

6. CUMULATIVE IMPACTS

6.1 Introduction

This chapter presents the requirements for cumulative impact analysis, and analyzes the potential for impacts of the Action Alternatives of the Proposed Action to combine with impacts of other past, present, and reasonably foreseeable future projects in each resource area's cumulative geographic scope, to result in significant cumulative effects. Following the presentation of the requirements related to cumulative impact analyses and a description of the related projects (Sections 6.1.1 and 6.1.2, respectively), the analysis in Section 6.2 addresses each of the resource areas for which Alternative 1 may make a cumulatively considerable contribution to cumulative impacts, when combined with other past, present, and reasonably foreseeable projects in the area. Section 6.3 addresses each of the resource areas for which Alternative 2 may make a cumulatively considerable contribution to cumulative impacts when combined with other past, present, and reasonably foreseeable projects in the area.

6.1.1 Requirements for Cumulative Impact Analysis

CEQ (40 C.F.R. § 1508.7 and 40 C.F.R. § 1508.25[a][2]) and the State CEQA Guidelines (14 CCR 15130) require a reasonable analysis of the significant cumulative impacts of a Proposed Action. 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).

The CEQ regulations implementing NEPA define a “cumulative impact” as follows:

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. (40 C.F.R. § 1508.7)

Cumulative impacts are defined similarly in the CEQA Guidelines:

“Cumulative impacts” refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

- (a) The individual effects may be changes resulting from a single project or a number of separate projects.*
- (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from*

individually minor but collectively significant projects taking place over a period of time. (CCR, Section 15355)

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

As defined in Section 15355, a cumulative impact consists of an impact which 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, the CEQA Guidelines, Section 15064(i)(5), states:

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

For the purposes of this SEIS/SEIR, significant cumulative impacts would occur if impacts related to the implementation of the Proposed Action, added to the environmental impacts of other past, present, and reasonably foreseeable future actions, result in a significant effect. For an impact to be considered cumulative, these incremental impacts and potential incremental impacts must be related to the types of impacts caused by the Proposed Action. Therefore, the cumulative impacts discussion focuses on whether the impacts of the Proposed Action are cumulatively considerable within the context of impacts caused by other past, present, or reasonably foreseeable future projects. These cumulative impact scenarios consider other projects within the area of the Proposed Action that have the potential to contribute to cumulatively considerable impacts.

6.1.2 Past Projects

The below discussions describe the past projects that have contributed to cumulative impacts.

History of the Port of Los Angeles

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

In 1822, under the newly independent Mexican government San Pedro became a robust commercial center and an attractive home for new settlers. The Mexican government granted three ranchos near the bay, Rancho San Pedro, Rancho Los Palos Verdes, and Rancho Los Cerritos. On February 2, 1848, when California came under American control, business at San Pedro Harbor was booming. It was evident, however, that the Harbor needed to be expanded to accommodate the increasing cargo volume coming into the bay for the growing population in Los Angeles. In 1906 the city annexed a 16-mile strip of land on the outskirts of San Pedro and Wilmington. The Port was officially founded in 1907 with the creation of the Los Angeles Board

of Harbor Commissioners. Between 1911 and 1912, the first 8,500-foot section of the breakwater was completed, and the Main Channel was widened to 800 feet and dredged to a depth of 30 feet to accommodate the largest vessels of that era. Concurrently, Southern Pacific Railroad completed its first major wharf in San Pedro, allowing railcars to efficiently load and unload goods simultaneously. The Port continued to grow through the twentieth century.

Following World War II, the Los Angeles Harbor District launched a broad restoration program. Many of the facilities in the Harbor required maintenance that had been delayed during the war years. In recent years, the advent of containerization resulted in dramatic changes at the Port. Because of this new mode of shipping, the Port, like major new and old harbors, modernized facilities to meet the needs of the new geometry required by containerization. In addition to the new (container size and shape driven) configurations, larger cranes and concrete wharves (replacing timber) were required to handle the dramatically increased weight of cargo containers. Other major Harbor improvements included deepening the main channel to accommodate the larger container vessels entering the bay, purchasing land to expand terminals, and replacing older wharves that could not bear the increased weight of newer containers.

History of the Project Area

With the exception of the ARSSS (Alternative 2 only), which is an upland site used for soil storage, and LA-2, which is an ocean disposal site, the proposed disposal sites consist of water areas within the inner basins and outer harbor that have experienced various levels of development. Historical development of these disposal sites has ranged from none (open water areas) to shipping container terminals and shipyard operations to support various Port activities. The following briefly summarizes the historical uses of each site.

Berth Slips 243-245. This site is currently unoccupied but has been occupied by ship builders and repair operations for nearly 100 years. As a result of previous shipyard operations, sediments within the slip are contaminated (Weston, 2006).

Northwest Slip. The Northwest Slip is a water area located adjacent to a wharf roadway at Berths 136-147. This wharf is developed with a shipping container terminal that receives high vehicle traffic and container movement.

Cabrillo Shallow Water Habitat (CSWH). This preservation area is currently a 190-acre site, which provides replacement habitats and feeding areas for fish and marine birds.

Eelgrass Habitat Area. This disposal area would be constructed on existing and proposed shallow water habitat in the Outer Harbor. This open water area has experienced no development other than creation of the existing CSWH.

LA-2 Ocean Disposal. This site is a USEPA-approved deep water disposal site located in the Pacific Ocean approximately 5.9 miles south-southwest of the entrance to Los Angeles Harbor on the outer continental shelf margin. The depth of this site ranges from approximately - 360 ft MLLW to - 1,115 ft MLLW. Up to 1,000 mcy of dredge material may be disposed of at this site annually.

Anchorage Road Soil Storage Site (ARSSS). This site has previously been used for minor amounts of disposal of material that is unsuitable for harbor or ocean disposal.

6.1.3 Current and Future Projects

A total of 84 present or reasonably foreseeable future projects (approved or proposed) were identified within the general vicinity of the Proposed Action that could contribute to cumulative impacts. The locations of these projects are shown on Figure 6-1. A corresponding list of the cumulative projects provided by LAHD, the Port of Long Beach, and the Los Angeles Department of Transportation (LADOT) is provided in Table 6-1. (As discussed in Section 6.1.1 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.)

Table 6-1 Related and Cumulative Projects

No. in Figure 6-1	Project Title and Location	Project Description	Project Status ¹
<i>Port of Los Angeles Projects</i>			
1	Pier 400 Container Terminal and Transportation Corridor Project, Port of Los Angeles	Element of the 2020 Deep Draft Navigation Improvements Plan: dredging, land filling, and marine terminal construction. The entire Pier 400 site is on a recently constructed landfill in the Port of Los Angeles Outer Harbor. The project is a two-phase development of Pier 400 into a 484-acre (196-hectare) container terminal with rail, highway, and utility access. Phase I consisted of construction of rail and highway access and the first 334 acres (135 hectares) of a marine container terminal, including buildings, a wharf, and an intermodal rail yard. Phase II consisted of construction of the remaining 150 acres (61 hectares) into a container terminal. The EIR certified for the project and the Final EIS identified significant air, transportation, and noise and vibration impacts.	Approved project. Phase I construction completed and terminal opened August 2002. Phase II construction started in April 2003 and was completed in September 2004.
2	Berths 136-147 (TraPac) Marine Terminal, West Basin, Port of Los Angeles	Element of the West Basin Transportation Improvement Projects. Reconfiguration of wharves and backlands. Expansion and redevelopment of the TraPac Terminal.	FEIR certified by Board of Harbor Commissioners December 2007. Construction expected mid/late 2008 to 2010 and 2015 to 2020.
3	San Pedro Waterfront Project, Port of Los Angeles	The "San Pedro Waterfront" Project is a 5 to 7 year plan to develop along the west side of the Main Channel, from the Vincent Thomas Bridge to the	An NOP/NOI was released in August 2005. A revised NOP/NOI was released in December 2006.

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		22 nd 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 Catalina Cruises Terminal and the SS Lane Victory, extension of the Red Car line, and related parking improvements.	Draft EIR/EIS being prepared. Construction expected 2010-2015.
4	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 ft mean lower low water (MLLW; lesser depths are considered as project alternatives) by removing between approximately 3.94 million and 8.5 million cubic yards of sediments. The sediments were disposed at several sites for up to 151 acres (61 hectares) of landfill. The EIR/EIS certified for the project identified significant biology, air, and noise impacts. This Project was completed in 2007. However, this Supplemental EIS/EIR is being prepared for new fill locations. This SEIS/SIER addresses the need to provide approximately 3 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. <i>(Project analyzed in this SEIS/SEIR)</i>	NOI/NOP released November 2004. SNOI/SNOP released in October 2005. SEIS/SEIR June 2008. Construction expected 2009-2010.
5	Cabrillo Way Marina, Phase II, Port of Los Angeles	Redevelopment of the old marinas in the Watchorn Basin and development of the backland areas for a variety of commercial and recreational uses.	EIR certified December 2, 2003. Construction anticipated 2008-2009.
6	Artificial Reef, San Pedro Breakwater, Port of Los Angeles	Development of an artificial reef site south of the San Pedro Breakwater. Provides opportunity for suitable reuse of clean construction materials and creates bottom topography to promote local sport fishing.	Negative Declaration issued and certified. Project proceeding (2006-2010).
7	Berth 226-236 (Evergreen) Container Terminal Improvements Project and Cannery's Steam Demolition.	Proposed redevelopment of existing container terminal, including improvements to wharves, adjacent backland, crane rails, lighting, utilities, new gate complex, grade crossings and modification of adjacent roadways and railroad tracks. Project also includes demolition of two unused buildings and other small accessory structures at the former Cannery's Steam Plant in the Fish Harbor area of the Port.	EIR/EIS to be prepared. NOP/NOI anticipated in 2008. Construction expected 2010-2013.

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8	Port of Los Angeles Charter School and Port Police Headquarters, San Pedro, Port of Los Angeles	Proposal to lease property for the Port of Los Angeles Charter School and to construct/develop a Port Police Headquarters and office. 330 S. Centre Street, San Pedro.	EIR certified in August 2005. Construction began in 2008 and expected to be complete in 2010.
9	SSA Outer Harbor Fruit Facility Relocation, Port of Los Angeles	Proposal to relocate the existing fruit import facility at 22nd and Miner to Berth 153.	On hold.
10	Crescent Warehouse Company Relocation, Port of Los Angeles	Relocate the operations of Crescent Warehouse Company from Port Warehouses 1, 6, 9, and 10 to an existing warehouse at Berth 153. Relocate Catalina Freight operations from Berth 184 to same building at Berth 153.	MND to be prepared. Release anticipated in 2008.
11	Pacific LA Marine Terminal (formerly Pacific Energy) Oil Marine Terminal, Pier 400, Port of Los Angeles	Proposal to construct a Crude Oil Receiving Facility on Pier 400 with tanks at Pier 400 and on Terminal Island, as well as construct new pipelines between berth, storage tanks, and existing pipeline systems.	Draft SEIR/SEIS released May 2008..
12	Ultramar Lease Renewal Project, Port of Los Angeles	Proposal to renew the lease between the Port of Los Angeles and Ultramar Inc., for continued operation of the marine terminal facilities at Berths 163-164, as well as associated tank farms and pipelines. Project includes upgrades to existing facilities to increase the proposed minimum throughput to 10 million barrels per year (mby), compared to the existing 7.5 mby minimum.	Project EIR under preparation; Final EIR expected in 2008. NOP released for public review in April 2004.
13	Westway Decommissioning	Decommissioning of the Westway Terminal along the Main Channel (Berths 70-71). Work includes decommissioning and removing 136 storage tanks with total capacity of 593,000 barrels (bb).	Remedial planning underway. Decommissioning anticipated 2009.
14	Consolidated Slip Restoration Project	Remediation of contaminated sediment at Consolidated Slip at Port of Los Angeles. Remediation may include capping sediment or removal/disposal to an appropriate facility. Work includes capping and/or treatment of approximately 30,000 cubic yards of contaminated sediments.	Remedial actions are being evaluated in conjunction with Los Angeles Regional Water Quality Control Board (LARWQCB) and U.S. Environmental Protection Agency (USEPA).
15	Berths 97-109, China Shipping Terminal Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, land fill and terminal construction and backland development.	Draft EIR/EIS released August 2006. Phase I construction completed in 2004. Re-circulated Draft EIR/EIS released April 2008. Construction expected 2009-2015.
16	Berths 171-181, Pasha Marine Terminal Improvements Project, Port of Los Angeles	Redevelopment of existing facilities at Berths 171-181 as an omni (multi-use) facility.	Project EIR on hold.
17	Berths 206-209 Interim Container Terminal Reuse Project, Port of Los Angeles	Proposal to allow interim reuse of former Matson Terminal while implementing green terminal measures.	Final EIR certified. Construction on hold.
18	LAXT Dome and Site Demolition	Demolition and clean up of existing storage dome and associated buildings on LAXT property.	Demolition began in 2007.
19	Southern California International Gateway Project (SCIG), Port of Los Angeles	Construction and operation of a 157 acre dock rail yard intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.	Project EIR under preparation. NOP released September 30, 2005. DEIR expected in Fall 2008.

