P.M. and midday peak hours
- Terminal Island Freeway (SR-47) and Ocean Boulevard Eastbound: A.M. peak hour

Contribution of the Proposed Project (Prior to Mitigation)

Table 4-3 summarizes the trip generation projections that were completed for the proposed Project. Table 4-4 shows future operating conditions for the 2026 No Project scenario and 2026 with proposed Project scenario. The 2026 with proposed Project conditions were compared to the 2026 No Project scenario (future CEQA baseline and

NEPA baseline) to determine potential cumulative and cumulatively considerable impacts.

The analysis indicates that the proposed Project would result in an increase in the V/C ratio at a number of study locations. However, the amount of proposed project-related traffic that would be added at the study intersection locations would not be of sufficient magnitude to meet or exceed any of the thresholds of significance. This includes some intersections that would operate at LOS E or F where the amount of proposed project-related traffic would be too small to trigger a significant traffic impact. Accordingly, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Contribution of the Alternatives

The proposed Project and Alternative 3 represent the same trip generation and traffic conditions because operationally they are similar and result in handling the same number of TEUs (1,913,000 TEUs). Therefore, Alternative 3 would result in the same cumulative impacts as those described for the proposed Project under both CEQA and NEPA. Alternatives 1 and 2 are also operationally the same as they represent the existing capacity of the terminal (1,692,000 TEUs), and consequently are also similar to the 2026 future CEQA baseline and the NEPA baseline. Therefore, the impacts of Alternatives 1 and 2 would have even less of a contribution to cumulative ground transportation impacts than the proposed Project and Alternative 3. As such, Alternatives 1 through 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA and Alternative 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to increased traffic volume. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impact under NEPA.

Mitigation Measures and Cumulative Residual Impacts

The proposed Program would not make a cumulatively considerable contribution to a significant cumulative impact. Therefore, no mitigation is required.

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Table 4-4: Intersection Level of Service Analysis—2026 No Project vs. 2026 With Proposed Project

		2026 No Project						2026 With Proposed Project						Changes in V/C or Delay			Significant Impact		
		A.M. Peak		M.D. Peak		P.M. Peak		A.M. Peak		M.D. Peak		P.M. Peak							
#	Study Intersection	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	A.M. Peak	M.D. Peak	P.M. Peak	A.M. Peak	M.D. Peak	P.M. Peak
1	Alameda Street / Sepulveda Boulevard ramp (on Alameda) [1]	D	0.848	B	0.604	B	0.673	D	0.850	B	0.606	B	0.674	0.002	0.002	0.001	No	No	No
2	Alameda Street / Sepulveda Boulevard ramp (on Sepulveda) [1]	C	0.735	A	0.525	C	0.720	C	0.738	A	0.526	C	0.720	0.003	0.001	0.000	No	No	No
3	Intermodal Way / Sepulveda Boulevard [1]	A	0.580	A	0.570	A	0.462	A	0.582	A	0.571	A	0.462	0.002	0.001	0.000	No	No	No
4	Alameda Street / PCH ramp (on Alameda) [b]	C	0.711	A	0.518	A	0.576	C	0.715	A	0.520	A	0.577	0.004	0.002	0.001	No	No	No
5	Alameda Street / PCH ramp (on PCH) [b]	A	0.473	A	0.466	A	0.551	A	0.473	A	0.466	A	0.551	0.000	0.000	0.000	No	No	No
6	Henry Ford Avenue/ Denni Street [b]	C	0.793	A	0.430	A	0.447	C	0.799	A	0.433	A	0.449	0.006	0.003	0.002	No	No	No
7	Henry Ford Avenue / Anaheim Street [b]	F	1.071	D	0.844	D	0.819	F	1.080	D	0.849	D	0.822	0.009	0.005	0.003	No	No	No
8	Henry Ford Avenue / SR-47 ramps / Pier A Way [b]	B	0.675	A	0.429	A	0.471	B	0.684	A	0.433	A	0.475	0.009	0.004	0.004	No	No	No
9	Navy Way / Seaside Avenue [b]	N/A																	
10	Terminal Island Freeway (SR-103) / Willow Street [c]	A	0.526	A	0.470	B	0.694	A	0.527	A	0.471	B	0.696	0.001	0.001	0.002	No	No	No
11	Terminal Island Freeway (SR-47) southbound off-ramp/ New Dock Street [d]	C	20.7	B	11.6	B	13.4	C	22.8	B	11.7	B	13.8	2.1	0.1	0.4	No	No	No
12	Terminal Island Freeway (SR-47) northbound on-ramp/ New Dock Street [d]	C	15.2	B	11.0	B	12.3	C	17.6	B	11.2	B	12.6	2.4	0.2	0.3	No	No	No
13	Terminal Island Freeway (SR-47) / Ocean Boulevard westbound [c]	D	0.831	B	0.683	B	0.680	D	0.834	B	0.685	B	0.680	0.003	0.002	0.000	No	No	No
14	Terminal Island Freeway (SR-47) / Ocean Boulevard eastbound [c]	F	1.058	D	0.820	C	0.774	F	1.058	D	0.820	C	0.774	0.000	0.000	0.000	No	No	No
15	Pier S Avenue / New Dock Street [c]	B	0.602	A	0.531	A	0.557	B	0.619	A	0.538	A	0.569	0.017	0.007	0.012	No	No	No
16	Pier S Avenue / Ocean Boulevard westbound [c]	D	0.816	B	0.636	C	0.716	D	0.824	B	0.643	C	0.725	0.008	0.007	0.009	No	No	No
17	Pier S Avenue / Ocean Boulevard eastbound [c]	B	0.607	A	0.504	A	0.593	B	0.610	A	0.506	A	0.595	0.003	0.002	0.002	No	No	No

Notes:
[a] City of Carson intersection analyzed using ICU methodology according to City standards.
[b] City of Los Angeles intersection analyzed using CMA methodology according to City standards.
[c] City of Long Beach intersection analyzed using ICU methodology according to City standards.
[d] City of Long Beach unsignalized intersection analyzed using 2012 HCM Stop-Control methodology according to City standards.

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4.2.7.5 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 an 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 3.7.2.3 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 3.7, 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. 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 12 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 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA and Alternative 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative 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 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.

4.2.7.6 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 proposed 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 cumulative impacts on the freeway system in the future as well. The cumulative projects would add traffic to the freeways, some of which are already operating at LOS F, which exceeds the State of California Congestion Management Plan (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.

Caltrans states that their target freeway LOS is between C and D, and for facilities that do not meet that target, the existing measure of effectiveness (MOE) should be maintained. However, Caltrans does not explicitly define thresholds that determine whether that goal is met. Therefore, this EIS/EIR utilizes Metro's CMP guidelines to determine significant impacts on freeways. For segments where LOS is E or F, D/C was used to determine significance of impacts. Per CMP guidelines, an increase of 0.02 or more in the D/C ratio with a resulting LOS F is deemed a significant impact.

The following freeway segments were analyzed for potential impacts:

1) I-710 north of Florence Boulevard

2) I-710 north of Firestone Boulevard (CMP freeway monitoring station: north of Jct. 105, north of Firestone Boulevard)

3) I-710 at Alondra Boulevard

4) I-710 north of I-405 (CMP freeway monitoring station: north of Jct. 405, south of Del Amo Boulevard)

5) I-710 north of PCH (CMP freeway monitoring station: north of Jct Rte 1 (PCH), Willow Street)

6) I-110 south of C Street (CMP freeway monitoring station: south of "C" Street).

7) SR-91 west of I-710 (CMP freeway monitoring station: east of Alameda Street and Santa Fe Avenue interchange)

8) I-405 between I-110 and I-710 (CMP freeway monitoring station: at Santa Fe Avenue)

9) SR-47 at Vincent Thomas Bridge

10) SR-47 at Commodore Schuyler Heim Bridge

Tables 4-5 and 4-6 show the expected volumes of traffic on those segments in the 2026 No Project scenario (CEQA 2026 future baseline and NEPA baseline). The past, present, and reasonably foreseeable future projects would add traffic to the freeway system and at the study segments, resulting in significant cumulative impacts to monitoring stations operating at LOS F or worse. Cumulative impacts would be expected to occur at the following study freeway segments:

- I-710 north of Florence Boulevard: A.M. peak hour, northbound direction
- I-710 north of Firestone Boulevard: A.M. peak hour, northbound direction; P.M. peak hour, southbound direction
- I-710 north of I-405: A.M. peak hour, northbound and southbound direction; P.M. peak hour, northbound direction
- I-710 north of PCH: A.M. peak hour, northbound and southbound direction
- I-405 between I-110 and I-710: A.M. peak hour, northbound direction; P.M. peak hour, southbound direction
- SR-47 at Vincent Thomas Bridge: P.M. peak hour, eastbound direction

Contribution of the Proposed Project (Prior to Mitigation)

As prescribed in the *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002) the cumulative conditions without the proposed Project are to be compared to the cumulative conditions with the proposed Project in 2026.

Caltrans states that their target freeway LOS is between C and D, and for facilities that do not meet that target, the existing MOE should be maintained. However, Caltrans does not explicitly define thresholds that determine whether that goal is met. Therefore, this DEIR utilizes Metro's CMP guidelines to determine significant impacts on freeways. For segments where LOS is E or F, D/C was used to determine impact significance. Per CMP guidelines, an increase of 0.02 or more in the D/C ratio with a resulting LOS F is deemed a significant impact.

Tables 4-5 and 4-6 show a comparison of the 2026 No Project and 2026 with proposed Project volumes (i.e., the cumulatively considerable potential impacts). As shown in the tables, the 2026 cumulatively considerable traffic impacts would not exceed the CMP thresholds and increase V/C ratios by more than 0.02 at the study segments operating at LOS F or worse, thereby 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 or NEPA.

Table 4-5: Freeway Analysis: A.M. Peak—2026 No Project vs. 2026 With Proposed Project

			Northbound / Eastbound										Southbound / Westbound									
			2026 No Project				2026 Proposed Project						2026 No Project				2026 Proposed Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[a]	Vol	Density	LOS	D/C[a]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[a]	Vol	Density	LOS	D/C[a]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[b]	9,400	9,243	50.0	F	0.98	9,245	50.1	F	0.98	0.00	No	7,691	34.6	D	-	7,697	34.7	D	-	-	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	9,234	49.9	F	0.98	9,237	50.0	F	0.98	0.00	No	8,360	40.1	E	0.89	8,366	40.2	E	0.89	0.00	No
#3 I-710	Alondra Boulevard[b]	11,750	8,118	27.2	D	-	8,128	27.2	D	-	-	No	10,572	41.1	E	0.90	10,588	41.2	E	0.90	0.00	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	8,744	48.3	F	0.97	8,758	48.4	F	0.97	0.00	No	9,179	54.4	F	1.02	9,197	54.7	F	1.02	0.00	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	7,969	97.4	F	1.18	7,979	98.0	F	1.18	0.00	No	8,670	205.9	F	1.28	8,685	211.7	F	1.29	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of "C" St)	9,400	6,384	26.6	D	-	6,392	26.7	D	-	-	No	4,486	18.4	C	-	4,492	18.4	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	8,037	21.9	C	-	8,037	21.9	C	-	-	No	10,121	28.6	D	-	10,121	28.6	D	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	12,796	67.8	F	1.09	12,796	67.8	F	1.09	0.00	No	8,892	30.7	D	-	8,892	30.7	D	-	-	No
#9 SR-47	Vincent Thomas Bridge[b]	4,700	3,405	32.9	D	-	3,416	33.0	D	-	-	No	3,516	34.1	D	-	3,526	34.2	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[b]	6,750	2,578	16.6	B	-	2,604	16.8	B	-	-	No	3,407	22.0	C	-	3,445	22.2	C	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[a]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[b]Non-CMP location

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Table 4-6: Freeway Analysis: P.M. Peak—2026 No Project vs. 2026 With Proposed Project

			Northbound / Eastbound										Southbound / Westbound									
			2026 No Project				2026 Proposed Project						2026 No Project				2026 Proposed Project					
Freeway	Location	Cap.	Vol	Density	LOS	D/C[a]	Vol	Density	LOS	D/C[a]	Change in D/C	Sig. Imp	Vol	Density	LOS	D/C[a]	Vol	Density	LOS	D/C[a]	Change in D/C	Sig. Imp
#1 I-710	North of Florence Avenue[b]	9,400	7,514	33.3	D	-	7,515	33.4	D	-	-	No	8,733	43.9	E	0.93	8,734	43.9	E	0.93	0.00	No
#2 I-710	North of I-105 and north of Firestone Boulevard (CMP monitoring station)	9,400	8,228	38.9	E	0.88	8,230	39.0	E	0.88	0.00	No	9,041	47.5	F	0.96	9,042	47.5	F	0.96	0.00	No
#3 I-710	Alondra Boulevard[b]	11,750	9,036	31.5	D	-	9,042	31.5	D	-	-	No	7,875	26.2	D	-	7,880	26.2	D	-	-	No
#4 I-710	North of I-405 (CMP monitoring station—north of Jct. I-405, south of Del Amo)	9,000	8,449	44.9	E	0.94	8,458	45.0	E	0.94	0.00	No	7,120	34.6	D	-	7,126	34.6	D	-	-	No
#5 I-710	North of PCH (CMP monitoring station—north of Jct. SR-1 [PCH], Willow St)	6,750	6,269	43.9	E	0.93	6,274	44.0	E	0.93	0.00	No	6,318	44.6	E	0.94	6,323	44.7	E	0.94	0.00	No
#6 I-110	South of C Street (CMP monitoring station—south of "C" St)	9,400	5,235	21.4	C	-	5,241	21.4	C	-	-	No	5,153	21.1	C	-	5,156	21.1	C	-	-	No
#7 SR-91	West of I-710 (CMP monitoring station—east of Alameda St/Santa Fe Ave interchange)	14,100	7,271	19.8	C	-	7,271	19.8	C	-	-	No	9,358	25.9	C	-	9,358	25.9	C	-	-	No
#8 I-405	Between I-110 and I-710 (CMP monitoring station—Santa Fe Ave)	11,750	9,934	36.6	E	0.85	9,934	36.6	E	0.85	0.00	No	13,025	72.3	F	1.11	13,025	72.3	F	1.11	0.00	No
#9 SR-47	Vincent Thomas Bridge[b]	4,700	4,223	44.8	E	0.90	4,237	45.2	F	0.90	0.00	No	3,406	32.9	D	-	3,411	33.0	D	-	-	No
#10 SR-47	Commodore Schuyler Heim Bridge[b]	6,750	2,281	14.7	B	-	2,304	14.9	B	-	-	No	1,928	12.4	B	-	1,945	12.5	B	-	-	No

Note: Freeway operation conditions based on the methodology in the 2010 HCM. Level of service based on density (passenger car per mile per lane).