No. in Figure 6-1	Project Title and Location	Project Description	Project Status¹
20	Pan-Pacific Fisheries Cannery Buildings Demolition Project, Port of Los Angeles	Demolition of two unused buildings and other small accessory structures at the former Pan-Pacific Cannery in the Fish Harbor area of the Port.	NOP released October 2005. Draft EIR released July 2006. Final EIR under preparation. Demolition expected mid to late 2008.
21	San Pedro Waterfront Enhancements Project, Port of Los Angeles	Project includes improving existing and development of new pedestrian corridors along the waterfront (4 acres), landscaping, parking, increased waterfront access from upland areas, and creating 16 acres of public open space.	MND approved in April 2006. Construction to begin in early 2008 and will be completed in 2009.
22	Joint Container Inspection Facility, Port of Los Angeles and Port of Long Beach	Construction and operation of a facility to be used to search and inspect random and suspicious containers arriving at the Ports of Los Angeles and Long Beach.	In planning. EIR to be prepared.
23	Berth 302-305 (APL) Container Terminal Improvements Project	Container terminal and wharf improvements project including a terminal expansion area and new berth on the east side of Pier 300. Currently includes 40 acres of fill that was completed as part of the Channel Deepening Project (number 4 above).	EIR/EIS to be prepared. NOP/NOI anticipated in 2008. Construction expected 2010-2012.
24	South Wilmington Grade Separation	An elevated grade separation would be constructed along a portion of Fries Avenue or Marine Avenue, over the existing rail line tracks, to eliminate vehicular traffic delays that would otherwise be caused by trains using the existing rail line and the new ICTF rail yard. The elevated grade would include a connection onto Water Street. There would be a minimum 24.5-foot clearance for rail cars traveling under the grade separation.	Conceptual planning. Current planning indicates summer 2011 completion.
25	Wilmington Waterfront Master Plan (Avalon Blvd. Corridor Project)	Planned development intended to provide waterfront access and promoting development specifically along Avalon Boulevard.	NOP issued March 2008. Draft EIR anticipated Summer 2008. Construction expected early 2009.
26	"C" Street/Figueroa Street Interchange	The "C" Street/ Figueroa Street interchange would be redesigned to include an elevated ramp from Harry Bridges Boulevard to the I-110 Freeway, over John S. Gibson Blvd. There would be a minimum 15-foot clearance for vehicles traveling on John S. Gibson Boulevard. An additional extension would connect from Figueroa Street to the new elevated ramp, over Harry Bridges Blvd.	Conceptual planning. Caltrans approval obtained on Project Study Report.
27	Port Transportation Master Plan	Port-wide transportation master plan for roadways in and around its facilities. Present and future traffic improvement needs are being determined, based on existing and projected traffic volumes. Some improvements under consideration include: I-110/SR-47/Harbor Blvd. interchange improvements; south Wilmington grade separations; and additional traffic capacity analysis for the Vincent Thomas Bridge.	Conceptual planning completed by the end of 2006.
28	Berths 212-224 (YTI) Container Terminal Improvements Project	Wharf modifications at the YTI Marine Terminal Project involves wharf upgrades and backland reconfiguration, including new buildings.	EIR/EIS to be prepared. NOP/NOI anticipated in 2008. Construction expected 2010-2013.
29	Berths 121-131 (Yang Ming) Container Terminal Improvements Project	Reconfiguration of wharves and backlands. Expansion and redevelopment of the Yang Ming Terminal.	EIR/EIS to be prepared. NOP/NOI anticipated in 2008. Construction expected 2010-2013.

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30	Southwest Marine Demolition Project	Demolition of buildings and other small accessory structures at the Southwest Marine Shipyard.	Draft EIR released September 2006. Final EIR under preparation. Demolition anticipated late 2008.
31	I-110 / SR 47 Connector Improvement Program	Program may include "C" Street/I-110 access ramp intersection improvements, I-110 NB Ramp/John S. Gibson Blvd. intersection improvements, and SR 47 On-and Off-Ramp at Front Street. These projects would reduce delays and emissions in the I-110/SR 47 area and improve safety and access.	Conceptual planning.
32	Inner Cabrillo Beach Water Quality Improvement Program	Phased improvements at Cabrillo Beach to reduce the wet and dry weather high concentrations of bacteria. Includes sewer and storm drain work, sand replacement, bird excluders, and circulation improvements (groin removal).	Sand replacement phase above high tide line completed in 2007. Additional sand replacement below high tide line anticipated in 2008.
33	Proposed Marine Research Center	Up to 28 acre site for potential marine research facility at City Dock No. 1.	Conceptual planning.
<i>Port of Los Angeles and/or Port of Long Beach Potential Port-Wide Operational Projects</i>			
34	Terminal Free Time	Industry supported program to reduce container storage time and use gates at off-peak travel times.	Program in progress.
35	Extended Terminal Gates (Pier Pass)	Industry supported program to use economic incentives to encourage cargo owners to use terminal gates during off-peak hours.	Program in progress.
36	Shuttle Train/Inland Container Yard	Alameda Corridor Transportation Authority (ACTA) program to encourage rail shuttle service between the ports' on-dock rail facilities and a rail facility in Colton (in the Inland Empire). The pilot program will consist of a daily train to and from Colton. The containers will be trucked between the Colton rail facility and the beneficial cargo owners' facility.	Preliminary study in progress.
37	Origin/Destination and Toll Study	Joint study of the Ports of Los Angeles and Long Beach to identify the origin and destination of international containers in the Los Angeles area, to determine the location of warehouses and identify the routes truck drivers use to move containers to and from the Ports. The bridges serving Terminal Island (Vincent Thomas, Gerald Desmond and Heim Bridge) are not currently designed to handle the trade volumes projected at the San Pedro Bay Ports. In order to identify funding mechanisms to replace/enhance these bridges, the Ports are conducting a toll study to explore potential funding sources for bridge replacement and truck driver behavior if tolls were assessed on the bridges.	Study in progress.
38	Virtual Container Yard	Joint program of ACTA and the Ports of Los Angeles and Long Beach to explore implementing a system that would match an empty container from an import move to one from an empty export move.	Conceptual planning.
39	Increased On-Dock Rail Usage	Joint program of ACTA, the Ports of Los Angeles and Long Beach, shipping lines, and terminal operators to consolidate neighboring terminals' intermodal volume to create larger trains to interior points, thereby reducing need for truck transportation.	Conceptual planning.

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40	Union Pacific Railroad ICTF Modernization Project	UP proposal to modernize existing intermodal yard four miles from the Port.	Conceptual planning. Application submitted and the EIR is being completed by the Joint Powers Authority.
41	Optical Character Recognition	Ports terminals have implemented OCR technology, which eliminates the need to type container numbers in the computer system. This expedites the truck driver through terminal gates.	Ongoing planning and implementation.
42	Truck Driver Appointment System	Appointment system that provides a pre-notification to terminals regarding which containers are planned to be picked up.	Conceptual planning.
<i>Community of San Pedro Projects</i>			
43	15 th 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	Cabrillo Marine Aquarium Expansion, San Pedro	Expansion of existing Cabrillo Marine Aquarium.	Construction complete.
46	Gas station and mini-mart	6-pump gas station and 1,390 sf mini-mart at 311 N. Gaffey Street, San Pedro (north of Sepulveda Street).	Project on hold. No construction has started.
47	Fast Food Restaurant w/drive-thru	Construct fast food restaurant with drive through (expand from existing 3000 sf to 4816 sf restaurant). 303 S. Gaffey Street (at 3rd Street), San Pedro.	Construction is complete and restaurant is operating.
48	Mixed use development, 407 Seventh Street	Construct 5,000 sf retail and 87-unit apartment complex. 407 W. Seventh Street (at Mesa St.), San Pedro.	In final stages of construction.
49	Condominiums, 28000 Western Ave.	Construct 140 condominium units. 28000 S. Western Avenue, San Pedro.	In final stages of construction. Building permit cleared March 2006; LADOT Planning Department has no estimated completion year.
50	Pacific Trade Center	Construct 220 housing unit apartments. 255 5th Street, San Pedro (near Centre Street).	In initial stage of construction. Building permit cleared August 2006, but LADOT Planning Department has no estimated completion year.
51	Single Family Homes (Gaffey Street)	Construct 135 single-family homes. About 2 acres. 1427 N. Gaffey St (at Basin St), San Pedro.	In construction. Estimated 2009 completion year according to LADOT Planning Department.
52	Mixed-use development, 281 W 8 th Street	Construct 72 condos & 7,000 sf retail. 281 West 8th Street (near Centre Street), San Pedro.	No construction started. LADOT Planning Department has no estimated completion year.
53	Target (Gaffey Street)	Construct 136,000 sf discount superstore. 1605 North Gaffey Street, San Pedro (at W. Capitol Drive).	No construction has started. Estimated 2009 completion year, according to LADOT Planning Department.
54	Palos Verdes Urban Village	Construct 251 condos & 4,000 sf retail space. 550 South Palos Verdes Street, San Pedro.	No construction has started. Estimated 2011 completion year, according to LADOT Planning Department.

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55	Temporary Little League Park	Construction of temporary baseball fields for the Eastview Little League at top of Knoll Hill in San Pedro; Knoll Hill Dog Park moved to bottom of Knoll Hill.	Construction completed in fall 2007.
56	Condos, 319 N Harbor Blvd	Construction of 94 unit residential condominiums, 319 N Harbor Blvd, San Pedro.	LADOT Planning Department has no estimated completion year.
<i>Community of Wilmington Projects</i>			
57	Banning Elementary School #1, 500 North Island Avenue, Wilmington	Banning Elementary School No. 1 is a two-building elementary school consisting of one two-story classroom building with subterranean parking garage and a one-story multipurpose building. The school also provides about 2 acres of playground and green space.	Construction completed and school operating. Completed in 2006.
58	East Wilmington Greenbelt Community Center, Wilmington	9,800-square-foot community building, a 25-space parking lot, and landscaped areas.	Construction complete; center opened in 2006.
59	Distribution center and warehouse	135,000 sf distribution center and warehouse on 240,000 sf lot w/47 parking spaces at 755 East L Street, (at McFarland Avenue) in Wilmington.	No construction has started; lot is vacant and bare. LADOT Planning Department has no estimated completion year.
60	Dana Strand Public Housing Redevelopment Project	The existing facility is being torn down and redeveloped to provide a 116-unit affordable housing complex with multifamily rental units, senior units and affordable homes for sale. The plans also include a day care center, lifelong learning center, parks and landscaped open space.	Under construction (construction started in 2005).
61	Vermont Christian School Expansion	Private school expansion to accommodate 72 additional students, for a total of 222 students.	LADOT Planning Department has no estimated completion year.
<i>Projects in Harbor City, Lomita, and Torrance</i>			
62	1437 Lomita Boulevard Condominiums	Construct 160 condominium units and demolish existing closed hospital. 1437 Lomita Boulevard (at Senator Avenue), Harbor City.	Construction is complete and in operation.
63	Harbor City Child Development Center	Conditional use permit to open 50-student pre-school at existing church building (25000 South Normandie Avenue, Harbor City, at Lomita Boulevard).	Public hearing in August 2006.
64	Kaiser Permanente South Bay Master Plan	Construct 303,000 sf medical office building, 42,500 sf records center / office / warehouse, 260 hospital beds. 25825 Vermont Street, Harbor City (at Pacific Coast Hwy).	In Construction. Estimated 2009 completion year, according to LADOT Planning Department.
65	Drive-through restaurant, Harbor City	Construct 2,448 sf fast food restaurant with drive-through. 1608 Pacific Coast Highway, Harbor City (at President Avenue).	In planning phase. Old building still in operation.
66	Ponte Vista	Construct 1725 condos, 575 senior housing units, and 4 baseball fields. 26900 Western Avenue (near Green Hills Park), Lomita. Rolling Hills Prep School being developed in an adjacent lot.	DEIR issued November 2006. LADOT Planning Department reports estimated 2012 completion year.
67	Warehouses, 1351 West Sepulveda Blvd	Construct warehouses with total capacity 400,000 sf. 1351 West Sepulveda Blvd. (at Western Ave.), Torrance.	Project building permit cleared 2/07. LADOT Planning Department estimates completion in 2007.
68	Sepulveda Industrial Park	Construct 154,105 sf industrial park (6 lots). Sepulveda Industrial Park (TT65665) 1309 Sepulveda Boulevard, Torrance (near Normandie Avenue).	No construction started. LADOT Planning Department has no estimated completion year.

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<i>Port of Long Beach Projects</i>			
69	Middle Harbor Terminal Redevelopment, Port of Long Beach	Expansion of an existing marine container terminal in the Middle Harbor area of the Port of Long Beach. The project will involve consolidation of two existing container terminals into one 345-acre (138-hectare) terminal. Construction will include approximately 48 acres (19 hectares) of landfill, dredging, wharf construction; construction of an intermodal rail yard; and reconstruction of terminal operations buildings. The Initial Study prepared for this project identified significant air, public health, transportation, biological, and water quality impacts.	Project EIS/EIR released May 2008. NOP/NOI released December 20, 2005. Anticipated construction 2008-2025.
70	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine container terminals into one terminal. The Piers G and J redevelopment project is in the Southeast Harbor Planning District area of the Port of Long Beach. The project will develop a marine terminal of up to 315 acres by consolidating two existing terminals on Piers G and J and several surrounding parcels. Construction will occur in four phases and will include approximately 53 acres of landfills, dredging, concrete wharves, rock dikes, and road and railway improvements. The EIR prepared for this project identified potentially significant impacts to air quality and geologic resources.	Approved project. Construction underway (anticipated construction period is 2005-2015).
71	Pier A West Remediation Project, Port of Long Beach	Remediation of approximately 90 acres of oil production land, including remediation of soil and groundwater contamination, relocation of oil wells, filling, and paving.	Project EIR/EIS under preparation. NOP/NOI released January 26, 2006. Expected duration through 2011.
72	Pier A East, Port of Long Beach	Redevelopment of 32 acres of existing auto storage area into container terminal.	EIR to be prepared.
73	Pier T, TTI (formerly Hanjin) Terminal, Phase III, Port of Long Beach	Development of a container terminal, liquid bulk facility and satellite launch facility. The Port of Long Beach is redeveloping the former Long Beach Naval Complex on Terminal Island. The project consists of expanding a 300-acre marine container terminal to 375 acres, including a wharf, terminal operations buildings, utilities, and rail yard. Construction includes 22 acres of landfill. The SEIS/EIR certified for this project identified significant air quality, transportation, public health and safety, cultural resources, biological resources, and vibration impacts.	Approved project. Final phase of construction underway.
74	Pier S Marine Terminal, Port of Long Beach	Development of a 150-acre container terminal and construction of navigational safety improvements to the Back Channel.	EIS/EIR to be prepared. Assessment/ construction expected 2007-2012.
75	Administration Building Replacement Project, Port of Long Beach	Replacement of the existing Port Administration Building with a new facility on an adjacent site.	EIR being prepared. Assessment/ construction expected 2009-2012.
76	Sound Energy Solutions-Pier T, Long Beach Liquefied Natural Gas (LNG) Terminal, Port of Long Beach	Construction of a 25-acre (10-hectare) liquefied natural gas (LNG) import terminal facility including pipeline and wharf construction on a portion of Pier T on Terminal Island within the Port of Long Beach.	Final EIR/EIS completed. Project disapproved by Board of Harbor Commissioners January 2007; legal challenge underway.

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No. in Figure 6-1	Project Title and Location	Project Description	Project Status ¹
77	San Pedro Bay Rail Study	Port-wide rail transportation plan with multiple projects in and around Harbor District.	EIR to be prepared.
78	Gerald Desmond Bridge Replacement Project, Port of Long Beach and Caltrans/FHWA	Replacement of the existing 4-lane Gerald Desmond highway bridge over the Port of Long Beach Back Channel with a new 6- to 8-lane bridge.	NOP/NOI released in 2005. EIR/EA released in 2005; Recirculated EIR/EA being prepared. Anticipated construction 2008-2013.
79	Chemoil Marine Terminal, Tank Installation, Port of Long Beach	Construction of two storage tanks for refined petroleum products and associated relocation of utilities and reconfiguration of adjoining marine terminal uses between Berths F210 and F211 on Pier F.	NOP released June 2007. EIR to be prepared.
80	Port of Long Beach Installation Restoration Site 7 (West Basin) Dredging Project	Removal of about 700,000 cubic yards of contaminated sediments at the Port of Long Beach, with beneficial/sustainable reuse of the material in the Pier G landfill.	In planning stages. Dredging is expected in 2008-2009.
<i>Alameda Corridor Transportation Authority and Caltrans Projects</i>			
81	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) and flyover from eastbound Ocean Boulevard to northbound SR 47.	ACTA and Caltrans issued Draft EIS/EIR August 2007. Final EIS/EIR expected spring 2008. Anticipated construction 2009-2011 (for SR47 and bridge) and 2015-2017 (for flyover).
82	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 State Route 60. Early Action Projects include: a) Port Terminus: Reconfiguration of SR 1 (Pacific Coast Highway) and Anaheim Interchange, and expansion of the open/green space at Cesar Chavez Park. b) Mid Corridor Interchange: Reconfigurations Project for Firestone Blvd. Interchange and Atlantic/Bandini Interchange.	Conceptual Planning.
83	Edison Avenue Closure	Close a short section of Edison Avenue between Ninth and Pier B streets to improve public safety and traffic by rerouting cars and trucks away from three rail lines that cross Edison at Pier B Street.	Initial Study and Negative Declaration released June 2007.
<i>City of Long Beach Projects</i>			
84	Renaissance Hotel Project, City of Long Beach	Development of a 374-room hotel on the southeast corner of Ocean Boulevard and the Promenade.	Approved project. Construction complete.
85	D'Orsay Hotel Project, City of Long Beach	Development of a hotel. The D'Orsay Project is a 162-room boutique style hotel on the northwest corner of Broadway and the Promenade.	Approved project. Construction underway. Anticipated completion in Fall 2008.

No. in Figure 6-1	Project Title and Location	Project Description	Project Status ¹
86	City Place Development, City of Long Beach	Development of commercial and residential space. The former Long Beach Plaza Mall, downtown between 3rd and 6th Streets and between Long Beach Boulevard and Pacific Avenue, is now under construction. The approved project will redevelop the former mall area and two blocks of vacant land east of Long Beach Boulevard with approximately 450,000 square feet of commercial space and up to 200 residential units. The EIR prepared for this project identified significant air quality impacts.	Construction complete. Completed in 2005.
87	The Pike at Rainbow Harbor, City of Long Beach	Commercial use development. This project site is south of Ocean Boulevard on the site of the former Pike Amusement Park between Pine and Magnolia Avenues in Long Beach. This approved project includes approximately 770 residential units, a 500-room hotel, and 25,000 square ft of commercial space. The EIR prepared for this project identified significant air quality, cultural resources, noise, public service, and transportation impacts.	Approved project. Construction complete.
88	Queensway Bay Master Plan, City of Long Beach	Construction of Long Beach Aquarium, new urban harbor, office building, and entertainment complex. This project, designed to create a major waterfront attraction in downtown Long Beach, includes a recreational harbor, 150,000-square-foot aquarium, 125,000-square-foot entertainment complex, 59,000 square feet of restaurant/retail space, an 800-room hotel, 95,000 square feet of commercial office space, and 487 boat slips in and around Queensway Bay. The recreational harbor and aquarium have been completed. The EIR certified for this project identified significant transportation impacts.	Approved project. Construction complete.
<i>Note:</i> 1. Construction date for Port projects based on an assumption that the project would be approved by the LAHD.			

For the purposes of this SEIS/SEIR, the timeframe of current or reasonably anticipated projects extends from 2002 to 2037, and the vicinity is defined as the area over which effects of the proposed Action 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 6.2.

6.2 Alternative 1 Cumulative Impacts Analysis

This section provides a discussion of the anticipated cumulative impacts of Alternative 1 of the Proposed Action in conjunction with the other approved or Proposed Actions within the Ports of Los Angeles and Long Beach. The cumulative impacts discussion is organized by resource area as presented in Chapter 3.

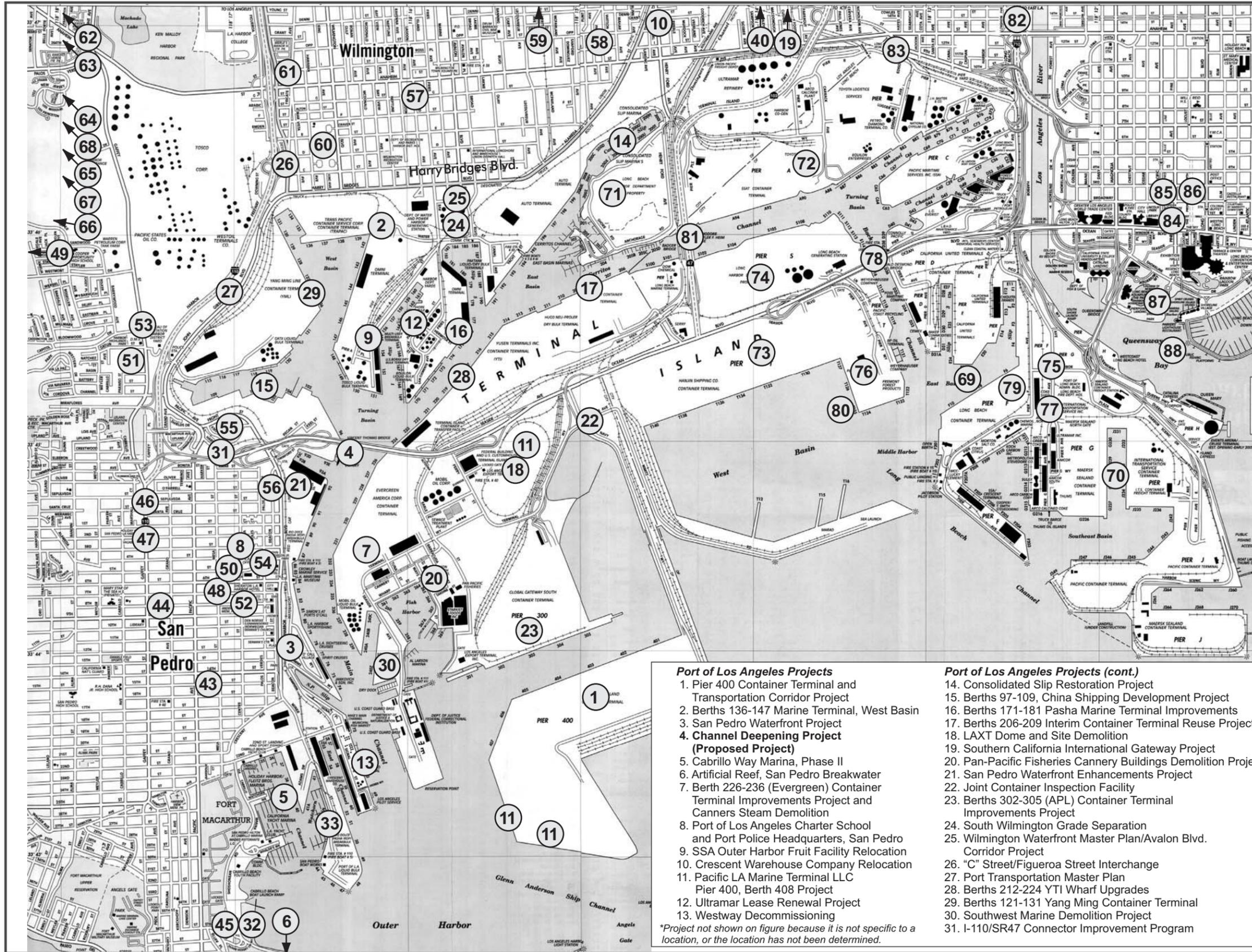
6.2.1 Aesthetics and Visual Resources

Scope of Analysis

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

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

Past, present, planned, and foreseeable future development that 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 upland equipment, such as gantry cranes, rail and trucking facilities and backland storage sites. Views may also be affected by in-water activities such as dredging, filling, wharf demolition and construction, and container ship traffic.



Port of Los Angeles Projects (cont.)
32. Inner Cabrillo Beach Water Quality Improvement Program
33. Proposed Marine Research Center

Potential Port-Wide Operational Projects

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

Community of San Pedro Projects

- 43. 15th Street Elementary School
- 44. Pacific Corridors Redevelopment Project
- 45. Cabrillo Marine Aquarium Expansion
- 46. Gas Station and Mini-Mart
- 47. Fast Food Restaurant with Drive-Thru
- 48. Mixed Use Development, 407 Seventh Street
- 49. Condos., 28000 Western Avenue
- 50. Pacific Trade Center
- 51. Single Family Homes (Gaffey Street)
- 52. Mixed-Use Development, 281 West 8th Street
- 53. Target (Gaffey Street)
- 54. Palos Verdes Urban Village
- 55. Temporary Little League Park
- 56. Condos, 319 N. Harbor Blvd.