[a]Per Caltrans traffic impact study guidelines, Caltrans targets maintaining LOS between C and D; for segments where LOS is E or F, D/C was used to determine impact significance per CMP guidelines.

[b]Non-CMP location

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Contribution of the Alternatives

The proposed Project and Alternative 3 represent the same trip generation and traffic conditions because operationally they are similar and result in handling the same number of TEUs (1,913,000 TEUs). Therefore, Alternative 3 would result in the same cumulative impacts as those described for the proposed Project under both CEQA and NEPA. Alternatives 1 and 2 are also operationally the same, as they represent the existing capacity of the terminal (1,692,000 TEUs), and consequently are also similar to the 2026 future CEQA baseline and the NEPA baseline. Therefore, the impacts of Alternatives 1 and 2 would have even less of a contribution to cumulative ground transportation impacts than the proposed Project and Alternative 3. As such, Alternatives 1 through 3 would not be expected make a cumulatively considerable contribution to a significant cumulative impact under CEQA and Alternative 3 would not be expected to 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 impact 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 or NEPA.

4.2.7.7 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 3.7.4.4 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)

To provide a comprehensive understanding of the proposed Project's vehicular delay impacts, an analysis was performed for the proposed Project's impacts in comparison to a future baseline for the year 2026. The future CEQA baseline represents the traffic conditions at the study intersections at the time (or study year, e.g., 2026) the proposed project traffic would affect the intersections. Thus, potential cumulative rail impacts were assessed by quantifying differences in vehicular delays due to at-grade crossings between future baseline conditions for the year 2026 and future baseline conditions plus the proposed Project.

2026 No Project Scenario and 2026 with proposed Project Scenario Rail Volumes

For each market and intermodal yard, projected marine cargo forecasts under 2026 No Project scenario and 2026 with proposed Project scenario were allocated based on the maximum capacities at the intermodal yards. Intermodal rail volumes were estimated from the allocated container volumes using the 2026 parameters that were used to determine the "Project Trains," or additional trains associated with the proposed Project, in Section 3.7.

Non-intermodal rail volumes in 2026 were obtained by interpolating between 2010 non-intermodal trains data and 2035 non-intermodal train volume forecasts. Interim year (2020/2025) passenger train volume forecasts were adopted as 2026 passenger rail volumes.

Table 4-7 shows the estimated rail volumes under the two 2026 scenarios: No Project and With proposed Project.

Table 4-7: 2026 No Project Scenario and 2026 with proposed Project Scenario Peak Month Average Daily Rail Volumes by Segment, Trains per Day

Railroad Subdivision	Rail Segment	2026 No Project Daily Freight Rail Volume	2026 with proposed Project Daily Freight Rail Volume	2026 Passenger Rail Volume	2026 No Project Daily Total Rail Volume	2026 with proposed Project Daily Total Rail Volume
UP Trains						
UPRR LA Sub	East LA–Pomona	28.2	28.4	12.0	40.2	40.4
	Pomona–Montclair	33.3	33.5	12.0	45.3	45.5
	Montclair–Mira Loma	34.1	34.3	12.0	46.1	46.3
	Mira Loma–W Riverside	36.9	37.1	12.0	48.9	49.1
UPRR Alhambra Sub	LATC–El Monte	37.9	38.1	-	37.9	38.1
	El Monte–Bassett	37.9	38.1	40.8	78.7	78.9
	Bassett–Industry	37.9	38.1	0.8	38.7	38.9
	Industry–Pomona	46.6	46.8	0.8	47.4	47.6
	Pomona–Montclair	45.4	45.7	0.8	46.2	46.5
	Montclair–Kaiser	46.7	46.9	0.8	47.5	47.7
	Kaiser–W Colton	47.8	48.0	0.8	48.6	48.8
	W Colton–Colton	46.4	46.6	0.8	47.2	47.4
UPRR Mojave (Palmdale)	W Colton–Silverwood	21.9	22.0	-	21.9	22.0
UPRR Yuma	Colton–Indio	74.1	74.4	0.8	74.9	75.2
BNSF San Bernardino Sub	W Riverside–Riverside	36.9	37.1	-	36.9	37.1
	Riverside–Highgrove	36.9	37.1	-	36.9	37.1
	Highgrove–Colton	36.9	37.1	-	36.9	37.1
	Colton–San Bernardino	6.8	6.8	-	6.8	6.8
BNSF Cajon	San Bernardino–Keenbrook	8.1	8.1	-	8.1	8.1
	Keenbrook–Silverwood	8.1	8.1	-	8.1	8.1
	Silverwood–Barstow	19.6	19.7	-	19.6	19.7
BNSF Trains						
BNSF San Bernardino Sub	Hobart–Fullerton	62.2	62.6	63.0	125.2	125.6
	Fullerton–Atwood	62.2	62.6	14.0	76.2	76.6
	Atwood–W Riverside	67.1	67.5	30.0	97.1	97.5
	W Riverside–Riverside	69.3	69.8	42.0	111.3	111.8
	Riverside–Highgrove	69.3	69.8	10.0	79.3	79.8
	Highgrove–Colton	69.3	69.8	18.0	87.3	87.8

Table 4-7: 2026 No Project Scenario and 2026 with proposed Project Scenario Peak Month Average Daily Rail Volumes by Segment, Trains per Day

Railroad Subdivision	Rail Segment	2026 No Project Daily Freight Rail Volume	2026 with proposed Project Daily Freight Rail Volume	2026 Passenger Rail Volume	2026 No Project Daily Total Rail Volume	2026 with proposed Project Daily Total Rail Volume
	Colton–San Bernardino	72.1	72.5	18.0	90.1	90.5
BNSF Cajon	San Bernardino–Keenbrook	77.4	77.8	2.0	79.4	79.8
	Keenbrook–Silverwood	77.4	77.8	2.0	79.4	79.8
	Silverwood–Barstow	77.4	77.8	2.0	79.4	79.8
BNSF & UP Trains						
BNSF San Bernardino Sub	W Riverside–Riverside	106.2	106.9	42.0	148.2	148.9
	Riverside–Highgrove	106.2	106.9	10.0	116.2	116.9
	Highgrove–Colton	106.2	106.9	18.0	124.2	124.9
	Colton–San Bernardino	78.9	79.4	18.0	96.9	97.4
BNSF Cajon	San Bernardino–Keenbrook	85.4	85.9	2.0	87.4	87.9
	Keenbrook–Silverwood	107.4	107.9	2.0	109.4	109.9
	Silverwood–Barstow	96.9	97.5	2.0	98.9	99.5
					781.2	785.4

Source: QuickTrip—Train Builder Integrated Model August 2013 Version for YTI DEIR; Non-intermodal and Passenger Trains Forecasts.

2026 No Project Scenario and 2026 With proposed Project Scenario Delay Impacts

Applying the same delay estimation methodology as used for the CEQA baseline described in Section 3.7.4.1, Tables 4-8 through 4-13 list the cumulative delays at at-grade crossings for the 2026 with proposed Project scenario. As can be seen, although the cumulative delay is projected to increase slightly, none of the locations experienced an average peak delay greater than 55 seconds in either the 2026 No Project or the 2026 With proposed Project scenarios. Thus, the proposed Project 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 under CEQA.

Table 4-8: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
San Bernardino MP 0.0								
Laurel St.	2	2,890	97.4	208.4	9.3	12.0	0.1	No
Olive St.	2	3,430	97.4	208.4	11.2	12.3	0.1	No
E St.	2	900	97.4	208.4	2.7	11.1	0.1	No
H St.	2	1,810	97.4	208.4	5.6	11.5	0.1	No
Valley Blvd.	2	13,560	97.4	208.4	64.6	21.2	0.1	No
Colton Crossing MP 3.2								
Highgrove Junction MP 6.1 (Connection to Perris via MetroLink)								
Main St.	2	3,300	116.9	273.7	14.7	16.7	0.1	No
Riverside-San Bernardino County Line MP 6.41								
Center St.	4	7,490	116.9	274.3	33.2	16.6	0.1	No
Iowa Ave.	4	27,620	116.9	274.3	166.6	25.7	0.2	No
Palmyrita Ave.	2	4,530	116.9	273.7	20.4	17.0	0.1	No
Chicago Ave.	4	16,350	116.9	274.3	81.7	19.7	0.1	No
Spruce St.	4	8,730	116.9	274.3	39.3	17.0	0.1	No
3rd St.	4	13,150	116.9	274.3	62.8	18.4	0.1	No
Mission Inn (7th St.)	4	6,430	116.9	274.3	28.2	16.3	0.1	No
Riverside Yard and Amtrak Station MP 10.02-10.16								
Cridge St.	2	4,540	148.9	297.2	21.5	18.2	0.1	No
West Riverside Junction MP 10.6 (Connection to UP Los Angeles Sub)								
Jane St.	2	2,610	97.5	191.1	7.4	10.7	0.1	No
Mary St.	4	14,400	97.5	191.6	46.2	12.7	0.1	No
Washington St.	2	10,000	97.5	191.1	34.7	14.2	0.1	No
Madison St.	4	18,950	97.5	191.6	65.0	13.9	0.1	No

Table 4-8: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Jefferson St.	2	9,880	97.5	191.1	34.2	14.1	0.1	No
Adams St.	4	21,110	97.5	191.6	74.9	14.6	0.1	No
Jackson St.	4	9,420	97.5	191.6	28.3	11.5	0.0	No
Gibson St.	2	1,020	97.5	191.1	2.8	10.1	0.0	No
Harrison St.	2	8,030	97.5	191.1	26.3	13.0	0.1	No
Tyler St.	4	18,840	97.5	191.6	64.5	13.9	0.1	No
Pierce St.	2	13,480	97.5	191.1	52.6	16.7	0.1	No
Buchanan St.	2	11,530	97.5	191.1	42.0	15.2	0.1	No
Magnolia Ave. EB	2	10,600	97.5	191.1	37.5	14.6	0.1	No
Magnolia Ave. WB	2	10,600	97.5	191.1	37.5	14.6	0.1	No
Mckinley St.	4	32,120	97.5	191.6	139.5	19.4	0.1	No
Radio Rd.	2	5,190	97.5	191.1	15.7	11.7	0.1	No
Joy St.	2	8,770	97.5	191.1	29.3	13.4	0.0	No
Sheridan St.	2	2,850	97.5	191.1	8.1	10.8	0.1	No
Cota St.	4	7,280	97.5	191.6	21.3	11.1	0.1	No
Railroad St.	4	11,660	97.5	191.6	36.1	12.0	0.1	No
Smith St.	4	16,510	97.5	191.6	54.6	13.2	0.1	No
Auto Center Dr.	2	13,950	97.5	191.1	55.4	17.2	0.1	No
Riverside-Orange County Line								
Kellogg Dr.	4	7,240	97.5	191.6	21.3	11.2	0.1	No
Lakeview Ave.	3	19,880	97.5	191.3	79.4	17.3	0.1	No
Richfield Rd.	4	9,980	97.5	191.6	30.5	11.8	0.1	No