Community of Wilmington Projects

- 57. Banning Elementary School #1
- 58. East Wilmington Greenbelt Community Center
- 59. Distribution Center and Warehouse
- 60. Dana Strand Public Housing Redevelopment Project
- 61. Vermont Christian School Expansion

Projects in Harbor City, Lomita, and Torrance

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

Port of Long Beach Projects

- 69. Middle Harbor Terminal Redevelopment
- 70. Piers G & J Terminal Redevelopment
- 71. Pier A West Remediation Project
- 72. Pier A East
- 73. Pier T TTI Terminal, Phase III
- 74. Pier S Marine Terminal
- 75. Administration Building Replacement Project
- 76. Pier T, Long Beach LNG Terminal
- 77. San Pedro Bay Rail Study
- 78. Gerald Desmond Bridge Replacement Project
- 79. Chemoil Marine Terminal Tank Installation
- 80. POLB Installation Restoration Site 7 (West Basin) Dredging Project

ACTA and CalTrans Projects

- 81. Schuyler Heim Bridge Replacement/SR47 Expressway
- 82. I-710 Major Corridor Study
- 83. Edison Avenue Closure

City of Long Beach Projects

- 84. Renaissance Hotel Project
- 85. D'Orsay Hotel Project
- 86. City Place Development
- 87. The Pike at Rainbow Harbor
- 88. Queensway Bay Master Plan

Port of Los Angeles Projects

- 1. Pier 400 Container Terminal and Transportation Corridor Project
- 2. Berths 136-147 Marine Terminal, West Basin
- 3. San Pedro Waterfront Project
- 4. Channel Deepening Project (Proposed Project)
- 5. Cabrillo Way Marina, Phase II
- 6. Artificial Reef, San Pedro Breakwater
- 7. Berth 226-236 (Evergreen) Container Terminal Improvements Project and Cannery Steam Demolition
- 8. Port of Los Angeles Charter School and Port Police Headquarters, San Pedro
- 9. SSA Outer Harbor Fruit Facility Relocation
- 10. Crescent Warehouse Company Relocation
- 11. Pacific LA Marine Terminal LLC Pier 400, Berth 408 Project
- 12. Ultramar Lease Renewal Project
- 13. Westway Decommissioning

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

Port of Los Angeles Projects (cont.)

- 14. Consolidated Slip Restoration Project
- 15. Berths 97-109, China Shipping Development Project
- 16. Berths 171-181 Pasha Marine Terminal Improvements
- 17. Berths 206-209 Interim Container Terminal Reuse Project
- 18. LAXT Dome and Site Demolition
- 19. Southern California International Gateway Project
- 20. Pan-Pacific Fisheries Cannery Buildings Demolition Project
- 21. San Pedro Waterfront Enhancements Project
- 22. Joint Container Inspection Facility
- 23. Berths 302-305 (APL) Container Terminal Improvements Project
- 24. South Wilmington Grade Separation
- 25. Wilmington Waterfront Master Plan/Avalon Blvd. Corridor Project
- 26. "C" Street/Figueroa Street Interchange
- 27. Port Transportation Master Plan
- 28. Berths 212-224 YTI Wharf Upgrades
- 29. Berths 121-131 Yang Ming Container Terminal
- 30. Southwest Marine Demolition Project
- 31. I-110/SR47 Connector Improvement Program

Source: Berths 136-147 Marine Terminal, West Basin EIS/EIR, 2007.

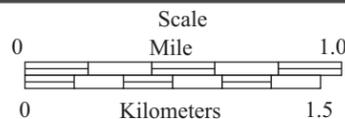


Figure 6-1
Cumulative Projects Locations

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The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.1.5.

Cumulative Impact AES-1: Have a Significant Demonstrable Negative Aesthetic Effect

The Proposed Action does not include any significant aesthetic and visual impacts; however it does combine with other projects at the Port and the surrounding area to contribute aesthetically negative views, partially obstruct some views, and produce additional nighttime lighting through the temporary presence of construction equipment and the permanent presence of new infrastructure. The existing visual quality at many sites throughout the Port and surrounding area, including the Port of Long Beach, is low to moderately low due to the intensive shipping and industrial uses, therefore all projects that occur within the area must be viewed from within this context of an existing poor aesthetic image. However, 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.

Most cumulative projects would not have significant aesthetic impacts because the existing visual quality at the Port and some surrounding areas, including the POLB, is generally low. No cumulative projects would remove, alter, or demolish existing features that substantially contribute to the valued visual character/image of the ports. No visually valuable features within the ports would be removed or modified. The area within the Port is highly industrial, and all space has already been graded and developed. Therefore, any previous or future cumulative projects at the Port or the POLB would be built on previously developed land, 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 6-1, the cumulative projects identified within the Port consist primarily of redevelopment projects. These projects would involve construction activities similar to existing development such as 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. It is unknown whether any zone changes would be necessary to complete the cumulative projects, and what guidelines and regulations would be applicable to the specific projects. However, it is likely that any development that occurs would not detract from the existing styles in the Port area and would be consistent with applicable plans and policies. Most of the cumulative projects, except for the tourist- or recreation-oriented projects would not make a positive contribution to the area's aesthetic value. However, while these projects may make a negative contribution to the

individual sites aesthetic value, it would not adversely change the overall aesthetic value of the area.

Contribution of Alternative 1 (Prior to Mitigation)

The Proposed Action would create temporary impacts to aesthetic resources through the presence of construction equipment at all disposal sites; however this would be temporary in nature and would not be an unusual view within the Port. Although the existing aesthetic environment of the Port is of low to moderately low visual character, the temporary contribution of construction equipment associated with Alternative 1 of the Proposed Action would be consistent with existing Port features (such as equipment that is routinely present for maintenance dredging) and would not constitute a considerable contribution to the visual scenario. Alternative 1 of the Proposed Action would also create permanent aesthetic impacts through the creation of a CDF and placement of surcharge at Berths 243-245, new land at the Northwest Slip, and an aboveground rock dike at the Eelgrass Habitat Area. The visual quality at Berths 243-245 and the Northwest Slip is already low to moderately low due to the dominance of industrial equipment and facilities, therefore Alternative 1 would not create a negative aesthetic value. Additionally, the construction of an aboveground rock dike at the Eelgrass Habitat Area would create a slightly negative aesthetic effect, but it would be effectively integrated into the existing coastal character of the site, similar to existing rock dikes in the area. As such, the contribution of Alternative 1 to the visual scenario at the Eelgrass Habitat Area would not result in a substantial negative aesthetic effect and would therefore not be cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact AES-2: Significantly Affect Recognized or Valued Views, Scenic Vistas, or Scenic Highways

The Port and some surrounding areas, including the POLB, generally have low to moderately low visual quality due to existing shipping and industrial operations, and many views are already full or partially obstructed due to this existing development. Therefore, any recognized views of the cumulative projects would most likely not be considered valuable and would be less than significant if obstructed. The only scenic highways in the area exist on the western side of the Port in San Pedro; therefore some of the cumulative projects located on the west end of the Port, such as the Container Terminal Improvements Project at Berths 226-236, the Yang Ming Container Terminal development at Berths 121-131, and the TraPac Terminal Expansion Program at Berths 136-147, may be able to be viewed from roadways in this area with higher

vantage points. However, these views would be intermittent due to roadways and other intervening development. Most cumulative projects would be able to be seen from some portion of a roadway or path within the Port or the POLB. However, most obstruction produced would only be a minor diminishment of the view, and would not be significant because the visual quality of most of these areas is low.

Contribution of Alternative 1 (Prior to Mitigation)

Implementation of Alternative 1 would create some view obstructions at the Berths 243-245 and Northwest Slip disposal sites. However, these sites are of low to moderate visual quality due to their industrial nature and are also either partially or completely obstructed from view from various points, including scenic vistas and scenic highways. Views of the CSWH Expansion Area, the Eelgrass Habitat Area, and LA-2 would not be substantially altered by implementation of Alternative 1. The rock dike constructed at the Eelgrass Habitat Area would cause a permanent obstruction of views, but this dike is low in height and made of natural materials similar to those used in existing features in the Outer Harbor area and would only obstruct views from close distances (e.g., from on boats within the Outer Harbor). Therefore, the effect of Alternative 1 on valued views, scenic vistas, or scenic highways would be negligible and would not combine with impacts of past, present, and reasonably foreseeable projects to result in cumulative impacts.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact AES-3: Create Substantial Negative Shadow Effects on Nearby Shadow-Sensitive Uses

Some of the cumulative projects would develop structures that would shade shadow-sensitive uses, such as recreation areas or tourist and public open spaces. However, it is unlikely these projects would shade these sensitive uses for significant amounts of time. In addition none of the sensitive uses would be impaired by the shadows produced by the cumulative projects.

Alternative 1 would also produce minor shadows on some water-based recreational areas.

Contribution of Alternative 1 (Prior to Mitigation)

Presence of equipment at disposal sites and the construction of an aboveground rock dike at the Eelgrass Habitat Area could produce shadows that would shade recreational uses that may occur in nearby open water. However, shadows would not be very long due to the short vertical height of equipment (with the possible exception of the crane arm) and the dike. There would also be an

exclusionary zone set up around the dredging and disposal areas where recreational activities would be restricted, so that areas in which shadows would most likely occur would be prohibited to recreational boaters. In addition, most recreational activities, except for fishing, would not involve remaining stationary. Therefore, due to the short length of shadows, the inability for recreational activities to occur close to dredge and disposal sites, and the likelihood that recreational users would not be stationary, any potential shadowing would not shade shadow-sensitive uses for more than three hours between the hours of 9:00 am and 3:00 pm PST (between late October and early April) or for more than four hours between the hours of 9:00 am and 5:00 pm PST (between early April and late October). In addition, the presence of dredging and disposal equipment and the surcharge piles are temporary. Therefore, Alternative 1's contribution to a cumulative impact would not be considerable.

Mitigation Measures and Residual Cumulative Impacts

No mitigation is required as the contribution of Alternative 1 to cumulative impacts would be less than significant.

Cumulative Impact AES-4: Create Significant Light or Glare

It is likely a majority of the cumulative projects would include some form of lighting, either for functional necessity, security, or navigational reasons. This additional lighting would contribute to the ambient illumination of the Port from all views, and could illuminate light-sensitive uses in the area. While dredging and disposal activities of Alternative 1 would not adversely contribute to the nighttime illumination of the Port, the foreseeable development at the Northwest Slip may include lighting that would slightly change ambient illumination levels, however, the new illumination would not be strong enough to spill into residential areas in the vicinity of the Northwest Slip, which are approximately 0.25 mile north. Therefore, the effects of the incremental increase to nighttime lighting would not be significant.

Contribution of Alternative 1 (Prior to Mitigation)

Alternative 1 would create minimal light due to the use of nighttime lighting at certain disposal sites. This would constitute only a slight change in ambient nighttime illumination because similar lighting conditions currently exist at the Port due to dredging for the Channel Deepening Project and other Port operations. As such, impacts of Alternative 1, when combined with those of past, present, and reasonably foreseeable projects, would not be significant.

Mitigation Measures and Residual Cumulative Impacts

No mitigation is required as the contribution of Alternative 1 to cumulative impacts would be less than significant.

6.2.2 Air Quality

Scope of Analysis

The region of analysis for cumulative effects on air quality is the South Coast Air Basin (SCAB). The highest project impacts would occur within the communities adjacent to the Port, including San Pedro, Wilmington, and Long Beach. The region of analysis for cumulative effects on climate change is on a global scale.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.2.5.

Cumulative Impact AQ-1: Potential conflict with or obstruction of implementation of an applicable air quality management plan (the 2007 AQMP)

Due to its substantial amount of emission sources and topographical/meteorological conditions that inhibit atmospheric dispersion, the SCAB is a “severe-17” nonattainment area for 8-hour O₃, a “serious” nonattainment area for PM₁₀, and a nonattainment area for PM_{2.5} in regard to the National Ambient Air Quality Standards (NAAQS). The SCAB is in attainment of the NAAQS for CO, SO₂, NO₂, and lead. In regard to the California Ambient Air Quality Standards (CAAQS), the SCAB is presently in “extreme” nonattainment for O₃ and nonattainment for PM₁₀ and PM_{2.5}. The SCAB is in attainment of the CAAQS for CO, SO₂, NO₂, sulfates, and lead, and is unclassified for hydrogen sulfide and visibility reducing particles. Existing concentrations of pollutants are a result of past and present projects in the area. These pollutant nonattainment conditions within the project region are therefore cumulatively significant.

The *2007 Air Quality Management Plan (2007 AQMP)* predicts attainment of all NAAQS within the SCAB, including PM_{2.5} by 2014 and O₃ by 2020. However, the predictions for PM_{2.5} and O₃ attainment are speculative at this time.

Contribution of the Alternative 1 (Prior to Mitigation)

Alternative 1 construction equipment would comply with the attainment strategies included in the 2007 AQMP. Additionally, the Proposed Action construction contractor would comply with Rule 403 by implementing one or more best available control measures (BACMs) identified in Rule 403 during proposed earth-moving activities that emit fugitive dust. Therefore, compliance with these requirements would ensure that Alternative 1 would not conflict with or obstruct implementation of the applicable air quality plans. As a result, Alternative 1 would result in less than cumulatively considerable contributions in terms of conflicting with or obstructing implementation of an applicable AQMP.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 would be less than cumulatively considerable.

Cumulative Impact AQ-2: Potential to 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

Impacts of past, present, and reasonably foreseeable future projects for Cumulative Impact AQ-2 are identical to those described for Cumulative Impact AQ-1, and they would contribute to significant cumulative construction impacts.

Contribution of Alternative 1 (Prior to Mitigation)

The SCAQMD develops daily emission thresholds that signify cumulatively considerable increases in pollutants from construction activities. Emissions from Alternative 1 would exceed the SCAQMD daily threshold for NO_x during a peak day of construction activity. Any concurrent emissions-generating activity that occurs in the vicinity of Alternative 1 construction activities would add additional air emission burdens to these significant emission levels. As a result, without mitigation, emissions from Alternative 1 would produce cumulatively considerable contributions to O₃ and NO₂ pollutant levels.

Mitigation Measures and Residual Cumulative Impacts

Alternative 1 construction activities would implement all applicable POLA Sustainable Construction Guidelines as part of unmitigated operating conditions, including measures 2 through 6, as identified in Section 3.2.3 of this Draft SEIS/SEIR. Since proposed construction activities would finish prior to 2011 when the Guidelines specify the next tier of additional emission controls, there are no other feasible measures that would further reduce criteria pollutant emissions from construction of Alternative 1. As a result, emissions from Alternative 1 would produce cumulatively considerable and unavoidable contributions to O₃ and NO₂ pollutant levels.

Cumulative Impact AQ-3: Potential to Produce Emissions that Exceed an Ambient Air Quality Standard or Substantially Contribute to an Existing or Projected Air Quality Standard Violation

Impacts of past, present, and reasonably foreseeable future projects for Cumulative Impact AQ-3 are identical to those described for Cumulative Impact AQ-1, and they would contribute to significant cumulative construction impacts.

Contribution of Alternative 1 (Prior to Mitigation)

The SCAQMD develops ambient pollutant thresholds that signify cumulatively considerable increases in criteria pollutants. Construction of Alternative 1 would produce ambient impacts that, when combined with background pollutant levels that represent impacts from existing and future emission sources, would exceed the SCAQMD ambient threshold for 1-hour NO₂. Any concurrent emissions-generating activity that occurs in the vicinity of proposed construction would add additional air emission burdens to this significant impact. As a result, without mitigation, emissions from Alternative 1 would produce cumulatively considerable contributions to ambient NO₂ levels.

Mitigation Measures and Residual Cumulative Impacts

There are no feasible measures that would further reduce criteria pollutant emissions from construction of Alternative 1. As a result, Alternative 1 would produce cumulatively considerable and unavoidable contributions to ambient NO₂ levels.

Cumulative Impact AQ-4: Potential to Create Objectionable Odors at the Nearest Sensitive Receptor

There are temporary and semi-permanent sources of odors within the Port region, including (1) marine and land-based mobile sources powered by diesel and residual fuels, and (2) stationary industrial sources, such as petroleum storage tanks. Some individuals may sense that diesel combustion emissions are objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. Due to the large number of sources within the Port that emit diesel emissions and the proximity of residents (sensitive receptors) adjacent to Port operations, odorous emissions in the Project region are cumulatively significant.

Contribution of Alternative 1 (Prior to Mitigation)

Construction activities from Alternative 1 would increase diesel emissions within the Port. Exposure to the atmosphere of dredge material from the creation of landfills at Berths 243-245 and the Northwest Slip also would produce odors from the decomposition of organic matter. Residents and sensitive receptors would occur within 0.25 mile of these emission sources. Construction of Alternative 1 without mitigation would produce less than significant incremental odor impacts to sensitive receptors. However, since future Port operations and construction activities identified in Table 6-1 would (1) add additional odor emissions to cumulative impacts, and (2) continue the degraded odor levels in the Ports region, Alternative 1 would contribute to cumulatively considerable odor impacts.

Mitigation Measures and Residual Cumulative Impacts

There are no feasible measures that would further reduce odorous emissions from construction of Alternative 1. As a result, Alternative 1 would produce cumulatively considerable and unavoidable contributions to ambient odor levels within the Project region.

Cumulative Impact AQ-5: Potential to Expose Receptors to Significant Levels of Toxic Air Contaminants (TACs)

The SCAQMD and ARB estimate that elevated levels of cancer risks due to operational emissions from the Ports of Los Angeles and Long Beach occur within and in proximity to the two Ports (SCAQMD 2008a and ARB 2006a). Based on this information, airborne cancer and non-cancer levels within the project region are therefore cumulatively significant.

The Port has approved port-wide air pollution control measures through their San Pedro Bay Ports Clean Air Action Plan (CAAP) (LAHD et al., 2006). Implementation of these measures will reduce air emissions and resulting airborne health impacts from future operations and projects at the Port. Currently adopted regulations and future rules proposed by the ARB and USEPA also will further reduce air emissions and associated cumulative health impacts from Port operations. However, because future proposed measures (other than CAAP measures) and rules have not been adopted, it is unknown at this time how these future measures would reduce cumulative health impacts within the Ports region.

Contribution of Alternative 1 (Prior to Mitigation)

Proposed dredge and disposal equipment would emit TACs that would impact public health. The main source of TACs from proposed construction would occur as diesel particulate matter (DPM) emitted from diesel-powered on- and off-road equipment. Construction of Alternative 1 without mitigation would produce less than significant incremental health impacts. Since future Port operations and construction activities identified in Table 6-1 would: (1) add additional airborne health burdens to cumulative impacts, and (2) continue the degraded airborne health levels in the Ports region, Alternative 1 would contribute to cumulatively considerable health impacts. .

Mitigation Measures and Residual Cumulative Impacts

There are no feasible measures that would further reduce TAC emissions and resulting health impacts from construction of Alternative 1. As a result, Alternative 1 would produce cumulatively considerable and unavoidable contributions to health impacts within the Project region.

Cumulative Impact AQ-6: Potential to contribute to Global Climate Change

The cumulative increase in GHG concentrations in the atmosphere has resulted in and will continue to result in increases in global average temperature and adverse effects to climatic and environmental conditions. Multiple adverse environmental effects are attributable to global climate change, such as sea level rise, increased incidence and intensity of severe weather events (e.g., heavy rainfall, droughts), shrinking glaciers, thawing permafrost, shifts in plant and animal ranges, and extirpation or extinction of plant and wildlife species. These effects would have environmental, economic, and social consequences on a global scale. Given the significant adverse environmental effects linked to global climate change induced by GHGs, past, current, and future global emissions of GHGs are considered cumulatively significant. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission, 2006a).

Contribution of Alternative 1 (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 micro-scale relative to global emissions—result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Proposed construction would increase GHG emissions from 2004 CEQA Baseline conditions. Any concurrent emissions-generating activity would add additional emission burdens to these significant levels. As a result, without mitigation, emissions from construction of Alternative 1 would produce cumulatively considerable contributions to global climate change.

Mitigation Measures and Residual Cumulative Impacts

Measures that reduce electricity consumption or fossil fuel usage from Project emission sources would reduce proposed GHG emissions. Implementation of MM AQ-2.3, Electricity Use, is the only feasible mitigation that would have this effect. Additionally, Alternative 1 would utilize electrified main dredge engines to comply with the POLA Sustainable Construction Guidelines. However, there are no other sources of air emissions from construction of Alternative 1 that are available for electrification. As a result, there are no feasible measures that would reduce GHG emissions from Alternative 1.

6.2.3 Biological Resources

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 Alternative 1 construction areas and extending approximately 1 mile (1.6 km) in all directions. For marine biological resources, the geographical region of analysis is the Los Angeles/Long Beach Harbor (inner and outer harbor areas) because the basins, slips, channels, and open waters are hydrologically and ecologically connected. The special status species have differing population sizes and dynamics, distributional ranges, breeding locations, and life history characteristics. Because the bird species are not year-long residents but migrate to other areas where stresses unrelated to the Proposed Action and other projects in the Harbor area can occur, the area for cumulative analysis is limited to the Harbor (water areas and adjacent land within the Ports). Marine mammals other than the California sea lion and harbor seal are unlikely to be present and not considered in the cumulative analysis.

Past, present, and reasonably foreseeable future development that could contribute to cumulative impacts on terrestrial resources are those projects that involve land disturbance such as grading, paving, landscaping, construction of roads and buildings, and related noise and traffic impacts. Noise, traffic and other operational impacts can also be expected to have cumulative impacts on terrestrial species. Marine organisms could be affected by activities in the water such as dredging, filling, wharf demolition and construction, and vessel traffic. Runoff of pollutants from construction and operations activities on land into Harbor waters via storm drains or sheet runoff also has the potential to affect marine biota, at least in the vicinity of the drains.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.3.5.

Cumulative Impact BIO-1: Cumulative Impacts to Special Status Species

Construction of past landfill projects in the Harbor has reduced the amount of marine surface water present and thus foraging and resting areas for special status bird species, but these projects have also added more land and structures that can be used for perching near the water. Construction of Terminal Island, Pier 300, and then Pier 400 provided new nesting sites for the California least tern, and the Pier 400 site is still being used. Shallow water areas to provide

foraging habitat for the California least tern and other bird species have been constructed on the east side of Pier 300 and inside the San Pedro breakwater as mitigation for loss of such habitat from past projects.

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 in Table 6-1 would increase vessel traffic and its associated underwater sound. The increase in frequency of vessel sound events could cause some individual marine mammals to avoid the vessels as they move into, through, and out of the Harbor. The overall increase in sound would be less than 3 dBA because the number of vessels would not double (FHWA 1987).

Development of the vacant land on Pier 400 has the potential to adversely affect an adjacent California least tern nesting site during construction (Pacific LA Marine Terminal (formerly Pacific Energy) Oil Marine Terminal, Pier 400 [#11]). 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 least terns are present. With respect to other special status species, it is not expected that any nesting, foraging habitat, or individuals would be lost as a result of cumulative projects in Table 6-1.

In-water construction activities for cumulative projects could disturb or cause special status birds, other than the California least tern addressed above, to avoid the construction areas for the duration of the activities. Because these projects would occur at different locations throughout the Harbor and only some are likely to overlap in time, the birds could use other undisturbed areas in the Harbor, and few individuals would be affected at any one time. Construction of the Schuyler F. Heim Bridge (#77), however, would have the potential to adversely affect the peregrine falcon if any are nesting at the time of construction. If nesting were to be affected, impacts could be significant but mitigable by scheduling the work to begin after the nesting season is complete.

In-water construction activities, and particularly pile driving, would also result in underwater sound pressure waves that could affect marine mammals. The locations of these activities (e.g., pile and sheetpile driving) are in areas where few marine mammals occur, projects in close proximity are not expected to occur concurrently, and the marine mammals would avoid the disturbance area by moving to other areas within the Harbor. No critical habitat for any federally-listed species is present in the Harbor.

Therefore, construction and operation of past projects have contributed to significant impacts on special status species, and have required mitigation measures. As a result, impacts associated with the cumulative projects listed in Table 6-1 are also expected to be significant but mitigable.

Contribution of Alternative 1 (Prior to Mitigation)

Alternative 1 would not adversely affect the California least tern at their nesting site on Pier 400. However, Alternative 1 would temporarily disturb foraging habitat for the least tern and other special status species in the CSWH during construction of the CSWH Expansion Area and Eelgrass Habitat Area (Impact BIO-1 in Section 3.3.6.2). These impacts would be less than significant, and the contribution of Alternative 1 to cumulative impacts would not be considerable. Alternative 1 would have no impact on critical habitat because none is present. No loss of individuals or habitat for other special status species would occur.

Mitigation Measures and Residual Cumulative Impacts

No mitigation measures are necessary, as the contribution of Alternative 1 to cumulative impacts would not be considerable, however implementation of MM BIO-1 would further reduce the potential for less than significant impacts.

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

Essential Fish Habitat (EFH) has been and will be lost due to past, present, and future landfill projects in the Harbor. EFH protection requirements began in 1996, and thus, only apply to projects since that time. The projects in Table 6-1 that could result in a loss of EFH are Pier 400 (#1), Berths 97-109 (#15), Berths 302-305 APL (#23), Middle Harbor Terminal redevelopment (#66), Piers G & J (#67), and Pier T (#70). The losses since 1996 are the same, significant but mitigable, as the marine habitat losses described in **Cumulative Impact BIO-5** below, and the use of mitigation bank credits for the latter impacts also offset the losses of EFH. Temporary disturbances within EFH also occur during in-water construction activities from cumulative projects in Table 6-1. These disturbances in the Harbor occur at specific locations that are scattered in space and time within the Harbor and would not cause a significant impact to EFH. Increased vessel traffic and runoff from on-land construction and operations resulting from the cumulative projects would not result in a loss of EFH nor would these activities substantially degrade this habitat.

Natural habitats, special aquatic sites (e.g., eelgrass beds, mudflats), and plant communities (wetlands) have a limited distribution and abundance in the Harbor. The 40-acre (16-ha) Pier 300 expansion project caused a loss of eelgrass beds that was mitigated. The Southwest Slip fill in West Basin completed as part of the Channel Deepening Project resulted in a small loss of

saltmarsh that was also mitigated. Losses of eelgrass and saltmarsh from early landfill projects are unknown. Therefore, past projects have created significant but mitigable impacts, and none of the other present or future projects are expected to adversely affect any of these habitats.