Table 4-8: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Atwood Junction MP 40.6 (Connection to Old Olive Sub)								
Van Buren St.	2	7,130	76.6	169.7	21.3	11.8	0.1	No
Jefferson St.	3	6,690	76.6	170.0	18.6	10.6	0.1	No
Tustin Av (Rose Dr.)	4	30,750	76.6	170.2	123.8	18.0	0.1	No
Orangethorpe Ave.	4	29,860	76.6	170.2	117.9	17.5	0.1	No
Kraemer Blvd.	4	20,850	76.6	170.2	69.4	13.7	0.1	No
Placentia Ave.	4	15,280	76.6	170.2	46.6	12.1	0.1	No
State College Blvd.	4	24,850	76.6	170.2	88.8	15.2	0.1	No
Acacia Ave.	4	7,100	76.6	170.2	19.3	10.3	0.1	No
Raymond Ave.	4	22,160	76.6	170.2	75.4	14.1	0.1	No
Fullerton Junction MP 45.5 = MP 165.5								
Orange-LA County Line								
Valley View Ave.	4	25,170	125.6	209.1	103.7	17.8	0.1	No
Rosecrans/Marquardt Ave.	4	23,770	125.6	209.1	95.2	17.2	0.2	No
Lakeland Rd.	2	6,700	125.6	208.4	22.3	13.2	0.0	No
Los Nietos Rd.	4	20,980	125.6	209.1	79.7	15.9	0.1	No
Norwalk Blvd.	4	26,890	125.6	209.1	114.8	18.8	0.1	No
Pioneer Blvd.	4	15,690	125.6	209.1	54.4	14.0	0.1	No
Passons Blvd.	4	13,010	125.6	209.1	43.3	13.2	0.1	No
Serapis Ave.	2	6,430	125.6	208.4	21.2	13.1	0.1	No

Table 4-8: BNSF San Bernardino Subdivision, from Hobart Yard to San Bernardino, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Commerce Yard MP 148.5								
Hobart Yard MP 146.0								
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					2,723.1			
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						15.8	0.1	No

Table 4-9: BNSF Cajon Subdivision from San Bernardino to Barstow, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Barstow MP 0								
Lenwood Rd.	2	5,350	99.5	188.3	13.0	9.1	0.0	No
Hinkley Rd.	2	570	99.5	188.3	1.2	7.9	0.1	No
Indian Trail Rd.	2	640	99.5	188.3	1.4	7.9	0.0	No
Vista Rd.	2	3,300	99.5	188.3	7.6	8.5	0.0	No
Turner Rd.	2	40	99.5	188.3	0.1	7.8	0.1	No
North Bryman Rd.	2	190	99.5	188.3	0.4	7.8	0.0	No
South Bryman Rd.	2	2,300	99.5	188.3	5.2	8.3	0.1	No
Robinson Ranch Rd.	2	140	99.5	188.3	0.3	7.8	0.1	No
1st St.	2	820	99.5	223.3	2.5	11.2	0.0	No
6th St.	4	4,300	99.5	260.2	18.7	15.9	0.1	No
Silverwood Junction MP 56.6								
Keenbrook Junction MP 69.4								
Swarthout Canyon Rd.	2	210	109.9	344.7	1.4	24.0	0.1	No
Devore Rd / Glen Helen Pkwy.	4	7,480	109.9	345.5	54.0	26.8	0.1	No
Dike Junction								
Palm Ave.	2	14,150	87.9	282.3	112.4	33.0	0.2	No
San Bernardino MP 81.4								

Table 4-9: BNSF Cajon Subdivision from San Bernardino to Barstow, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					218.3			
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						21.7	0.1	No

Table 4-10: UP Alhambra Subdivision from Los Angeles Transportation Center (LATC) to Colton Crossing, 2026 with Proposed Project Scenario (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)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
LATC MP 482.9								
San Pablo St.	4	4,330	38.1	205.3	30.7	26.3	0.2	No
Vineburn Ave.	2	1,450	38.1	144.2	5.0	12.5	0.0	No
Worth/Boca Rd.	2	8,380	38.1	144.2	36.3	17.7	0.1	No
Valley Blvd.	4	29,370	38.1	95.9	65.6	9.8	0.0	No
Ramona St.	2	13,590	38.1	144.2	66.0	20.9	0.1	No
Mission Rd.	3	24,600	38.1	144.4	135.0	25.0	0.2	No
Del Mar Ave.	2	22,490	38.1	144.2	176.6	42.0	0.2	No
San Gabriel Blvd.	4	37,490	38.1	144.6	232.0	29.7	0.1	No
Walnut Grove Ave.	3	16,380	38.1	83.7	24.1	6.1	0.1	No
Encinita Ave.	2	6,820	38.1	83.6	8.8	5.0	0.0	No
Lower Azusa Rd.	4	18,590	38.1	83.8	26.0	5.6	0.0	No
Temple City Blvd.	4	22,290	38.1	83.8	33.2	6.2	0.1	No
Baldwin Ave.	4	27,660	38.1	83.8	45.4	7.1	0.0	No
Arden Dr.	4	11,800	38.1	83.8	15.0	4.9	0.1	No
El Monte Junction MP 494.99								
Tyler Ave.	4	12,570	78.9	113.1	19.0	6.1	0.0	No
Cogswell Rd.	2	10,750	78.9	112.7	18.6	7.4	0.0	No
Temple Ave.	4	28,890	78.9	113.1	58.1	9.1	0.0	No
Bassett Junction MP 498.45								
Vineland Ave.	2	13,400	38.9	84.2	21.7	7.0	0.1	No
Puente Ave.	4	33,960	38.9	84.4	64.4	8.8	0.1	No

Table 4-9: BNSF Cajon Subdivision from San Bernardino to Barstow, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Orange Ave.	2	6,160	38.9	84.2	7.9	4.9	0.0	No
California Ave.	2	20,040	38.9	84.2	44.7	11.1	0.1	No
City of Industry Junction MP 501.5								
Fullerton Rd.	4	19,520	47.6	104.5	35.0	7.3	0.1	No
Fairway Dr.	4	21,180	47.6	104.5	39.1	7.6	0.1	No
Lemon Rd.	4	18,340	47.6	104.5	32.3	7.1	0.0	No
Brea Canyon Rd.	2	15,360	47.6	104.3	33.8	9.8	0.0	No
Pomona Junction MP 514.3								
LA-San Bernardino County Line MP 516.7			HANDLED SEPARATELY DUE TO PROXIMITY TO UP LA SUB					
Montclair Junction								
Bon View Ave.	2	11,930	47.7	100.4	21.0	7.4	0.1	No
Vineyard Ave.	4	36,630	47.7	100.6	84.4	10.9	0.1	No
Milliken Ave.	6	40,730	47.7	100.9	76.8	8.1	0.0	No
Kaiser Junction MP 527.5								
West Colton MP 534.7								
Colton Crossing MP 538.70								
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					1,456.6			
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						12.4	0.1	No

Table 4-11: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, 2026 with Proposed Project Scenario (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)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
East Los Angeles MP 5.85								
S. Vail Ave.	2	8,410	40.4	102.5	19.8	9.5	0.1	No
Maple Ave.	2	5,920	40.4	102.5	13.0	8.6	0.1	No
S. Greenwood Ave.	4	7,750	40.4	102.8	16.2	8.0	0.1	No
Montebello Blvd.	4	21,900	40.4	102.8	56.1	10.7	0.0	No
Durfee Ave.	2	14,870	40.4	69.9	19.7	6.0	0.0	No
Rose Hills Rd.	4	10,060	40.4	66.6	8.7	3.4	0.0	No
Mission Mill Rd.	2	2,320	40.4	66.4	1.9	3.1	0.0	No
Workman Mill	4	8,150	40.4	66.6	6.9	3.3	0.0	No
Turnbull Canyon Rd.	4	15,390	40.4	66.6	14.3	3.8	0.0	No
Stimson Av & Puente Av.	4	15,680	40.4	66.6	14.6	3.8	0.0	No
Bixby Dr.	2	3,160	40.4	66.4	2.6	3.2	0.1	No
Fullerton Rd.	4	25,830	40.4	66.6	28.5	4.9	0.1	No
Nogales St.	6	40,200	40.4	66.8	45.4	5.0	0.0	No
Fairway Dr.	4	27,010	40.4	66.6	30.5	5.0	0.0	No
Lemon St.	4	16,050	40.4	66.6	15.1	3.8	0.0	No
Pomona Junction MP 31.9 LA-San Bernardino County Line MP 33.17	HANDLED SEPARATELY DUE TO PROXIMITY TO UP ALHAMBRA SUB							
E. Montclair Junction MP 35.02								
Bonview Ave.	2	4,220	46.3	80.4	4.5	4.1	0.0	No
Grove Ave.	6	47,890	46.3	80.8	78.0	7.6	0.1	No
Vineyard Ave.	4	5,400	46.3	80.6	5.5	3.9	0.0	No

Table 4-11: UP Los Angeles Subdivision from East Los Angeles Yard to West Riverside Junction, 2026 with Proposed Project Scenario (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)	Total Gate Down Time (Minutes/ Day)	Daily Total Vehicle Hours of Delay (Veh-Hrs/Day)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Archibald Ave.	4	6,380	46.3	80.6	6.6	4.0	0.0	No
San Bernardino-Riverside County Line MP 43.36								
Milliken Ave.	6	25,670	46.3	80.8	30.9	4.9	0.0	No
Mira Loma Junction MP 45.7								
Bellegrave Ave.	2	9,430	49.1	84.9	12.1	5.3	0.0	No
Rutile St.	2	10,120	49.1	84.9	13.2	5.5	0.1	No
Clay St.	4	19,960	49.1	85.1	26.1	5.5	0.1	No
Jurupa Ave.	2	17,300	49.1	101.5	43.6	11.8	0.0	No
Mountain View Ave.	2	2,100	49.1	101.5	3.2	5.7	0.0	No
Streeter Ave.	4	16,960	49.1	101.8	30.8	7.4	0.1	No
Palm Ave.	2	9,170	49.1	95.0	14.7	6.6	0.1	No
Brockton Ave.	4	16,350	49.1	101.8	29.4	7.3	0.1	No
Riverside Ave.	2	14,070	49.1	101.5	30.8	9.7	0.1	No
Panorama Rd.	2	7,820	49.1	101.5	13.8	7.1	0.0	No
West Riverside Junction MP 56.7								
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					636.4			
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						6.2	0.0	No

Table 4-12: Combined UP Alhambra and LA Subdivisions in Pomona and Montclair Area, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Pomona Junction MP 514.3								
Hamilton Blvd.	4	8,540	92.0	182.0	22.1	9.9	0.1	No
Park Ave.	2	6,050	92.0	181.5	16.4	10.6	0.1	No
Main St.	2	1,680	92.0	181.5	4.1	9.0	0.1	No
Palomares St.	2	4,130	92.0	181.5	10.6	9.8	0.1	No
San Antonio Ave.	4	7,350	92.0	182.0	18.7	9.7	0.1	No
LA-San Bernardino County Line MP 516.7								
Monte Vista Ave.	4	14,520	92.0	182.0	40.6	11.1	0.1	No
San Antonio Ave.	4	12,300	92.0	182.0	33.4	10.6	0.1	No
Vine Ave.	2	9,020	92.0	181.5	26.5	11.9	0.1	No
Sultana Ave.	2	13,450	92.0	181.5	46.1	14.8	0.0	No
Campus Ave.	2	12,630	92.0	181.5	42.0	14.2	0.1	No
Montclair Junction								
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					260.4			
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						11.7	0.0	No

Table 4-13: UP Yuma Subdivision from Colton Crossing to Indio, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
Colton Crossing MP 539.0								
Hunts Lane	4	17,790	75.2	184.4	62.0	14.0	0.0	No
Whittier Ave.	2	250	75.2	218.6	1.0	14.0	0.1	No
Beaumont Ave.	2	610	75.2	218.6	2.4	14.1	0.0	No
San Timoteo Cyn Rd.	2	15,330	75.2	218.6	97.4	28.6	0.2	No
Alessandro Rd.	2	380	75.2	218.6	1.5	14.0	0.0	No
San Bernardino-Riverside County Line MP 549.25								
Live Oak Cyn Rd.	2	1,440	75.2	218.6	5.7	14.4	0.0	No
San Timoteo Cyn Rd.	2	1,870	75.2	218.6	7.5	14.6	0.0	No
Viele Ave.	2	140	75.2	184.0	0.4	9.8	0.0	No
California Ave.	2	8,650	75.2	184.0	28.6	13.0	0.1	No
Pennsylvania Ave.	2	10,710	75.2	184.0	37.5	14.1	0.1	No
North Sunset Ave.	2	5,000	75.2	184.0	15.1	11.4	0.1	No
22nd St.	4	20,270	75.2	184.4	70.1	13.8	0.1	No
San Gorgonio Ave.	2	16,770	75.2	184.0	71.7	18.8	0.1	No
Hargrave St.	2	21,810	75.2	184.0	116.6	25.8	0.1	No
Apache Trail	2	3,310	75.2	184.0	9.6	10.8	0.1	No
Broadway	2	8,730	75.2	184.0	28.9	13.0	0.0	No
Tipton Rd.	2	160	75.2	184.0	0.4	9.8	0.0	No
Garnet MP 588.32								
West Indio MP 609.63								
Indio MP 610.9								
Avenue 52	4	14,380	75.2	184.4	46.0	12.4	0.1	No
Avenue 56/Airport Blvd.	2	6,270	75.2	184.0	19.5	11.9	0.1	No
Avenue 66/4th St.	2	10,280	75.2	184.0	35.6	13.8	0.0	No

Table 4-13: UP Yuma Subdivision from Colton Crossing to Indio, 2026 with Proposed Project Scenario

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)	P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	2026 No Project vs. 2026 with proposed Project P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)	Above Evaluation Criteria?
OVERALL								
Total Daily Vehicle Hours of Delay (Veh-Hrs/Day)					657.6			
P.M. Peak Average Delay per Vehicle (Seconds/Vehicle)						16.9	0.1	No

The rail lines beyond the Hobart and East Los Angeles yards are the outer geographic limits from Port of Los Angeles terminals USACE has evaluated cumulative rail-related impacts in previous EIS/EIRs, and they also represent 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

The proposed Project and Alternative 3 would have the same impacts related to train volumes and rail delays because operationally they are similar and result in handling the same number of TEUs (1,913,000 TEUs). Therefore, Alternative 3 would result in the same cumulative impacts as those described for the proposed Project. Alternatives 1 and 2 are also operationally the same as they represent the existing capacity of the terminal (1,692,000 TEUs), and consequently are also similar to the 2026 future CEQA baseline. Therefore, the impacts of Alternatives 1 and 2 would have even less of a contribution to cumulative train volumes and rail delays than the proposed Project and Alternative 3. As such, although the cumulative delay would be projected to increase as a result of an increase in train counts under Alternative 3, none of the crossings would have an average vehicular delay exceeding 55 seconds. Therefore, Alternative 3 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. Cumulative Impact TRANS-5 is not required to be analyzed under NEPA.