Contribution of Alternative 1 (Prior to Mitigation)

The loss of 14.1 acres (5.7 ha) of EFH represents a cumulatively considerable impact. The temporary construction disturbances at the Northwest Slip, Berths 243-245, CSWH Expansion Area, and Eelgrass Habitat Area sites would also be cumulatively considerable because these activities combined with those of other cumulative projects (described above) would result in a loss of EFH.

Mitigation Measures and Residual Cumulative Impacts

Implementation of **MM BIO-4** would use existing mitigation credits to offset the loss of 14.1 acres (5.7 ha) of marine habitat due to the Northwest Slip, Berths 243-245, and Eelgrass Habitat Area dike construction in accordance with agreements between the Port and regulatory agencies. Other recent and future cumulative projects that involve construction of new landfills in the Harbor have used or would use these mitigation credits to offset impacts of marine habitat loss (see Table 3.3-4 in Section 3.3.5). The mitigation bank currently contains 161 credits, so that adequate credits would remain after the approved and planned projects, including Alternative 1, are mitigated. Therefore, mitigation would render the contribution of Alternative 1 to cumulative impacts less than considerable.

Cumulative Impact BIO-3: Cumulative Interference with Migration/Movement Corridors

No known terrestrial wildlife or aquatic species migration corridors are present in the Harbor. Migratory birds pass through the Harbor area, and some rest or breed, such as the California least tern, in this area. Past, present, and foreseeable future projects in the Harbor would not interfere with movement of these species because (during migration or between nesting and foraging areas) 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; therefore, potential cumulative impacts would not be considerable.

Contribution of Alternative 1 (Prior to Mitigation)

Alternative 1 would not affect any migration or movement corridors in the Harbor or along the coast. Consequently, it would not contribute to a cumulatively considerable impact on wildlife migration or movement corridors.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact BIO-4: Cumulative Disruption of Local Biological Communities

Dredging and Wharf Work. Construction of past projects in the Harbor has involved in-water disturbances such as dredging and wharf construction that removed surface layers of soft bottom habitat as well as temporarily removed or permanently added hard substrate habitat (e.g., piles and rocky dikes). These disturbances altered the benthic habitats present at the location of the specific projects, but effects on benthic communities were localized and of short duration as invertebrates recolonized the habitats. Because these activities affected a small portion of the Harbor at a time and recovery has occurred or is in progress, biological communities in the Harbor have not been degraded. Similar construction activities (e.g., wharf construction/reconstruction and dredging) would occur for these cumulative projects that are currently under way and for some of those that would be constructed in the future. Because recolonization of dredged areas and new riprap and piles begins immediately and provides a food source for other species, such as fish, within a short time, multiple projects spread over time and space within the Harbor would not substantially disrupt benthic communities. Construction disturbances at specific locations in the water and at different times that are caused by the cumulative projects, which can cause fish and marine mammals to avoid the work area, are not expected to substantially alter the distribution and abundance of these organisms in the Harbor and thus would not substantially disrupt biological communities. Turbidity that results from in-water construction activities occurs in the immediate vicinity of the work and lasts just during the activities that disturb bottom sediments. Effects on marine biota are thus localized to relatively small areas of the Harbor and of limited duration for each project. Those projects that are occurring at the same time but which are not in close proximity would thus not have additive effects.

Furthermore, based on biological baseline studies described in Section 3.3, the benthic marine resources of the Harbor have not declined during Port development activities occurring since the late 1970s. The biological baseline conducted by MEC and Associates (2002) identified healthy benthic communities in the Outer Harbor despite major dredging and filling activities associated with the Port's Deep Draft Navigation Project (USACE and LAHD, 1992). However, between

2002 and 2005, the USACE and the Port dredged most of the Inner Harbor channels and basins from -45 ft to -53 ft (Channel Deepening Project, #4). Recolonization of disturbed marine environments begins rapidly and is characterized by high reproduction rates of a few colonizing species. And establishment of a climax biological community would occur in 2 to 5 years (MEC, 1988).

Landfilling. Landfilling has removed and would continue to remove marine habitat and to disturb adjacent habitats in the Harbor. Several projects from Table 6-1 involve land fill. During the filling process, suspension of sediments would result in turbidity in the vicinity of the work with rapid dissipation upon completion of the fill to above the water level. Water column and soft bottom habitats are lost while riprap habitats are gained. Although the total amount of marine habitat in the Harbor has decreased, a large amount remains, and the biological communities present in the remaining Harbor habitats have not been substantially disrupted as a result of those habitat losses. All marine habitat loss impacts from landfill construction have been mitigated to insignificance through on-site (shallow water habitat construction) and off-site (Baticuitos and Bolsa Chica restorations) mitigation since implementation of the agreement with the regulatory agencies (see Cumulative Impact BIO-5).

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 passed. Runoff also has the potential to occur during present and future projects (all projects in Table 6-1 because all drainage in the area containing the cumulative projects listed is ultimately to the Harbor). Construction runoff would only occur during construction activities so that projects that are not concurrent would not have cumulative effects. Construction runoff would add to ongoing runoff from operation of existing projects in the Harbor at specific project locations and only during construction activities. For past, present, and future projects, the duration and location of such runoff would vary over time. Best Management Practices (BMPs) such as berms, silt curtains, and sedimentation basins are used to prevent or minimize runoff from construction, and this keeps the concentration of pollutants below thresholds that could measurably affect marine biota. Runoff from past construction projects (e.g., turbidity and any pollutants) has either dissipated shortly after construction was completed or settled to the bottom sediments. For projects more than 20 years in the past, subsequent settling of suspended sediments has covered the pollutants, or the pollutants have been removed by dredging projects. Runoff from operation of these past projects continues but is regulated. Biological baseline surveys in the Harbor (MEC 1988, MEC and Associates 2002) have not shown any disruption of

biological communities resulting from runoff. Effects of runoff from construction activities and operations would not substantially disrupt local biological communities in the Harbor.

Much of the development in the Harbor has occurred and continues to occur on landfills that were constructed for that purpose. As a result, those developments did not affect terrestrial biota. Redevelopment of existing landfills to upgrade or change backland operations temporarily affected the terrestrial biota (e.g., landscape plants, rodents, and common birds) that had come to inhabit or use these industrial areas. Future cumulative developments such as hotels and other commercial developments on lands adjacent to the Harbor would be in areas that do not support natural terrestrial communities or are outside the region of analysis. Projects in Table 6-1 that are within the geographical region of analysis and could affect terrestrial biological resources are: San Pedro Waterfront (#3), Channel Deepening (#4), Evergreen Expansion (#7), SSA Outer Harbor Fruit Facility Relocation (#9), Crescent Warehouse Company Relocation (#10), Ultramar (#12), Berths 97-109 (#15), Berths 171-181 (#16), Berths 206-209 (#17), South Wilmington Grade Separation (#24), Avalon Boulevard Corridor Project (#25), "C" Street/Figueroa Street Interchange (#26), Port Transportation Master Plan (#27), Berths 212-224 (#28), Berths 121-131 (#29), Banning Elementary School #1 (#55), East Wilmington Greenbelt Community Center (#56), Pier A West Remediation (#68), Pier A East (#69), and Schuyler Heim Bridge Replacement (#77).

Contribution of Alternative 1 (Prior to Mitigation)

Dredging and Wharf Work. The small amount of dredging and wharf demolition at Berths 243-245 and the Northwest Slip fill site for Alternative 1 would not contribute considerably to cumulative disruption of a local biological community.

Landfilling. Filling at the Northwest Slip site and Berths 243-245 site would remove 12.4 acres (5.1 ha) of highly modified marine habitat in the Inner Harbor and cause short-term turbidity associated with fill placement. This would not substantially disrupt biological communities, and Alternative 1 would not contribute considerably to cumulative effects on biological communities of the Harbor. Placement of fill for the CSWH Expansion Area and Eelgrass Habitat Area also would have temporary but less than significant impacts on local biological communities and would not contribute considerably to cumulative effects on those communities. Effects of the fill on amount of marine habitat are addressed in Cumulative Impact BIO-5 below.

Backland Construction and Operations. Alternative 1 involves construction of two small landfills with no construction or operation of facilities on those fills. Alternative 1, however, would add 13 acres (5.3 ha) of area from which runoff could enter Harbor waters through storm drains or sheet runoff, but runoff of pollutants in quantities that could adversely affect marine

biota is not likely to occur. Furthermore, runoff from Alternative 1 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, both in frequency and location. Consequently, Alternative 1 would not result in any cumulatively considerable effects on biological communities because runoff control measures, such as SWPPPs, would be implemented as required in project permits.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact BIO-5: Cumulative Loss of Marine Habitat

Numerous landfill projects have been implemented in the Harbor since the Harbor was first developed, and these projects have resulted in an unquantified loss of marine habitat. For the cumulative projects listed in Table 6-1, approximately 570 acres (231 ha) of landfill have been completed in the Harbor, another 75 acres (30 ha) are in the process of being filled, and future planned landfills (without the Proposed Action) total about 65 acres (26 ha). Thus, well over 700 acres (283 ha) of marine habitat have been or will be lost in the Harbor. Losses of marine habitat prior to implementation of the agreements among the Ports and regulatory agencies were not mitigated. Losses since that time have been, and will be for future projects, mitigated by use of existing mitigation bank credits from marine habitat restoration off site and through creation of shallow water habitat within the Outer Harbor as established in the agreements with the regulatory agencies.

Contribution of Alternative 1 (Prior to Mitigation)

Alternative 1 would contribute 14.1 acres (5.7 ha), or less than 2 percent, of the more than 700 acres (283 ha) of fill completed or proposed for the Harbor prior to mitigation. This would make a cumulatively considerable contribution to habitat loss prior to mitigation.

Mitigation Measures and Residual Cumulative Impacts

Implementation of **MM BIO-4** would use existing mitigation credits to offset the loss of 14.1 acres (5.7 ha) of marine habitat due to the Northwest Slip, Berths 243-245, and Eelgrass Habitat Area dike construction in accordance with agreements between the Port and regulatory agencies. Other recent and future cumulative projects that involve construction of new landfills in the Harbor have used or would use these mitigation credits to offset impacts of marine habitat loss (see Table 3.3-4 in Section 3.3.5). The mitigation bank currently contains 161 credits, so that adequate credits would remain after the approved and planned projects, including Alternative 1,

are mitigated. Therefore, mitigation would render the contribution of Alternative 1 to cumulative impacts less than considerable.

6.2.4 Cultural Resources

Scope of Analysis

The geographic region of analysis for cumulative effects on cultural, archaeological, historical architectural, and paleontological resources related to Port projects consists of the areas at the Port and in the immediate vicinity within natural landforms (i.e., excluding modern Port in-fill development), and 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 resources 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 to contribute to cumulative impacts on historical architectural resources. Projects that involve grading of intact, natural landforms (i.e., not modern landfill areas) have the potential to contribute to cumulative impacts on paleontological resources.

The significance criteria used for the cumulative analysis are the same as those used in Section 3.4.5 to evaluate the Proposed Action.

Cumulative Impact CR-1: Result in disturbance, damage, or degradation to paleontological resources

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

Construction activities (i.e., excavation, dredging, and land filling) associated with present and future Port projects, including the Pier 400 Container Terminal Project (#1), Ultramar Lease Renewal Project (#12), Pier 400 Oil Marine Terminal Project (#11), Berths 97-109 Container Terminal Project (#15), and Evergreen Container Terminal Improvement Project (#7), would potentially require excavation. These activities would be in areas of historical estuary habitats containing sediments dating from recent geologic time (i.e., the last 20,000 years), well after the time periods when animals that have been fossilized were present, and recent landfills that would not contain natural fossil deposits. Therefore, the projects would not be located within areas with potentially significant vertebrate paleontological resources. There is the potential for other related upland Port projects including the South Wilmington Grade Separation (#24), Avalon Boulevard Corridor Development (#25), and “C” Street/Figueroa Street Interchange (#26) on the periphery of the Port (i.e., in upland areas) to disturb unknown paleontological resources.

Reasonably foreseeable future projects within upland areas that may affect paleontological resources include those in the Community of San Pedro (#43, #45, #49, #50, #51, #52, #53, #54), Community of Wilmington (#57), Harbor City, Lomita, and Torrance (#61, #62, #63, #65), and City of Long Beach (#80). The County of Los Angeles (Los Angeles County 2007) and City of Long Beach (City of Long Beach 2007) do not have code requirements ensuring that paleontological resources encountered during construction are professionally assessed and preserved. Therefore, such projects may result in the destruction of paleontological resources.