4.2.8 Groundwater and Soils

4.2.8.1 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 is confined to the proposed project site because these impacts would be site-specific and relate primarily to potential exposure of on-site personnel to contaminants during construction and operation of the proposed Project or an alternative. There is no geographic scope with respect to potential 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 two-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. LADWP is responsible for supplying water to the proposed 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, 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.

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 five feet below ground surface. 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 3.8. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.8.2 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 could result in exposing soils containing toxic substances and petroleum hydrocarbons associated with prior operations, which would be deleterious to humans. Exposure to contaminants associated with historical uses of the proposed project 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 3.8.2.3. 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, Department of Toxic Substances Control (DTSC), and Los Angeles Fire Department regulations governing handling and cleanup of hazardous materials, and California Division of Occupational Safety and Health (Cal OSHA) 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 3.8.2.3, soil and groundwater at the YTI 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 mitigation measures **MM GW-1** and **MM 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 or NEPA.

Contribution of the Alternatives

For the same reasons as discussed for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternative 3 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 proposed project-level impacts are not anticipated, mitigation measures **MM GW-1** and **MM GW-2** require that any contaminated soils and groundwater encountered during construction will be remediated in compliance with applicable requirements and conditions. Further, all applicable regulations governing use and handling of hazardous materials will be complied with. Therefore, the proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA.

4.2.8.3 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 could change 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 portion of the proposed project site are backlands that would be improved as part of the Project 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 mitigation measures for site remediation and a contamination contingency plan (**MM GW-1** and **MM 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 proposed project site have been identified, as discussed in Section 3.8.2.3. 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 at the proposed 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 3.8, 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 proposed project site. Furthermore, as discussed for Impact GW-1, should any contaminated soil or groundwater be encountered during construction, it would be remediated in compliance with federal, state, and local requirements. The removal of site contamination prior to development would further minimize the potential for the movement or expansion of existing contamination. In addition, operation of the proposed Project would comply with all applicable regulations governing use and handling of hazardous materials. Because the contribution from the proposed Project would potentially 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 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternative 3 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 existing paved backlands as part of the proposed backlands improvements, or replacement of pavement in disturbed areas at the proposed 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, mitigation measures requiring site remediation and a contamination contingency plan (**MM GW-1** and **MM GW-2**) will be implemented to protect worker health and safety and to establish procedures to manage unforeseen encounters with contamination during proposed 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 proposed project site. As such, the proposed Project and the alternatives would not make a cumulatively considerable contribution to a significant cumulative impact.

4.2.8.4 Cumulative Impact GW-3: The proposed Project would not result in a cumulatively considerable change in potable water levels—No Cumulatively Considerable Impact

Cumulative Impact GW-3 addresses the degree to which the proposed Project or alternatives along with other cumulative projects could result in a change in potable water levels.

As described in Section 3.8, 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 proposed 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.

4.2.8.5 Cumulative Impact GW-4: The proposed Project would not result in a cumulatively considerable reduction in potable groundwater recharge capacity—No Cumulatively Considerable 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. 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.

4.2.8.6 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 Cumulatively Considerable 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) could result in a violation of regulatory water quality standards at an existing production well, as defined in CCR Title 22, Division 4, Chapter 15 and in the Safe Drinking Water Act. Because no existing groundwater production wells are 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.

4.2.9 Hazards and Hazardous Materials

4.2.9.1 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 3.9. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.9.2 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

The historical HazMat spill notification databases available on the Governor's Office of Emergency Services website were evaluated from 2009 to 2012 for the number of spills (greater than 10 gallons) that have occurred at ships/port/harbor and waterways in the cities of Los Angeles, San Pedro, Terminal Island, and Wilmington, in the County of Los Angeles. The data indicated approximately 35 hazardous material spills known to be greater than 10 gallons had occurred between 2009 and 2012 (California Emergency Management Agency 2013).[1] The spills include fuel and other spills from vessels serving the terminals. During this period, the total throughput of the container terminals at the Port of Los Angeles was 30,599,122 TEUs (POLA 2013). Therefore, the probability of a spill involving a hazardous material at the container terminals can be estimated at 1.14×10^{-6} per TEU (35 spills divided by 30,599,122 TEUs). This spill probability is a conservative estimate because it includes materials that would not be considered a risk to public safety (e.g., food grease), but would still be considered an environmental hazard. It should be noted that, during the period from 2009 to 2012, there were no reported impacts (injuries, fatalities, or evacuations) to the general public or employees directly from a hazardous material spill.

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 3.9-3, Risk Matrix (in Section 3.9.3.1), 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 expected to be less than cumulatively significant.

[1] If unknown spill quantities are taken into consideration, the number of hazardous material spills greater than 10 gallons and of unknown quantities increases to 53 spills between 2009 and 2012. In an attempt to be more definitive while calculating the risk of spills, only spills that were known to be greater than 10 gallons have been considered while estimating spill probability.

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. As described in Section 3.9.3.3, construction activities for the proposed Project would be conducted using BMPs in accordance with City guidelines, as detailed in the *Development Best Management Practices Handbook- Part A Construction Activities* (City of Los Angeles 2004). Standard BMPs would be used during construction activities to minimize runoff of contaminants and clean up any spills, in compliance with the state General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) and the proposed project-specific SWPPP that has been prepared in accordance with California NPDES permit CAS000001 2013. Further, BMPs would be implemented at Berths 214–216 and 217–220 during dredging and disposal of the dredged material. Implementation of these construction standards would minimize the potential for an accidental release of petroleum products or hazardous materials and explosion during construction activities at the proposed project site.

In addition, YTI Terminal operations would be subject to safety regulations that govern the shipping, transport, storage, and handling of hazardous materials, which would limit the severity and frequency of potential releases of hazardous materials resulting in increased exposure of people to health hazards (i.e., Port RMP, USCG, and LAFD regulations and requirements, and USDOT regulations). YTI Terminal operations involving hazardous materials are also governed by LAFD in accordance with regulations of state and federal departments of transportation (49 CFR 176). The transport of hazardous materials in containers on the street and highway system is regulated by Caltrans procedures and the Standardized Emergency Management System prescribed under Section 8607 of the California Government Code. These safety regulations strictly govern the storage of hazardous materials in containers (i.e., types of materials and size of packages containing hazardous materials). Implementation of increased hazardous materials inventory control and spill prevention controls associated with these regulations would limit both the frequency and severity of potential releases of hazardous materials.

Further, as analyzed in Section 3.9, construction, 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. Therefore, construction and operation of the proposed Project would not be expected to 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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.

4.2.9.3 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 proposed 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 be expected to 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 accident per million vehicle miles traveled (USDOT 2008). 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% (4,066 of the total 380,000 truck crashes) produced fatalities and 17.4% (66,000 of the total 380,000 truck crashes) produced injuries (USDOT 2008). 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. In addition, LAHD 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.

LAHD has fully implemented its Clean Truck Program, which involved phasing out older trucks. In addition, 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 ten 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%.

Furthermore, as part of the San Pedro Bay Ports CAAP 2010 Update, LAHD will be implementing measures and requirements that will result in truck fleet improvements (i.e., requiring newer trucks that meet certain EPA 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 be expected to 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 3.9, construction activities at the YTI Terminal would not substantially increase the probable frequency and severity of consequences to people from exposure to health hazards. Implementation of the aforementioned preventative measures and as detailed in Section 3.9.3.3 would minimize the potential for spills to affect members of the public, including on-site employees, and confine the adverse impacts of contamination to a relatively small area. 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 proposed project construction would not represent a cumulatively considerable impact.

The analysis in Section 3.9 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 be expected to 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, 2, and 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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.

4.2.9.4 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—Less than Cumulatively Considerable

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

Emergency response and evacuation planning is a shared responsibility among LAPD, LAFD, Los Angeles Port Police, and USCG. As a standard procedure for activities occurring on Port property and within the Port area, the contractor would coordinate with the agencies responsible for emergency response and evacuation planning (LAPD, LAFD, Port Police, and USCG), and all construction activities would be subject to emergency response and evacuation systems implemented by LAFD. Prior to commencement of construction activities, all plans would be reviewed by LAFD to ensure adequate access is maintained throughout construction and, during proposed project construction, emergency access would be maintained to all surrounding facilities.

Virtually all of the proposed cumulative projects that could have any impact on emergency response or evacuation plans would be subject to approval by 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 had the potential to negatively impact applicable emergency response or evacuation plans. Consequently, the related projects would not be expected to 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. 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 activities would be subject to emergency response and evacuation systems implemented by LAFD. In addition, the contractor would coordinate with the agencies responsible for emergency response and evacuation planning: LAPD, LAFD, Port Police, and USCG. As such, emergency access to these sites would not be adversely impacted during construction.

Proposed project operations would also be subject to emergency response and evacuation systems implemented by 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 proposed project site. The existing oil spill contingency and emergency response plans for the proposed project site would be updated to incorporate proposed facility and operation changes. Because existing management plans are commonly revised to incorporate terminal operation changes, conflicts with existing contingency and emergency response plans are not anticipated. The proposed project site would be secured, with access allowed only to authorized personnel. Therefore, the proposed Project would not be expected to 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 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.

4.2.9.5 Cumulative Impact RISK-4: The proposed Project would comply with applicable regulations and policies guiding development within the Port—Less than Cumulatively Considerable

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. For example, all construction would be completed in accordance with RCRA, CERCLA, CCR Title 22 and Title 26, and the California Hazardous Waste Control Law, which would govern proper containment, spill control,

and disposal of hazardous waste generated during construction activities. Potential releases of hazardous substances during construction would be addressed through the federal Emergency Planning and Right-to-Know Act, which is administered in California by SERC, and the Hazardous Material Release Response Plans and Inventory Law. In addition, construction would be completed in accordance with the Los Angeles Municipal Fire Code (LAFC), which regulates the construction of buildings and other structures used to store flammable hazardous materials, and LAMC (Public Works and Property), which regulates the discharge of materials into the sanitary sewer and storm drain. LAHD maintains compliance with these federal, state, and local laws through a variety of methods, including internal compliance reviews, preparation of regulatory plans, and agency oversight. All projects are also required to be consistent with the PMP, or be subject to approved amendments to the PMP in order to accommodate the proposed Project. Therefore, the past, present, and foreseeable future projects would not be expected to 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. 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 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 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, including the federal RCRA and CERCLA, and CCR Title 22 and Title 26. The proposed Project would be subject to numerous regulations for operation of the improved terminal. For example, as discussed in Section 3.9.3.1, List of Regulations, USCG maintains an HMSD, under the jurisdiction of the federal Department of Homeland Security (33 CFR 126), which develops standards and industry guidance to promote the safety of life and protection of property and the environment during marine transportation of hazardous materials. Terminal cargo operations involving hazardous materials are also governed by LAFD in accordance with regulations of state and federal departments of transportation (49 CFR 176). The transport of hazardous materials in containers on the street and highway system is regulated by Caltrans procedures and the Standardized Emergency Management System prescribed under Section 8607 of the California Government Code. These safety regulations strictly govern the storage of hazardous materials in containers (i.e., types of materials and size of packages containing hazardous materials).

LAHD maintains compliance with these state and federal laws through a variety of methods, including internal compliance reviews, preparation of regulatory plans, and agency oversight. Most notably, the Port RMP as presented in the PMP update includes a framework within which LAHD can implement the RMP for hazardous liquid bulk cargo and vulnerable resources to minimize or eliminate the overlap of hazardous footprints on vulnerable resources (LAHD 2013).

Therefore, the proposed Project would not be expected to have a 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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.

4.2.9.6 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 212–224, 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 the ships are 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 feet 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 feet 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 feet 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 ten 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 USDOT 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" (see Section 3.9.9.3). 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 of a tsunami and the risks are considered

acceptable, and thus a significant cumulative impact would not be expected to occur under CEQA or NEPA.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.9.9.3 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. A reasonably foreseeable scenario for generation of a tsunami or seiche in the Port Complex includes the recently developed Port Complex model, which predicts a maximum tsunami wave height, or reasonable worst-case scenario, of approximately 5.2 to 6.6 feet above MSL for the earthquake scenario and approximately 7.2 to 23.0 feet above MSL for the landslide scenario at certain locations within the Port. The highest anticipated water levels from the earthquake scenarios are predicted to occur in the East Channel area of the Port. The highest anticipated water levels from the landslide scenarios would occur in the Outer Harbor area and the western side of Pier 400. The report determined that, for the worst-case landslide scenario, water levels could exceed the adjacent deck levels in some localized areas (Pier 400) and some limited overtopping of the wharves could occur; however, no overtopping is expected at the Port for any of the other scenarios analyzed. Additionally, none of the scenarios modeled, including the two with the most significant sea level rise (Palos Verdes Landslide scenario and Catalina Fault: 7 Segments scenario), denoted a sea water level rise impact in the YTI Terminal area. The Port Complex model also identified the lowest deck elevations throughout the Port using various sources of data. According to the study, the lowest deck elevations near the proposed project site are adjacent to the East Basin Channel at approximately 11.2 feet above MSL (Moffatt and Nichol 2007). Based on the lowest deck elevation (near the YTI Terminal) presented above and the data provided in the Port Complex study, tsunami-induced flooding would not occur at the proposed project site under any of the earthquake and landslide scenarios. Therefore, localized tsunami-induced flooding is not expected to occur within the proposed project site.

However, the volume of spilled fuel that could occur as a result of tsunami or other seismic event induced spilling is 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 proposed project-level probability of an accidental spill would be the same as for the related projects, the proposed Project would not be expected to 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 3 would not be expected to make a cumulatively considerable contribution to a significant

cumulative impact under CEQA, and Alternative 3 would not be expected to 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.

4.2.9.7 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 potential of the proposed Project along with other cumulative projects to increase 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 fifth 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% 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 (e.g., major sporting events, mass transit, skyscrapers), or critical infrastructure facilities. Currently,

the United States has more than 500 chemical facilities operating near large populations. United States 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, and 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 weapon of mass destruction 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 to an increased probability of a terrorist action.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.9.3.3, the proposed Project would not result in a significant proposed 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 proposed project-related throughput, but rather would be based on the intent of the terrorist and his/her desired

outcome. It is possible that the increase in vessel traffic at the terminal as a result of the proposed Project could lead to a greater opportunity of a successful terrorist attack by providing increased chances for unauthorized terminal access and smuggling of harmful devices into the terminal; however, existing Port security measures as described below would counter the potential for increase in unauthorized access to the terminal.

Existing Port and YTI Terminal security measures would help minimize the risk of a successful terrorist attack and counter any potential increase in unauthorized access to the terminal. The Port has a layered approach to security that includes the security program of LAHD and the existing proposed project site. The vulnerability of the Port and of individual cargo terminals, including the YTI Terminal, can be reduced by implementing security measures, and the potential consequences of a terrorist action could be affected by certain measures, such as emergency response preparations. Compliance with maritime security regulations including the MTSA and ISPS Code would minimize any potential increase in the risk of terrorist attacks during construction and operations of the proposed Project. YTI Terminal security is conducted in accordance with an existing Facility Security Plan approved by the Captain of the Port for Sector Los Angeles-Long Beach in 2008, and YTI uses mandatory Maritime Security (MARSEC) Access Control Measures. Further, all cargo vessels 300 gross tons or larger that are flagged by International Maritime Organization signatory nations adhere to ISPS code requirements as discussed above and detailed in Section 3.9.1.4. The Port is currently involved in initial implementation of the TWIC program that includes issuance of a tamper-resistant biometric credential to maritime workers to minimize the potential for unauthorized handling of containers that contain hazardous materials and provide additional shoreside security at the terminal. The U.S. CBP enforces screening and scanning checks to ensure security of cargo being shipped into the United States. Finally, the Port continues to improve its security measures. For instance, in its latest five-year Strategic Plan for 2012–2017 (POLA 2012), the Port describes two initiatives related to strengthening security measures, including the use of Web media to enhance passage of critical information between the Port and local stakeholders, and delivering hands-on training in security and emergency response. Implementation and enforcement of the above security measures would serve to counter any potential increase in risks of a successful terrorist attack at the YTI Terminal.

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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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.

4.2.10 Land Use

4.2.10.1 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 are assessed in terms of their compatibility with the already existing Port industrial uses.

4.2.10.2 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 Cumulatively Considerable 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.

As stated in Section 3.10.4.3, 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 proposed 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.

For the same reasons as described for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternative 2 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.

4.2.10.3 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 Cumulatively Considerable 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 Berth 136–147 Marine Terminal (#1), the San Pedro Waterfront Project (#2), the Channel Deepening Project (#3), the Evergreen Container Terminal (#5), the Ultramar Lease Renewal Project (#8), China Shipping Development Project (#10), the Wilmington Waterfront Development Project (#12), and Yang Ming Container Terminal (#21), 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 3.10.4.3, 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 the existing YTI Terminal would be consistent with 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 or NEPA.

Contribution of the Alternatives

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

4.2.10.4 Cumulative Impact LU-3: The proposed Project would not result in a cumulatively considerable effect on the types and/or extent of existing land uses in the proposed 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 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 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 proposed 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 3.10.4.3, land use effects of the proposed Project would be confined to the proposed project site on Terminal Island and would consist of land uses and operations that are similar to those that currently exist on and around Berths 212–224 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 and 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternative 3 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.

4.2.10.5 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 to 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, 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 Berth 136–147 Marine Terminal (#1), San Pedro Waterfront Project (#2), the Channel Deepening Project (#3), the Evergreen Terminal (#5), China Shipping Development Project (#10), the Yang Ming Container Terminal (#21), 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 3.10.4.3, 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 and 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and the proposed Project and Alternative 2 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.

4.2.11 Marine Transportation

4.2.11.1 Scope of Analysis

The proposed Project would allow a greater number of container vessels to call at the proposed project site, including larger vessels (up to 13,000 TEUs) that could be accommodated at deepened berths (i.e., Berths 217–220 and Berths 214–216). Like all commercial vessels, these ships would follow designated traffic channels (also used by other vessels) when approaching and leaving the Harbor (see Figure 3.11-1). Moreover, dredging and in-water/over-water construction activities associated with the proposed Project would occur within the East Basin Channel, an existing federal channel at the Port. Because the proposed Project has the capacity to affect vessel transportation within these channels only and the berths that the vessels are accessing, the region of analysis for cumulative marine transportation impacts includes the vessel traffic channels that ships use to access berths within the Main Channel, East Basin Channel, and the Precautionary Area.

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

4.2.11.2 Cumulative Impact VT-1: Proposed project construction- and operation-related marine traffic would not result in a cumulatively considerable impact related to interference with the 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 East Basin Channel, and/or Precautionary Areas. This includes construction and operation phase impacts.

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.

Present and reasonably foreseeable Port projects, including the other terminal projects, could result in marine vessel safety impacts if they introduce construction equipment and additional vessels to the Main Channel, harbor, and Precautionary Area that interferes with USCG designated vessel traffic lanes. In-water/over-water construction activities and vessel operations associated with the marine-based related projects listed in Table 4-1 include the TraPac Marine Terminal (#1), San Pedro Waterfront Project (#2), Evergreen Container Terminal (#5), the Ultramar Lease Renewal Project (#8), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), and the APL Container Terminal (#35).

With the exception of the APL Container Terminal (#35), the majority of the related projects involving in-water/over-water construction and operational vessel traffic would be located the Inner Harbor at the West Basin and Turning Basin and along the Main Channel. As reported in Section 3.11.2.1, 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 channels. Regulated navigation areas (RNAs) and routes have been designated to ensure safe vessel navigation, and are regulated by various agencies and organizations to ensure navigational safety. Mariners are required to report their position to 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 when 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. Vessels must also adhere to the Harbor Safety Plan (HSP) speed limit regulations and the limited-visibility guidelines. Additionally, Port Tariffs requiring the use of Los Angeles Port Pilots for all vessels of foreign registry and U.S. vessels that do

not have a federally licensed pilot on board, further ensures that vessels are safely transited within the harbor.

In addition to the standard operational procedures, LAHD requires standard measures stipulated in all LAHD contracts and USACE permits, including navigational hazard markings. In addition, construction projects must comply with USCG navigation rules that include providing the USCG with a dredging schedule in advance of construction. Compliance with standard safety measures and requirements would preclude construction from blocking navigation channels or creating circumstances that could result in substantial navigation hazards.

Therefore, with the continued implementation of the VTS, oversight by the COTP and Marine Exchange, and use of Port Pilots, as well as standard measures implemented during in-water and over-water construction and dredging, impacts from past, present, and reasonably foreseeable related projects would not be expected to 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 improvement activities within the East Basin 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 USACE permits as described above. Because standard safety precautions would be utilized by all contractors, the use of a general cargo ship to deliver crane equipment, derrick barges for pile driving and dredging, and dump scows for moving dredge material would not substantially affect marine vessel safety in the East Basin Channel, Main channel, and connected basin areas.

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 #21 and #35 would result in additional vessel traffic in the Precautionary Area, outer harbor, inner harbor, and Main Channel. Consequently, the proposed Project in combination with future Port development could potentially increase the risk of in-water vessel traffic hazards; however, continued implementation of the VTS, oversight by the COTP and Marine Exchange, adherence to the HSP speed limit regulations, adherence to limited-visibility guidelines, and use of Port Pilots would ensure navigational hazards would not occur.

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 or NEPA.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to vessel traffic or navigational safety, and Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to vessel traffic or navigational safety. Alternative 1 is a

CEQA-required alternative and 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 marine transportation impact under CEQA or NEPA. Therefore, no mitigation measures would be required.

4.2.12 Noise

4.2.12.1 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 proposed project area. The nearest sensitive receptors include liveaboard boats in the East Basin and Cerritos Channel just west of the SR-47 Schuyler Heim Bridge and Henry Ford Bridge (ST-3, ST-4, and LT-1 shown on Figure 3.12-1) and residential area located about 0.8 mile to the west, across the Main Channel of the Los Angeles Harbor (ST-1 and LT-2 shown on Figure 3.12-1). The nearest parks are the John Gibson Jr. Park about one mile to the southwest (ST-2 shown on Figure 3.12-1), across the Main Channel, and the Wilmington Waterfront Park about one mile to the southwest, north of the West Basin. 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 proposed project construction activities and operational activities (including on-site operations, increased traffic noise, and increased railroad noise).

4.2.12.2 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 for 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 3.12.3.1). Thus, if overlapping noise levels from the concurrent construction of related projects exceeds 5 dBA at a sensitive receptor, a cumulatively considerable impact would result. During construction of the proposed Project, except during the sheet and king pile installation, the level of construction activity would be less intense as compared to the construction levels for the sheet and king pile installation, 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 proposed Project would be constructed over an approximately 22-month schedule, and is expected to begin in mid-2015. 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 (liveaboard boats at the marinas in East Basin).

In the vicinity of the nearby liveaboard boat area, projects that could have construction activities concurrently with the proposed Project and would result in potential noise impacts on sensitive receptors include the Wilmington Youth Sailing and Aquatic Center (#37) and Schuyler Heim Bridge Replacement and State Route (SR) 47 Terminal Island Expressway (#83). It is likely that construction activities and associated noise levels of these related projects would be similar to those expected from the equipment necessary to construct the proposed project elements. 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 nearby liveaboard boats in East Basin. Therefore, during pile driving, the proposed 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.

Construction noise at the residential area west of the proposed Project (ST-1 and LT-2 shown on Figure 3.12-1) and nearby parks (John Gibson Jr. Park [ST-2 shown on Figure 3.12-1] and Wilmington Waterfront Park) would be well below the ambient noise levels; therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative noise impact at these sensitive areas.

Contribution of the Alternatives

Alternative 1 would not involve any construction activities; therefore, there would be no potential for cumulative construction impacts under CEQA. Alternative 2 would involve

minimal construction and thus would not be expected to contribute to cumulatively considerable noise impacts at nearby liveaboard under CEQA. Alternative 1 is not required to be analyzed under NEPA, and Alternative 2 would result in no impacts under NEPA.