Contribution of Alternative 1 (Prior to Mitigation)

Alternative 1 would have no impact with regard to Impact CR-1 and would therefore not have the potential to combine with impacts of past, present, or reasonably foreseeable projects to result in a cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact CR-2: Cumulative Impacts on Archaeological or Ethnographic Resources

Archaeologists estimate that past and present projects within urban areas including the project vicinity have destroyed over 80 percent of all prehistoric sites without proper assessment and systematic collection of information beforehand. As prehistoric sites are non-renewable resources, the cumulative direct and indirect impacts of these actions are significant. Such projects have eliminated our ability to study sites that may have been likely to yield information

important in prehistory. In other words, the vast majority of the prehistoric record has been already lost.

Construction activities (i.e., excavation, dredging, and land filling) associated with present and future Port projects, including the Pier 400 Container Terminal Project (#1), Ultramar Lease Renewal Project (#12), Pier 400 Oil Marine Terminal Project (#11), Berths 97-109 Container Terminal Project (#15), and Evergreen Backlands Improvements Project (#7) would potentially require excavation. These activities, however, would be in areas of historical estuary habitats and recent landfills, and therefore would not be within the landforms inhabited by Native American populations. Although much of the area has been previously disturbed, there is the potential for other related upland Port projects including the South Wilmington Grade Separation (#24), Avalon Boulevard Corridor Development (#25), and “C” Street/Figueroa Street Interchange (#26) on the periphery of the Port (i.e., in upland areas) to disturb unknown, intact subsurface prehistoric or historic archaeological resources. Reasonably foreseeable future projects within upland areas, i.e. the Community of San Pedro (#43, #45, #49, #50, #51, #52, #53, #54), Community of Wilmington (#57), Harbor City, Lomita, and Torrance (#61, #62, #63, #65), and City of Long Beach (#80), would also potentially contribute to this impact.

Contribution of Alternative 1 (Prior to Mitigation)

There are no recorded listed, eligible, or otherwise unique or important archaeological or historic resources within Alternative 1 site. Therefore, Alternative 1 would not have the potential to combine with impacts of past, present, or reasonably foreseeable projects to result in a cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact CR-3: Cumulative Impacts on Historic Architectural Resources

Past and present projects within urban areas including the project vicinity have involved demolition of significant historic architectural structures, most often without the benefit of their recordation (photographs and professional drawings) beforehand. Though each structure over 45 years old is not necessarily unique, historic buildings are capable of contributing to understanding events that have made a significant contribution to the broad patterns of history, and/or may have been associated with the lives of persons significant in the past; and/or may have been architecturally distinctive. Their destruction without proper recordation has minimized the ability to reconstruct the region’s heritage.

The Southwest Marine Shipyard facility which includes Berths 243-245, is one of the oldest shipbuilding and repair facilities at the Port. The site has been deemed eligible for listing in the National Register for Historic Places (NRHP) as a historic district because it is the last remaining example of the once highly significant World War II shipbuilding industry (LAHD, 2006). The majority of the remaining structures at the Southwest Marine Shipyard site were identified in a prior historical survey as being contributors to the historical significance of the site (pre-1946), with the exception of the Compressor Building (Building 26), cranes constructed after 1945, railroad tracks, a sanitary lift stations, and fire protection system.

At the time of the preparation of this environmental document, there are no applications on file at the LAHD for this location. Although future use of the site is unknown, it would likely be utilized for certain operations in accordance with the City of Los Angeles Planning and Zoning Code and the Port Master Plan. The City of Los Angeles zoning designation for the Project Site is QM3 (Qualified Heavy Industrial) (City of Los Angeles, 2006). This classification restricts the uses to general cargo, limited Port-related commercial and industrial uses (Ordinance 165406, effective February 1990). The Port Master Plan designated land uses for the Project Site consists of general cargo, dry bulk, liquid bulk, commercial fishing, industrial and institutional activities (Port of Los Angeles, 2002). Depending on the final design of a future use at this site, it is likely some or all of the historic structures onsite would be demolished and or removed. Mitigation measures would be implemented to document historic resources at the project site prior to demolition, however such mitigation measures would not reduce impacts to less than a significant level.

Proposed present and future Port projects requiring removal of significant or potentially significant historical architectural resources (i.e., demolition of structures over 45 years of age) include the Pan-Pacific Fisheries Cannery Buildings Demolition Project (#20) and Canner's Steam Demolition Project (#30) within the Port of Los Angeles, the Administration Building Replacement Project (#68) within the Port of Long Beach, and the 1437 Lomita Boulevard Condominiums project (#59) within the City of Lomita.

Contribution of Alternative 1 (Prior to Mitigation)

The Southwest Marine Shipyard facility which includes Berths 243-245 contains structures which have been evaluated as NRHP eligible (LAHD, 2006). The four Colby Cranes present on the wharves that surround and divide Berths 243 and 245—wharves that would be demolished to construct the Berths 243-245 disposal site—have been identified as facilities contributing to historic resources at the adjacent Southwest Marine Shipyard facility. Alternative 1 would result in less than significant impacts because the cranes, which are mobile, would be moved to the adjacent former Southwest Marine Shipyard facility. Therefore, although buildings at the

adjacent site will likely be demolished as a result of future development at the site, which would be a significant impact, the less than significant impacts of Alternative 1 of the Proposed Action would not combine with impacts of the future development to result in a cumulative impact because Alternative 1 would not result in any adverse changes to historic resources. Therefore, impacts of Alternative 1 would not be cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

6.2.5 Geology

Scope of Analysis

The geographic scope for the evaluation of cumulative impacts varies depending on the geologic hazard. The geographic scope for seismic hazards is the POLA/POLB Harbor area, as an earthquake capable of creating substantial damage or injury at Alternative 1 sites could also cause substantial damage or injury throughout the Harbors. Earthquake-related damage may be particularly severe in areas developed on artificial fill, which is prevalent in the Harbor areas and is prone to increased ground shaking and liquefaction effects. The geographic scope related to tsunamis hazards is the potential inundation area, which could extend throughout the low-lying coastal areas of Los Angeles and Orange counties. The geographic scope for cumulative erosion-related impacts is the POLA/POLB Harbor area because this water body receives runoff from the Project sites and surrounding areas.

The significance criteria used for the cumulative analysis are the same as those used in Section 3.5.5 to evaluate the Proposed Action.

Cumulative Impact GEO-1: Accelerate geologic hazards that could result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury

Potential geologic hazards in the Project area include suspected traces of the Palos Verdes fault, which have been mapped in the POLA Harbor area in the vicinity of the Northwest Slip project site. Ground shaking is another potential geologic hazard that could affect the Project area because the southern California region is seismically active and has experienced strong earthquake-related ground shaking during historic times. Due to the proximity and number of known faults in the Project region, it is likely that a strong seismic event will occur during the lifetimes of the proposed sediment disposal facilities and other cumulative development projects. The presence of unconsolidated and saturated natural and fill soils in the Harbor areas, along

with shallow groundwater levels, increases the potential for liquefaction-related impacts to occur in response to a seismic event. Facilities in the POLA have been damaged by tsunami events in the past and it is reasonable to expect that a future tsunami or seiche event would also have the potential to result in significant damage to harbor facilities.

Past, present, and reasonably foreseeable future projects, including the proposed sediment disposal facilities, would not increase the potential occurrence of geologic hazards that have the potential to result in substantial damage to structures and infrastructure, or that would expose people to substantial risk of injury. However, past development projects have increased the amount of land area that consists of unconsolidated fill materials, which has the potential to increase the adverse effects of ground shaking and liquefaction. Subsequent development that has occurred on fill areas has increased the number of buildings, amount of infrastructure, and the number of people that may be exposed to seismic hazards and related effects. All of the present and reasonably foreseeable future projects listed in Table 6-1 that would directly or indirectly result in new structural development would also result in an increase in the amount of infrastructure, number of structures, and the number of people that have the potential to be exposed to geologic hazards.

Contribution of Alternative 1 (Prior to Mitigation)

Sediment disposal sites that would be created by Alternative 1 would not result in the development of habitable buildings or extensive infrastructure systems that would be subject to the adverse effects of geologic hazards. Geologic hazard impacts that have the potential to affect the proposed sediment disposal sites would be reduced to less than significant levels through implementation of existing regulatory requirements and current building practices. As a result, ground shaking, liquefaction and other geological hazards that may affect the project would not result in a cumulatively considerable increase in risk to persons or structures located at the Port or in the project region. Other cumulative development projects within the Port and in surrounding areas would also have the potential to be affected by geologic hazards, and to result in short- and long-term erosion impacts. Implementation of Alternative 1 would not result in a cumulatively considerable contribution to geologic hazard risks at the identified cumulative development project sites, and it is anticipated that cumulative development projects located throughout the project region would also be required to comply with regulatory requirements and current building practices that would reduce geologic hazard and erosion impacts to the extent possible. Therefore, Alternative 1 would not result in a cumulatively considerable contribution to significant cumulative geologic hazard impacts.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 to significant cumulative geologic hazard impacts would be less than cumulatively considerable.

Cumulative Impact GEO-2: Cumulative Acceleration of Rates of Erosion and Sedimentation

Past development projects in and around the POLA/POLB have disturbed soils within upland areas, which has increased the potential for erosion and the transport of sediments into the harbors. In general, however, the potential for significant long-term erosion impacts was minimized when the previous construction projects were completed. Current and future cumulative development projects will disturb soils in upland areas of the watershed that drain to the harbor. Construction activities on sites larger than one acre that disturb soils will be required to implement appropriate BMPs to minimize the effects of erosion and the transport of sediments off of the project sites. Therefore, current and future construction project should not result in significant cumulative erosion and sedimentation impacts. On a long-term basis, present and future development projects would generally be characterized as urban land uses with a high proportion of paved surface, and a low potential for substantial erosion-related impacts.

Contribution of Alternative 1 (Prior to Mitigation)

Sediment disposal activities at the Northwest Slip, Berths 243-245 site, and the ARSSS would have a minimal potential for accelerating erosion of soils and offsite sedimentation impacts in the harbor due to the required implementation of erosion control BMPs. Sediment disposal operations at the CSWH Expansion Area, Eelgrass Habitat Area and LA-2 would not result in the creation of upland areas that would be subject to the effects of erosion. Therefore, Alternative 1's contribution to rates of erosion and sedimentation would not be cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 would be less than cumulatively considerable.

6.2.6 Ground Transportation and Circulation

Scope of Analysis

The transportation environmental setting for the cumulative ground transportation analysis includes those streets and intersections that would be used by construction workers to gain access to and from the construction parking and staging area in Fish Harbor. The streets most likely to

be impacted by cumulative project-related auto and truck traffic include the following: the Seaside Avenue/Ocean Boulevard, Terminal Way, Ferry Street, Earle Street, Seaside Avenue, Navy Way and Reeves Avenue.

Cumulative Impact TRANS-1 Short term impacts to streets would occur during construction of Alternative 1.

Cumulative Impact TRANS-1 represents the potential of the Proposed Action along with other cumulative projects to result in a short-term, temporary increase in construction truck and auto traffic. In the case of construction activity impacts, the most important cumulative projects include the Proposed Action plus the other projects on Terminal Island. As presented in Table 6-1, projects on Terminal Island that are expected to be under construction concurrently with the Proposed Action include project #2 (Berths 136-147 (TraPac) Marine Terminal) and #11 (Pacific LA Marine Terminal (formerly Pacific Energy) Oil Marine Terminal, Pier 400). Construction of these projects is estimated to occur Monday through Friday from 7:00 a.m. to 5:00 p.m. Most construction activity for the remaining cumulative projects would occur outside of the project study area. In addition, the timing of construction as well as the number of construction trips is unknown and speculative for the remaining cumulative projects. There would be temporary impacts on the study area roadway system during construction of Alternative 1 because the construction activities would generate vehicular traffic associated with construction workers' vehicles and trucks delivering equipment to the site. This site-generated traffic would result in increased traffic volumes on the study area roadways for the duration of the construction period, which would span a period of 15 months.

The average levels of traffic generated by the construction activities have been estimated for the Proposed Action and the relevant cumulative projects, as shown below. Because construction of the Proposed Action would occur 24 hours per day in three shifts, Alternative 1 construction traffic would only have the potential to combine with traffic from cumulative projects during the a.m. peak hour. The construction schedule and traffic levels have been estimated based the construction period activities on a number of similar construction projects at the Port of Los Angeles and are presented in Table 6-2.

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past construction activities resulted in short-term, temporary impacts at selected roadway links, intersections and ramps. Construction period traffic handling measures were implemented to mitigate these impacts.

Table 6-2 Cumulatively Considerable Peak Hour Trips

Project	Peak Hour Auto Trips	Peak Hour Truck Trips	Total Peak Hour Trips
Proposed Action	77 am 0 pm	4 am 0 pm	81 am 0 pm
Berth 136-147	75 am 75 pm	15 am 15 pm	90 am 90 pm
Plains All American Marine Terminal	0 am 523 pm	0 am 0 pm	0 am 523 pm
Totals	152 am 598 pm	19 am 15 pm	171 am 613 pm

The construction worker and truck trips were assessed cumulatively for the above referenced projects at all study intersections during the AM and PM peak hours. Thus there would be an assumed 152 worker trips and 19 truck trips in the AM peak hour, and 598 worker trips and 15 truck trips in the PM peak hour. These truck trips were based on Environmental Impact Reports from the other Port construction projects. While construction would likely occur in phases for each project, the construction analysis assumes that construction would occur at all projects simultaneously to represent a conservative construction analysis.