Alternative 3 individually would not have significant adverse noise impacts during construction. However, the construction noise from pile driving could temporary increase the ambient noise levels at nearby liveaboard boats by 4 dB. Although the noise levels from these construction activities would not exceed the City's noise impact threshold, should construction of other projects in the vicinity occur concurrently, these construction activities could make a cumulatively considerable contribution to a significant cumulative impact at the liveaboard boats. Therefore, for the same reasons as described for the proposed Project, Alternative 3 would make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to construction noise.

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 help reduce the maximum noise levels during pile driving. 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 Alternative 3 would make a cumulatively considerable contribution to a significant cumulative impact related to noise.

4.2.12.3 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 for 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 3.12.3.1). Thus, if overlapping noise levels from the concurrent construction of related projects exceeds 5 dBA at a sensitive receptor, 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 (liveaboard boats at the marinas in the East Basin) that would have a temporary increase in ambient noise levels during construction of the proposed Project.

In the vicinity of the liveaboard boat area, the only project that may involve nighttime construction activities and could occur concurrently with the proposed Project is the Schuyler Heim Bridge Replacement and SR 47 Terminal Island Expressway (#83). Nighttime construction activities would involve typical roadway construction activities. Although the bridge and roadway construction would involve pile driving, the pile-driving activities would occur during daylight hours only.

The EIS/EIR for the Schuyler Heim Bridge Replacement and SR-47 Expressway Project determined that the construction activities (other than pile driving, which would occur during daylight hours only) would not result in a significant construction impact at the liveaboard boat area because highway construction activities do not typically stay in one location for long periods, and noise-sensitive receptors in a given location would not be exposed for extended periods to noise generated by construction. Additionally, Caltrans standard construction practices include complying with all local sound control rules, and Caltrans would take all reasonable steps to avoid disruption during construction (Caltrans 2009).

Contribution of the Proposed Project (Prior to Mitigation)

Dredging along Berths 214–216 and Berths 217–220 is the proposed Project's only construction activity that would occur during nighttime hours. With the exception of dredging, the proposed Project would follow the construction hours of the City of Los Angeles Noise Ordinance. These berths are more than 0.5 mile from the nearest sensitive receptor (liveaboard boats at the marinas in the East Basin) and, accordingly, no construction activities within 500 feet of a residential zone would occur between the hours of 9 P.M. and 7 A.M. Monday through Friday, before 8 A.M. or after 6 P.M. on Saturday, or at any time on Sunday. Night construction during dredging would not result in average noise levels exceeding the ambient levels at the liveaboard boats; thus, it would not exceed the significance criteria for the area.

Given that the nighttime construction activities associated with the Schuyler Heim Bridge Replacement and SR 47 Terminal Island Expressway Project (#83) would not significantly increase ambient noise levels at sensitive receptor locations and the proposed Project would not result in a noise increase in ambient noise levels and would occur at a distance of over 0.5 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. Therefore, the proposed Project would not be expected to 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, Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to nighttime construction noise. Alternatives 1 and 2 would not involve nighttime construction and thus would have no 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

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

4.2.12.4 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 receptors within the geographic scope of the proposed Project.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

On-site operations at the Port Complex and roadway traffic on the roadway network along major roadways in the study area including SR-47, Vincent Thomas Bridge, Schuyler Heim Bridge, Harry Ford Bridge, and other streets in the Wilmington and San Pedro areas are the dominant sources of community noise at noise sensitive receptors within the geographic scope of the proposed Project. Virtually all of the cumulative projects in Table 4-1, with the exception of, for instance, some of the Port-wide operational plans and programs, would contribute to existing noise sources such as traffic, terminal operations, and neighborhood 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 5 dBA CNEL, the significant impact threshold for residential, park, and water recreation uses, with ambient noise levels under normally acceptable and conditionally acceptable conditions.

Noise increases associated with on-site terminal operations and increases 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 3 dBA at the liveaboard boats at the marinas in the Cerritos Channel 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 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, Alternative 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA or NEPA related to operational noise levels, and Alternative 2 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA 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 and alternatives would not contribute a cumulatively considerable impact under CEQA and NEPA.

4.2.13 Public Services

4.2.13.1 Scope of Analysis

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

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

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); therefore, cumulative Port development could 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 staff/sworn officer totals are based on current Homeland Security data and levels of security at other ports of corresponding size and activity, rather than on the number of employed officers necessary for the amount of proposed development or anticipated population for a given area. The Port Police has increased staffing levels as needed, 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, projects such as the TraPac Marine Terminal (#1), Evergreen Container Terminal (#5), Ultramar Lease Renewal Project (#8), China Shipping Development Project (#10), APL Container Terminal (#35), Yang Ming Container Terminal (#21), Middle Harbor Terminal Redevelopment (#67), and Piers G & J Redevelopment (#68) 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 continues to assess the needs of the Port, including the proposed project area, and would make adjustment to its operations as appropriate, as well as increase staffing, as needed, in conjunction with future development in order to ensure that adequate service would be provided to all future project sites.

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 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 be expected to 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 because the proposed project site already includes existing basic security equipment. Existing security infrastructure for the terminal includes: surveillance and access control systems that enhance perimeter security; water and shoreside surveillance; physical security (e.g., fencing, gates, lighting, signage); access control (a system/procedure for controlling who has physical access to the facility); surveillance

systems (e.g., cameras); and communication systems (e.g., two-way radios, phones, Internet access). Improvements to the existing security infrastructure would occur as needed. In addition to City and Port Police protection, additional security service would also be provided at the proposed project site by the terminal's internal security staff. Further, given the Port Police's existing patrol of land and water, and the assignment at all times of some officers to the proposed project area (both land- and waterside), the proposed project area would be adequately served. Moreover, the Port Police currently works cooperatively with various agencies (LAPD, Long Beach Police Department, Los Angeles County Sheriff, and USCG), to provide adequate protection when additional support is needed to respond to an emergency situation. The proposed Project would not burden the Port Police such that it would not be able to maintain its current level of service to the Port area. However, the Port Police continues to assess the needs of the Port, including the proposed project area, and would make adjustment to its operations as appropriate.

Additionally, as described in Section 3.13, the proposed Project would not diminish the resources or response times provided by 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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 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, LAFD emergency response times would only be affected by land use changes 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, projects such as the TraPac Marine Terminal (#1), Evergreen Container Terminal (#5), Ultramar Lease Renewal Project (#8), China Shipping Development Project (#10), APL Container Terminal (#35), Yang Ming Container Terminal (#21), Middle Harbor Terminal Redevelopment (#67), and Piers G & J Redevelopment (#68) 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. As standard practice, LAFD would be notified in advance of any construction activities and would review plans to ensure adequate fire prevention measures are incorporated into the projects including emergency access provisions. Codes and ordinances to be complied with would include measures such as requiring fire protection infrastructure (i.e., fire hydrants and sprinklers) and ensuring that 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 be expected to 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 in Section 3.13.4.3, 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 prior to the beginning of any construction activities. In addition, considering that the current level of LAFD service on Terminal Island and the Port is sufficient, emergency response times would not increase because the existing land use would not change, and any site access alterations would be reviewed and approved by 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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.

4.2.14 Utilities

4.2.14.1 Scope of Analysis

Cumulative impacts on utilities can result from the combined demand of the proposed Project with past, present, and future related projects on any of the utilities for which the proposed Project may have impacts (i.e., water supply, landfill and wastewater treatment capacities, and energy). The geographic scope of the cumulative effect analysis of utilities depends on the service area of the individual utility provider. Because the proposed Project has the capacity to affect the environment within the Port and surrounding communities, the geographic scope for cumulative impacts includes the Port of Los Angeles and extends to adjacent areas, including the communities of San Pedro and Wilmington. Direct impacts of the proposed Project would be localized to the Port area, and indirect impacts could extend further within the communities of San Pedro and Wilmington. The service areas of the Bureau of Sanitation (wastewater), Sanitation Districts of Los Angeles County (solid waste and wastewater treatment), and LADWP (water and electricity) encompass the City of Los Angeles. The Southern California Gas Company (natural gas) serves most of central and Southern California. However, the geographic region for cumulative utilities impacts is the Port and Los Angeles Harbor area because the infrastructure immediately serving the proposed Project is located within this service area. Service subareas of utility providers are sufficiently separated such that increased service demands from the proposed Project would not threaten provision of service in other areas (i.e., central and Southern California in the case of the Gas Company).

The significance criteria used for the cumulative analysis are the same as those used for the proposed Project in Section 3.14, Utilities.

4.2.14.2 Cumulative Impact UT-1: Exceed wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board or the Capacity of Existing Treatment Facilities—Less than Cumulatively Considerable

Cumulative Impact UT-1 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to generate substantial wastewater demands that would exceed the treatment requirements of the Los Angeles RWQCB.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Operation of past projects has created a demand for wastewater treatment infrastructure that is currently accommodated by existing treatment facilities. The current wastewater treatment facility in the proposed project vicinity is the Terminal Island Water Reclamation Plant (TIWRP), which has a capacity of 30 mgd and currently operates at approximately 60% 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 (BOS and LADWP 2006). Therefore, approximately 10 mgd in daily capacity at TIWRP would remain unused and available for future years beyond 2020. It is expected that all present and reasonably foreseeable future projects would be designed to be fully compliant with wastewater treatment requirements of the Los Angeles RWQCB and cumulative projects listed in Table 4.1 would be accommodated by the available capacity at the TIWRP. Wastewater from the related projects would not result in an exceedance of wastewater treatment requirements of the Los Angeles RWQCB. Therefore, past, present, and reasonably foreseeable future projects would not result in significant cumulative impacts on wastewater treatment requirements or capacity.

Contribution of the Proposed Project

The proposed Project would be designed to be fully compliant with existing wastewater treatment requirements of the Los Angeles RWQCB. The proposed Project would be connected to the sanitary sewer system where wastewater would be processed and sanitized at the TIWRP. As shown in Table 3.14-5 in Section 3.14, the increased staff levels associated with the proposed operation would generate an increase of 7,488 gpd (0.0083 mgd) over the CEQA baseline and 2,256 (0.0024 mgd) over the 2026 NEPA baseline. The proposed Project's additional 7,488 gpd contribution to the TIWRP's daily wastewater processing capacity would constitute approximately 0.0624% (7,488 ÷ 12,000,000) of the TIWRP's available capacity. The proposed Project would contribute even less over the NEPA baseline, with its addition above the baseline of only 2,256 gpd to the TIWRP's daily wastewater processing capacity, which would constitute approximately 0.019% (2,256 ÷ 12,000,000) of the TIWRP's available capacity. The negligible proposed project-related increase over the CEQA baseline and NEPA baseline, when combined with the contributions from past, present, and reasonably foreseeable future projects, would not exceed the daily capacity of the TIWRP at proposed project completion in 2026. Therefore, because the TIWRP operates in compliance with the Los Angeles RWQCB's requirements and has sufficient capacity to accommodate the proposed Project's wastewater generation, wastewater discharged into the sewer system would not exceed the requirements of the Los Angeles RWQCB. The proposed Project's contribution would not be cumulatively considerable.

Contribution of the Alternatives

With the increase in water demand during operations related to the continued increase in throughput and ship calls to 2026 for each of the alternatives, there would be a proportionate increase in wastewater generation. Both Alternatives 1 and 2 would generate an increase of 0.0017 mgd (5,232 gpd) over 2012 conditions. Alternative 3 would generate an increase of 7,488 gpd (0.0083 mgd) over the CEQA baseline and 2,256 (0.0024 mgd) over the 2026 NEPA baseline, which is similar to the proposed Project's estimated wastewater generation. Therefore, for the same reasons as described for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to exceeding wastewater treatment requirements, and the proposed Project and Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to exceeding wastewater treatment requirements. Alternative 1 is a CEQA-required alternative and 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.

4.2.14.3 Cumulative Impact UT-2: Result in a substantial increase in water demand that would exceed the water supplies available from existing entitlements and resources, and new or expanded facilities or entitlements would be required—Less than Cumulatively Considerable

Cumulative Impact UT-2 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to result in substantial demand for water supplies and therefore require the substantial expansion of entitlements and resources to meet that demand.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and operation of past projects has resulted in existing demands for water. These demands are currently accommodated by existing facilities. In order to properly plan for water supply, LADWP determines water demands using factors such as demographics, weather, economy, and trends in development. LADWP, in Chapter 6 of the Urban Water Management Plan (UWMP), determined an existing water demand within the LADWP service area that can be accommodated by the planned water supply of the same amount (LADWP 2011). The UWMP projects overall water supply reliability within the LADWP 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 2011). Total LADWP demand for water is predicted to be 701,200 acre-feet in 2030 and 710,800 acre-feet in 2035. Nonetheless, LADWP expects a 15% lower water demand trend than what was projected in the 2005 UWMP. LADWP would be able to meet this demand by increasing local water supplies and water conservation from the current 12% to 43% by 2035, reducing its reliance on the purchased MWD water supply by one-half (existing and planned).

Many of the projects identified in Table 4-1 involve new or expanded land uses and/or cargo throughput that may result in additional utility demands. These projects include the TraPac Marine Terminal (#1), San Pedro Waterfront Project (#2), Evergreen Container Terminal (#5), the Ultramar Lease Renewal Project (#8), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), and the APL Container Terminal (#35). The number of related projects would increase the demands for water. However, LADWP would continue to project future water demands and supply through new UWMPs every five years. Because LADWP will continue to plan and provide water supply for its customers based on the water supply planning process including preparation of the UWMP every five years, past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact on the provision of water. Therefore, past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact related to the provision of water and related facilities.

Contribution of the Proposed Project

The proposed Project would result in increased water demands but would not require new or expanded entitlements. As discussed in Section 3.14, Utilities, operation of the proposed Project would result in a water demand increase over CEQA baseline conditions of approximately 8,312 gpd (see Table 3.14-4). This would represent less than 0.0036% of the existing water demand and the projected water demand estimated in the UWMP for 2025 (LADWP 2011). Given that the UWMP projects adequate supplies are available to meet projected demands in the City through 2035, and that the proposed Project would require a relatively small increase in water supply to the proposed project site, it is expected that water would be available for the proposed Project. Therefore, the proposed Project would not impact future water supply such that new or expanded entitlements would be required, and the proposed Project's contribution to cumulative water demand would be less than cumulatively considerable.

Contribution of the Alternatives

The increase in vessel calls to 2026 would result in increased water demand during operations for each of the alternatives. Both Alternatives 1 and 2 would generate an increase of 0.017 mgd (5,808 gpd) over the 2012 conditions. Alternative 3 would increase water demand at the proposed project site by approximately 0.025 acre-foot per day, or 8,312 gpd over the CEQA baseline, and approximately 0.008 acre-foot per day, or 2,504 gpd over the 2026 NEPA baseline, which is similar to the proposed Project's estimated water demands. Therefore, for the same reasons as described for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to water supply and facilities, and Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to water supply and facilities. Alternative 1 is a CEQA-required alternative and 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 proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to water supply. No mitigation is required.

4.2.14.4 Cumulative Impact UT-3: Generate substantial surface runoff that would exceed the capacity of existing municipal storm drain systems—Less than Cumulatively Considerable

Cumulative Impact UT-3 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to generate substantial surface runoff that would exceed the capacity of existing municipal storm drain systems that would require new facilities, the construction of which would result in significant environmental impacts.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and operation of past projects has resulted in changes to the storm runoff conditions and stormwater infrastructure has been constructed to ensure flooding does not

occur and land is properly drained of excess surface water. During construction, a project that would affect more than one acre would have to prepare a Stormwater Pollution Prevention Plan (SWPPP) that would specify BMPs that would in many cases temporarily capture or slow water runoff existing the project site, alleviating the stress of the overall stormwater system during times of heavy runoff. Many of the projects identified in Table 4-1 involve new or expanded land uses that would require SWPPPs and in some cases may require updates to their existing stormwater infrastructure. These projects include the TraPac Marine Terminal (#1), San Pedro Waterfront Project (#2), Evergreen Container Terminal (#5), the Ultramar Lease Renewal Project (#8), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), and the APL Container Terminal (#35).

At the Port Complex, much of the area is already impervious and development resulting from present and future projects would not result in substantial increases in impervious surface area. Moreover, all projects that have the potential to modify on-site drainage must provide the appropriate development plans, which could include grading and drainage plans to ensure flooding damage does not occur and show that stormwater flows can be accommodated with the existing drainage systems. During engineering design, should it be determined the existing stormwater system is at capacity, upgrades to the system would be required. The environmental impacts of any stormwater system upgrades would be analyzed during the environmental review and any potential impacts from new trenching or construction activities would be mitigated, as appropriate. Thus, because SWPPPs would be implemented during construction and the engineering design would determine if stormwater system improvements are required, impacts from past, present, and reasonably foreseeable projects would be less than cumulatively significant.

Contribution of the Proposed Project

During construction activities, a SWPPP would be implemented to ensure discharge to the harbor would be minimized and would be treated through BMPs identified in the SWPPP. Thus, during construction, the proposed Project would not contribute to a cumulatively considerable impact related to exceeding the existing stormwater drainage capacity.

Once operational, the proposed Project would not increase runoff associated with the proposed project site because all improvements would occur on existing impervious (i.e., paved) space. Stormwater infrastructure would be left in its existing state or enhanced where appropriate based on the planned improvements in the backland. Consequently, during operation, the proposed Project would not contribute to a cumulatively considerable impact related to exceeding the existing stormwater drainage capacity.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to stormwater infrastructure, and Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to stormwater infrastructure. Alternative 1 is a CEQA-required alternative and 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 proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact related to stormwater infrastructure. No mitigation is required.

4.2.14.5 Cumulative Impact UT-4: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs—Less than Cumulatively Considerable

Cumulative Impact UT-4 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to generate substantial solid waste 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 the generation of solid waste, which is currently accommodated by existing facilities. The primary landfill that serves the Port area is the Sunshine Canyon Landfill. Sunshine Canyon has a daily throughput capacity of 12,100 tons allotted for City use and is expected to accommodate demands until 2037 (CalRecycle 2013). In addition, Chiquita Canyon Sanitary Landfill serves the Los Angeles area, including the Port. It has a maximum permitted throughput of 6,000 tons per day. The remaining capacity was approximately 8,390,000 cubic yards as of December 2010, and it has an estimated closure date of 2019 (LACDPW 2013). Moreover, there are several other landfills identified in Section 3.14, Utilities, for secondary uses and disposal of hazardous wastes. However, the City of Los Angeles, as well as Southern California in general, is currently faced with reduced landfill space due to increases in population. To comply with AB 939, recycling studies for the City of Los Angeles have been conducted, and currently there is a citywide diversion rate 76.4% and a zero waste goal (90% or greater diversion) by 2025 (BOS 2013). The combined waste diversion from Port programs and construction is 96.3%, with a recent diversion rate for construction and demolition at 99.1%, or 60,166 tons (Garrett pers. comm. 2012).

Additionally, the City of Industry certified and approved a conditional use permit for a Puente Hills Intermodal Facility (PHIMF) in June of 2008, acquired the property in May 2009, started construction in late 2009, and completed final design in 2010, though the operational phase is still to be determined (Sanitation Districts of Los Angeles County 2013). This is a waste-by-rail project, intended to accommodate the solid waste removal needs for Los Angeles County. The proposed facility would eventually have the capacity to handle up to two trains per day, transporting a total of 8,000 tons of municipal solid waste per day. With the remaining capacity of Sunshine Canyon City/County Landfill, along with the proposed intermodal system and anticipated recycle diversion rates for the area, solid waste removal and disposal would be adequately provided for past, current, and future projects, and cumulative impacts would be less than significant.

Many of the projects identified in Table 4-1 are Port redevelopment projects within the proposed project vicinity, and generally do not require any expansion of facilities. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional generation of solid waste. These projects include

the TraPac Marine Terminal (#1), San Pedro Waterfront Project (#2), Evergreen Container Terminal (#5), the Ultramar Lease Renewal Project (#8), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), and the APL Container Terminal (#35). While the number of related projects would increase the generation of solid waste, existing and planned capacity would be able to accommodate the increased demand. Therefore, based on the above, past, present, and reasonably foreseeable future projects would not result in a significant cumulative impact on landfill capacity.

Contribution of the Proposed Project

Construction and demolition activities could generate significant quantities of debris that would require disposal in a landfill. Construction and demolition materials would include asphalt, metals, and other solids. However, the Port requires significant recycling of construction and demolition debris, recently reaching diversion rates as high as 99%. Moreover, the proposed Project would be required to implement **MM UT-1** and **MM UT-2**. The first mitigation measure requires demolition and construction materials that can be recycled must be separated by material and recycled. The second mitigation measure requires use of recycled content in construction materials, where feasible. Thus, the proposed Project would have a less than cumulatively considerable contribution related to construction waste going to landfills.

By 2026, the proposed Project's operation would generate approximately 0.1815 ton of solid waste per day, which is an increase of 0.0675 ton per day over the CEQA baseline and a 0.02-ton per day increase over the 2026 NEPA baseline. Currently, there is a citywide diversion rate 76.4% and the combined waste diversion from Port programs and construction of 96.3%. Using the more conservative City-wide ratio, the amount of solid waste that would go to the landfill after the diverted estimate is removed is approximately 0.043 ton per day or 0.0000036% of the permitted daily throughput of 12,100 tons. If the goal of zero waste (90% or greater diversion) is achieved by 2025, the amount of solid waste sent to Sunshine Canyon City/County Landfill would be less than 0.01815 ton per day or 0.0000015% in 2026. The Sunshine Canyon City/County Landfill would be able to accommodate the negligible increase in solid waste generated by proposed project operations. Therefore, the proposed Project would not result in a cumulatively considerable contribution to a significant cumulative impact related to solid waste.

Contribution of the Alternatives

For the same reasons as described for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to solid waste, and Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to solid waste. Alternative 1 is a CEQA-required alternative and 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 proposed Project and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact related to solid waste generation. No mitigation is required at the cumulative level.

4.2.14.6 Cumulative Impact UT-5: Require new, offsite energy supply and distribution infrastructure, or capacity-enhancing alterations to existing facilities that are not anticipated by adopted plans or programs—Less than Cumulatively Considerable

Cumulative Impact UT-5 represents the potential of the proposed Project when combined with past, present, and reasonably foreseeable future projects to generate increases in energy demands such that the construction of new unplanned 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 demands for energy and natural gas. These demands are currently accommodated by existing facilities as provided by LADWP and the Gas Company. Many of the projects identified in Table 4-1 involve new or expanded land uses and/or cargo throughput that may result in additional demands on electricity and natural gas. These projects include the TraPac Marine Terminal (#1), San Pedro Waterfront Project (#2), Evergreen Container Terminal (#5), the Ultramar Lease Renewal Project (#8), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), and the APL Container Terminal (#35).

Under the Los Angeles City Charter (Sections 220 and 673), LADWP has the power and duty to construct, operate, maintain, extend, manage, and control water and electric works and property for the benefit of the City and its inhabitants. LADWP has a total generating capacity of about 7,197 MW per day to serve a peak Los Angeles demand of about 6,142 MW and growth in annual peak demand over the next 20 years is estimated to be about 1.3%, or approximately 100 megawatts (MW) per year (LADWP 2012).

LADWP's Power Integrated Resources Plan (Power IRP) anticipates load growth and plans new generating capacity or demand-side management programs to meet load requirements for future customers. LADWP has issued the 2012 Final Draft Power IRP, which builds upon the 2011 Power IRP and provides forecasts and a 20-year framework to ensure that current and future energy needs of the City can be met over the next 20 years (LADWP 2012). The current load forecast used in this Power IRP is lower than the one used in 2011. Compared to the prior forecast, electricity sales for year 2020 decreased by approximately 5.3% mostly due to increasing levels of energy efficiency.

In 2002, SB 1078 (Public Utilities Code Chapter 2.3 Section 387, 390.1, and 399.25) implemented a Renewables Portfolio Standard, which established a goal that 20% of the energy sold to customers be generated by renewable resources by 2017. The goal was accelerated in 2006 under SB 107 and expanded in 2011 under SB 2, which requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33% of total procurement by 2020. The Power IRP provides objectives and recommendations to reliably supply LADWP customers with power and to meet the 33% renewable energy goal by 2020.

Through implementation of strategies identified in the IRP, electricity resources and reserves at LADWP will adequately provide electricity for the Port. LADWP is required by the Charter to provide a reliable supply of electricity for its customers, and because LADWP is moving toward increasing renewable energy supplies in its resource portfolio, the electricity demand of the past, present, and reasonably foreseeable future projects would not result in the need to construct a new unplanned offsite power station or facility. As a result, past, present, and reasonably foreseeable future related projects would not result in a significant cumulative impact related to the provision of electricity.

Natural gas service to the proposed project site would be supplied by the Southern California Gas Company (SCGC). Demand is expected to be virtually flat for the next 21 years because of modest economic growth, CPUC-mandated demand-side management and renewable electricity goals, decline in commercial and industrial demand, continued increased use of non-utility pipeline systems by enhanced oil recovery customers, and savings linked to advanced metering modules. The 2012 California Gas Report estimates the total annual gas supply taken by SCGC to be 2,673 million cubic feet per day (MMcf/day) in 2012, 2,615 MMcf/day in 2015, and 2,619 MMcf/day in 2030. The report predicts the total capacity available to SCGC to remain constant at 3,875 MMcf/day through 2030 (California Gas and Electric Utilities 2012). Therefore, past, present, and reasonably foreseeable future projects would not result in a cumulatively significant impact related to natural gas service.

Contribution of the Proposed Project

Energy expenditures during construction, primarily diesel fuel and electricity, would be short in duration, occurring to varying degrees during each of the proposed project construction phases. Construction would not result in substantial waste or inefficient use of energy because construction would be competitively bid, which would facilitate efficiency in all construction stages. Current LAHD bid specifications include provisions to reduce energy consumption, such as staging work during nonpeak hours when appropriate.

Operational electricity demands at the proposed project site would be related to industrial uses, including additional crane operations, facility and backlands operations (refrigeration units), site and security lighting, general site maintenance, and AMP. No new buildings are proposed as part of the proposed Project. All light fixtures used at the proposed project site would meet the latest efficiency standards and would not waste input energy by producing unusable light in the form of glare. Current electrical demand is 15,754,440 kWh. Based on this usage and the proposed additional electrical draw, primarily from new cranes, electrical demand in 2026 is estimated to be 23,092,182 kWh based on a throughput of 1,913,000 TEUs.

As described in Section 4.2.14.5, LADWP is charged with maintaining sufficient capability to provide its customers with a reliable supply of power, and will continue to do so with proper planning and development of facilities in accordance with the City Charter using such mechanisms as the Power IRP. Based on the LADWP Power IRP, electricity resources and reserves at LADWP will adequately provide electricity for all of its customers, including the proposed Project, through the current Power IRP planning horizon of 2040 (LADWP 2012). Further, LADWP is required by the Charter to provide a reliable supply of electricity for its customers; because LADWP is moving toward increasing renewable energy supplies in its resource portfolio, the added electricity

demand of the proposed Project to past, present, and reasonably foreseeable future projects would not result in the need to construct a new off-site power station or facility.

The proposed Project would generate negligible demand for natural gas associated with space and water heating because administrative offices would not be expanded and no new buildings are proposed. SCGC's existing supplies via the existing infrastructure adjacent to and within the proposed project site would be adequate to serve the proposed Project at completion. Therefore, the proposed Project would not result in a cumulatively considerable contribution to a significant cumulative impact related to energy demand.

Contribution of the Alternatives

Both Alternatives 1 and 2 would require less energy demand in 2026 than the 23,092,182 kWh estimated for the proposed Project because they would only reach a throughput of 1,692,000 TEUs compared to the proposed Project's throughput of 1,913,000 TEUs. Alternative 3 would result in a similar energy demand in 2026 as the proposed Project, as it would reach the same throughput capacity as the proposed Project. Therefore, for the same reasons as described for the proposed Project, Alternatives 1 through 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to energy, and Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under NEPA related to energy. Alternative 1 is a CEQA-required alternative and 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.

4.2.15 Water Quality, Sediments, and Oceanography

4.2.15.1 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's backlands and immediately adjacent lands within the Harbors subwatershed, because this represents the drainage area that could 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 3.15.4. These criteria are the same for both CEQA and NEPA impact analyses.

4.2.15.2 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 3.15, 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; this TMDL became effective on March 23, 2012. The Los Angeles RWQCB is also 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 3.15.2.1). 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 the proposed Project. Water quality impacts associated within-water/over-water construction projects would not persist for the same reasons discussed in Section 3.15. 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), China Shipping Development Project (#10), Yang Ming Container Terminal (#21), Maintenance Dredging (#26), Relocation of Jankovich Marine Fueling Stations (#33), and Al Larson Boat Shop Improvement Project (#34) are in the vicinity of the proposed Project and involve in-water construction activities. Dredging for the Channel Deepening Project (#3) was completed in 2013, whereas a number of projects (such as the Evergreen Container Terminal [#5], Yang Ming Container Terminal [#21], and Relocation of

Jankovich Marine Fueling Stations [#33]) are still in the planning phases. A number of projects within the Port of Long Beach, including the Middle Harbor Terminal Redevelopment (#67) and Piers G and J Redevelopment (#68), involve dredging and/or in-water construction. However, as described in Section 3.15, 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 be expected to result in a significant cumulative impact to water quality.

Wastewater discharges associated with proposed project operations and runoff from proposed 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 be expected to occur.

Development of port facilities associated with the cumulative related projects (TraPac Marine Terminal [#1], Evergreen Container Terminal [#5], China Shipping Development Project [#10], Yang Ming Container Terminal [#21], Berth 302–306 [APL] Container Terminal Improvements Project [#35], Middle Harbor Terminal Redevelopment [#67], and Piers G & J Terminal [#68]) 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 be expected to 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 proposed project area would flow into the Harbor, along with runoff from adjacent areas of the large, primarily urbanized watershed. Stormwater runoff from 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. The proposed project operations would operate on the same footprint as the CEQA baseline, all backlands would be paved, and there would be 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 pile installation, would suspend bottom sediments. Receiving water monitoring studies in the Harbor (MBC 2001a, 2001b, 2002; USACE and LAHD 2008; POLA 2009a–i, 2010a–d) and other water bodies (Parish and Wiener 1987; Jones & Stokes 2007a, 2007b) have documented a relatively small, turbid dredge plume that dissipates rapidly with distance from dredging operations (see Impact BIO-1). Because of this, the water quality standards at the specified distances in the certification/permits resulting from in-water activities are not expected to be violated, and significant impacts to water quality would not result. 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 were measured in DO levels 200 to 300 feet away from the dredging operations (LAHD 2011). 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 feet and 300 feet 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 unit. As discussed for the China Shipping Berth 100 Project in 2002, mean pH levels at the compliance station remained within 0.02 unit 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 proposed 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 two 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 3.15, 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 be expected to 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) would prevent the accidental spill from causing a nuisance or from adversely affecting beneficial uses of the Harbor. Any spills from past, present or reasonably foreseeable future related projects would be subject to the same regulations. Therefore, the proposed Project would not be expected to 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, and for other vessels transiting the Harbor. As a result, the proposed project's vessel operations would not be expected to 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 YTI Terminal no longer uses tributyltin (TBT) in hull coatings on 100% 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, Alternative 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA and NEPA related to causing regulatory standards to be violated in Harbor waters.

Because under Alternative 1 there would be no new construction at the proposed project site, there would be no pollution, contamination, nuisance, or violation of regulatory standards due to construction, and no impacts would occur. Therefore, Alternative 1 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to construction. Further, for the same reasons as described for the proposed Project, operations under Alternative 1, including increased container throughput and increased truck traffic, are not expected to create pollution, contamination, or a nuisance, or result in violations of water quality standards or permit conditions. As such, Alternative 1 operations would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to causing regulatory standards to be violated in Harbor waters from accidental spills or illegal discharges from oceangoing vessels, or leaching from vessel hull coatings. Alternative 1 is not required to be analyzed under NEPA.

Because under Alternative 2 there would be only backlands improvements and no in-water or over-water construction activities, for the same reasons as described for the proposed Project related to proposed project site runoff, Alternative 2 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to causing regulatory standards to be violated in Harbor waters due to site runoff. Further, for the same reasons as described for the proposed Project, operations under Alternative 2, including increased container throughput and increased truck traffic, are not expected to create pollution, contamination, or a nuisance, or result in violations of water quality standards or permit conditions. Therefore, Alternative 2 operations would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA related to causing regulatory standards to be violated in Harbor waters from

accidental spills or illegal discharges from oceangoing vessels, or leaching from vessel hull coatings. 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 relative to water quality. Therefore, no mitigation measures would be required.

4.2.15.3 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 3.15, most of the terminal is designated by FEMA as Flood Zone X (areas of one percent annual chance flood with average depths of less than one foot).

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. There are no cumulative projects near the proposed Project with the potential to affect drainage patterns and runoff volumes. 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 3.15, the proposed Project would not increase the potential for flooding because the existing on-site storm drains and storm drainage conveyance and treatment are adequate to treat and convey runoff from the proposed project site, and total impervious area and existing overland drainage paths would not change. Further, 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 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 3 would not make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 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.

4.2.15.4 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 (e.g., TraPac Marine Terminal [#1], San Pedro Waterfront Project [#2], Channel Deepening Project [#3], Cabrillo Way Marina [#4], China Shipping Development Project [#10],Yang Ming Container Terminal [#21], Al Larson Boat Shop Improvement Project [#34], Middle Harbor Terminal Redevelopment Project [#67], Piers G and J Terminal Redevelopment Project [#68], and the Pier S Marine Terminal [#71]) would add additional fill, 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 (which, in addition to those previously mentioned for fill, include Evergreen Container Terminal [#5]). Changes to the hydromorphology 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 3.15, 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 cumulative projects would not be expected to 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 Berths 214–220. Sheet piles and king piles would be installed beneath the wharf, but due to the low profile of the piles (which are installed mostly beneath the sediment) 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 proposed 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 East Basin 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, Alternative 3 would not be expected to contribute to cumulatively considerable impact under CEQA and NEPA related to surface water movement.

Because under Alternative 1 there would be no new construction, including in-water construction, and because Alternative 1 would not install barriers to prevent or impede water movement around the proposed project site, Alternative 1 would not be expected to contribute to cumulatively considerable impacts under CEQA related to surface water movement. Alternative 1 is not required to be analyzed under NEPA.

Because under Alternative 2 there would be only backlands improvements and no in-water construction would occur, and because Alternative 2 would not install barriers to prevent or impede water movement around the proposed project site, Alternative 2 would not be expected to contribute to cumulatively considerable impacts under CEQA related to surface water movement. 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.

4.2.15.5 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 proposed 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 have disturbed or would disturb soils within upland areas of the watershed that drain to the Harbor. Cumulative related projects (e.g., TraPac Marine Terminal [#1], the San Pedro Waterfront Project [#2], Cabrillo Way Marina [#4], Evergreen Container Terminal [#5], China Shipping Development Project [#10], YTI Container Terminal [#22], Yang Ming Container Terminal [#21], Relocation of Jankovich Marine Fueling Station [#33], Berths 302–306 APL Marine Terminal Project [#35], and the Middle Harbor Terminal Redevelopment Project [#67]) 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 be expected to 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's 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 3 would not be expected to make a cumulatively considerable contribution to a significant cumulative impact under CEQA, and Alternative 3 would not be expected to 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

Alternative 3 would be expected to result in similar cumulative impacts as the proposed Project because it also involves expanding operations of the existing container terminal, and would have construction and operational characteristics (although with five peak day ship calls [over a 24-hour period], compared to four for the proposed Project and a shorter construction period) similar to the proposed Project with the same 2026 throughput. Alternatives 1 and 2 would not include any dredging or construction activities in the water or in waterside areas, nor the addition of any new cranes; extension of the 100-foot gauge crane rail and expansion of the TICTF on-dock rail yard would also not take place. While backlands improvements would take place under Alternative 2, Alternative 1 would not include any construction activities in the backland areas nor include any backland repairs. These two alternatives would be expected to result in minimal or no construction impacts and fewer operational impacts than the proposed Project because cargo throughput increases under these alternatives would be less than 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
  - Emissions from Alternative 1 operations would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOC, NO_X, and PM_{10} emissions under CEQA.

- Alternative 1 would make a considerable contribution to an existing significant cumulative impact for cancer risk under CEQA.

- Biological Resources
  - Alternative 1 would 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.
- Greenhouse Gas Emissions
  - 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.

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 NO_X, VOC, and PM_{10}, emissions under CEQA.
  - Alternative 2 overlapping construction and operation emissions during the construction period would make a cumulatively considerable and unavoidable contribution to a significant impact for NO_X, VOC, and PM_{10} emissions under CEQA.
  - Emissions from Alternative 2 operations would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for VOC, NO_X, and PM_{10} emissions under CEQA.
  - Alternative 2 would make a considerable contribution to an existing significant cumulative impact for cancer risk under CEQA.
- Biological Resources
  - Alternative 2 would 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.
- Greenhouse Gas Emissions
  - 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.

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

4.3.3 Alternative 3 – Reduced Project: Improve Berths 217–220 Only

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 crane lighting associated with Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact under CEQA.
- Air Quality
  - Construction emissions under Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for PM_{10}, $PM_{2.5}$ NO_X, CO, and VOC in 2015 and for NO_X in 2016 under CEQA and for $PM_{2.5}$, NO_X, CO, VOC, and NO_X under NEPA.
  - Alternative 3 overlapping construction and operation emissions during the construction period would make a cumulatively considerable and unavoidable contribution to a significant impact for $PM_{2.5}$, NO_X, CO, and VOC under CEQA and NEPA.
  - During construction, Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2 and PM_{10} under CEQA and NO_2 under NEPA.
  - Alternative 3 overlapping construction and operation emissions during the construction period would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2 and PM_{10} levels under CEQA and NO_2 levels under NEPA.
  - Emissions from Alternative 3 operations would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for VOC, NO_X, and CO under CEQA, and for VOC and NO_X under NEPA.
  - Alternative 3 would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to NO_2 and PM_{10} levels during project operation under CEQA and NEPA.
  - Alternative 3 would make a considerable contribution to an existing significant cumulative impact for cancer risk under CEQA and NEPA.
- Biological Resources
  - Alternative 3 would 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.

- Greenhouse Gas Emissions
  - 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.
- Noise
  - During pile driving, Alternative 3 would have a cumulatively considerable noise impact at the liveaboard boats when combined with any other project that would affect the same receptor location and occur concurrently 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 cumulative impacts related to construction would be less than the proposed Project due to no proposed dredging and pile driving at Berths 214–216, while intensity of contributions to cumulative impacts related to operations would be more than the proposed Project due to more annual and peak day vessel calls (although of smaller vessel sizes compared to the proposed Project) at the proposed project site under Alternative 3.