The combined effect of construction traffic from the Proposed Action and the two cumulative projects identified above is shown below in Table 6-3, and would result in no significant impacts from construction activities during the AM or PM peak hours. Thus, proposed Project construction traffic would not result in a significant temporary construction impact on ground transportation and circulation at any intersection.

Table 6-3 Intersection Level of Service Analysis – 2009 Cumulative Construction Analysis

Study Intersection	2009 Adjusted Baseline + Cumulative Construction Traffic				Adjusted Baseline + Cumulative Construction Traffic + Project Construction Traffic				Change in V/C		Significantly Impacted
	A.M. PEAK HOUR		P.M. PEAK HOUR		A.M. PEAK HOUR		P.M. PEAK HOUR		A.M.	P.M.	
	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay			
1. Navy Way/Seaside Ave.	B	0.626	C	0.769	B	0.631	C	0.769	0.005	0.000	No
2. Ferry St./SR-47 EB Ramp	A	0.423	B	0.624	A	0.424	A	0.624	0.001	0.000	No
3. Henry Ford Ave./Anaheim St.	B	0.676	C	0.740	B	0.676	C	0.740	0.000	0.000	No
4. Alameda St./Anaheim St.	D	0.801	C	0.815	D	0.801	C	0.815	0.000	0.000	No

*Note: * City of Los Angeles signalized intersections were analyzed using Critical Movement Analysis (CMA) methodology.*

Cumulative Impact TRANS-2 Alternative 1 would not increase an intersection's V/C ratio in accordance with the following guidelines:

- V/C ratio increase ≥ 0.040 if final LOS is C,
- V/C ratio increase ≥ 0.020 if final LOS is D, or
- V/C ratio increase ≥ 0.010 if final LOS is E or F.

Operation of Alternative 1 would not result in increased V/C ratios at area intersections. No impacts would occur and Alternative 1 would therefore not have the potential to combine with impacts of past, present, or reasonably foreseeable projects to result in a cumulative impact.

Cumulative Impact TRANS-3: Alternative 1 Project operations would not result in a significant increase in related public transit use

Operation of the disposal sites created under Alternative 1 would not require any on-site employees and would not result in increased use of public transit. . No impacts would occur and Alternative 1 would therefore not have the potential to combine with impacts of past, present, or reasonably foreseeable projects to result in a cumulative impact.

Cumulative Impact TRANS-4: Alternative 1 operations would not result in a significant increase in freeway congestion.

There are no trips associated with Alternative 1 Project operations; therefore Alternative 1 would not result in increased freeway congestion. No impacts would occur and Alternative 1 would therefore not have the potential to combine with impacts of past, present, or reasonably foreseeable projects to result in a cumulative impact.

Cumulative Impact TRANS-5: Alternative 1 operations would not cause an increase in rail activity that would cause delays in regional traffic.

The disposal sites created under Alternative 1 would not result in increased throughput. Therefore this alternative would not result in increased rail activity. No impacts would occur and Alternative 1 would therefore not have the potential to combine with impacts of past, present, or reasonably foreseeable projects to result in a cumulative impact.

Construction activities would not occur in or within the immediate proximity of a road right-of-way and would not require closure of any roadways. Therefore Alternative 1 would not impact to the transportation system and would therefore not have the potential to combine with impacts of any past, present, or reasonably foreseeable projects to result in a cumulative impact.

6.2.7 Hazards and Hazardous Materials

Scope of Analysis

The geographic scope for cumulative impacts associated with risk of upset involving hazardous materials encompasses several areas of the Port including the Outer Harbor, Main Channel, West Basin, and East Basin areas of the Port of Los Angeles. The importance of regional projects diminishes with distance from the Port as potential adverse impacts diminish in magnitude with

distance. Thus, past, present, and reasonably foreseeable future projects that could contribute to these cumulative impacts include those projects that transport hazardous materials in the areas of the Port where Proposed Action activities would generally be occurring.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.7.5.

Cumulative Impact HAZ-1: Failure to comply with applicable regulations and policies guiding development within the Port

All projects within the Port are required to comply with applicable development regulations and policies. All projects are also required to be consistent with the Port Master Plan, or be subject to approved amendments to the Port Master Plan in order to accommodate the project.

Contribution of Alternative 1 (Prior to Mitigation)

Alternative 1 would be required to comply with all existing hazardous waste laws and regulations and would not conflict with RMP guidelines. In addition, code-required, fire-protection features and other firefighting design elements would be included and approved by the LAFD during the design process, as appropriate, to ensure compliance with the Los Angeles Municipal Fire Code. Dredging and disposal activities would be required to comply with all existing hazardous waste laws and regulations, including the federal RCRA, CERCLA, and CCR Title 22 and Title 26. Therefore, since Alternative 1 would be in compliance with all applicable regulations and policies, it would not combine with potential impacts of other past, present, and reasonably foreseeable projects to result in a cumulatively considerable impact.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 to cumulative impacts would be less than considerable.

Cumulative Impact HAZ-2: Increase the probable frequency and severity of consequences to people from exposure to health hazards

All present and reasonably foreseeable projects which would involve the handling of hazardous materials would be subject to the same BMPs as Alternative 1 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 construction/demolition 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.

Contribution of Alternative 1 (Prior to Mitigation)

As discussed in Section 3.7 of this SEIS/SEIR, construction of Alternative 1 would increase the potential to expose people to existing sources of contaminated materials and could increase the potential for hazardous materials shipped within the POLA to be involved in an accident with a dredge, dredging activities, and/or with the new fill locations, or otherwise be released, posing a threat to the public. However, compliance with hazardous materials transportation regulations and City of Los Angeles BMPs would limit the potential for exposure to a health hazard. Furthermore, the potential for accidents involving containers carrying hazardous materials is extremely low and the potential that members of the public would be injured is even lower. As such, Alternative 1 would not substantially increase the probable frequency or severity of consequences to people from exposure to health hazards. As described above, projects that involve the use or transport of hazardous materials are subject to numerous regulations, precautions and BMPs that not only decrease the likelihood of upset but also limit the potential of exposure to a release to a small area. Because the potential for Alternative 1 to cause an accident is low and the potential for such an accident to involve hazardous materials is even lower, and the potential for such an accident to expose members of the public to hazardous materials is even lower, this impact of Alternative 1 is extremely unlikely to combine with impacts of past, present and reasonably foreseeable future projects to result in a cumulative impact.. Therefore, the incremental effect of Alternative 1 on the probable frequency and severity of consequences to people from to spills of hazardous materials would be less than cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 to cumulative impacts would be less than considerable.

Cumulative Impact HAZ-3: Substantially increase the probable frequency and severity of consequences to people or property from

exposure to health hazards as a result of a potential accidental release or explosion of a hazardous material

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

Other present and reasonably foreseeable future terminal projects along the Main Channel, West Basin, and East Basin, such as Berths 136-147, Berths 97-109, Berths 121-131, would result in an increase in hazardous materials and petroleum products that could potentially spill during construction and operational activities. Such spills could result in soil contamination, groundwater contamination, marine water quality contamination, and health and safety impacts to on-site personnel and the public.

Alternative 1 and each related project in the Project area 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. Potential health and environmental impacts associated with container hazardous material spills are also very localized due to the relatively small sizes of individual storage containers, as compared to bulk facilities, and would not overlap.

Contribution of Alternative 1 (Prior to Mitigation)

As analyzed in Section 3.7, operation of the CDF at Berths 243-245, the new land area at the Northwest Slip, the CSWH Expansion Area, the Eelgrass Habitat Area, and LA-2 for Alternative 1 would result in no potential for accidental release or explosion of a hazardous material, as no vulnerable resources would be located near existing hazardous materials (i.e., liquid bulk terminals) and no transport of hazardous materials would be associated with operations. Therefore, incremental contribution of Alternative 1 to a cumulative impact would be less than considerable.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact HAZ-4: Substantially interfere with emergency response plans or emergency evacuation plans, and would increase the risk of injury or death

Virtually all of the proposed cumulative projects that would have any impact on emergency response or evacuation plans would be subject to approval by the Port of Los Angeles, Port of Long Beach, 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 was the potential to impact applicable emergency response or evacuation plans.

Contribution of Alternative 1 (Prior to Mitigation)

Alternative 1 would result in the placement of dredged material at various disposal sites. Those sites where no development beyond placement of dredge material would occur (CSWH Expansion Area, Eelgrass Habitat Area, and LA-2), minimal construction equipment would be required (dredge, barge, tug boat, slurry pipeline, and pump). As such, emergency access to these sites would not be adversely impacted during construction. For the CDF at Berths 243-245 and the new land area at the Northwest Slip, construction equipment would be located at designated staging areas adjacent to the construction areas, thereby minimizing impacts to emergency access. Therefore, Alternative 1 would not interfere with any existing emergency response or emergency evacuation plans or increase the risk of injury or death and would not contribute to cumulative impacts.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact HAZ-5: Increase the frequency or severity of an accidental release or explosion of hazardous materials, and would increase the risk of injury or death

As evaluated under HAZ-3 above, Alternative 1 and each related project in the Project area 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 accidental release or explosion of hazardous materials.

Contribution of Alternative 1 (Prior to Mitigation)

Operation of Alternative 1 would result in no potential for accidental release or explosion of a hazardous material, as no vulnerable resources would be located near existing hazardous materials (i.e., liquid bulk terminals) and no transport of hazardous materials would be associated with operations. Therefore, Alternative 1 would not have the potential to combine with impacts of other past, present, and reasonably foreseeable projects to result in a cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact HAZ-6: Tsunami-induced flooding would result in fuel releases from demolition/construction equipment, which in turn would result in risks to persons and/or the environment

As discussed in Section 3.7.6, there is the potential for a large tsunami to impact the Port, which would result in a potential for tsunami-induced flooding. Under the theoretical maximum worst-case scenario, tsunami-induced flooding would result in infrastructure damage and/or injury to personnel from complete site inundation at the aboveground disposal locations, namely the Northwest Slip and Berths 243-245. However, the likelihood of a large tsunami is very low during construction of Alternative 1 and the overall probability of this worst-case scenario is less than one in a 100,000 year period.

A large tsunami would likely lead to a fuel spill if a moored vessel were present. While in transit, the hazards posed are insignificant, and in most cases, imperceptible. However, while docked, a tsunami striking the Port could cause significant ship movement and even a hull breach if the ship is pushed against the wharf. Consequently, containers of hazardous substances on ships or on berths associated with current and past projects within the Port could be damaged as a result of a large tsunami. Such damage would result in releases of both hazardous and non-hazardous cargo to the environment, adversely impacting persons and/or the marine waters. However, containers carrying hazardous cargo would not necessarily release their contents in the event of a large tsunami. The DOT regulations (49 CFR Parts 172-180) covering hazardous material packaging and transportation would serve to minimize potential release volumes since 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 within the U.S. with full authority to implement removal actions in the event of an oil spill incident, and to contract with the spill response organizations

to carry out cleanup activities in case of a spill. The existing oil spill response capabilities in the POLA/POLB are sufficient to isolate spills with containment booms and recover the maximum possible spill from an oil tanker within the Port.

In light of such a low probability of a large tsunami, in combination with standard hazardous materials handling, storage, and transport procedures, the potential for tsunami-induced flooding to result in fuel releases from project demolition/construction equipment that would combine with releases from related projects, which in turn would result in risks to persons and/or the environment is less than significant.

Contribution of Alternative 1 (Prior to Mitigation)

If a tsunami and seiche were to occur during construction, an accidental spill of petroleum products and/or hazardous substances could occur. The volume of spilled fuel would be expected to be relatively low. While there would be fuel-containing equipment present during construction, most equipment is equipped with watertight tanks. The most likely scenario in such an event would be infiltration of water into the tank and fuel combustion chambers with very little fuel spilled. Thus, the volume spilled in the event of a tsunami would be less than 10,000 gallons, which is considered “slight.” In light of such a low probability and acceptable risk of a large tsunami, the project’s contribution to cumulative impacts would be less than cumulatively considerable as they pertain to hazardous materials spills.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact HAZ-7: Measurable increase in the probability of a terrorist attack, which would result in adverse consequences to the Proposed Action and nearby areas

Potential impacts due to terrorism are characteristic of the entire Los Angeles/Long Beach (LA/LB) 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 (USACE and LAHD, 2007). Overall, the results of the terrorism risk analysis characterized the LA/LB metropolitan area as one of the highest-risk regions in the country. Using population metrics, the LA/LB region was ranked either first or second in the country, while the event-based model dropped the LA/LB 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 LA/LB region represented between 4 and 11 percent of the United States terrorism risk.

Historical experience provides little guidance in estimating the probability of a terrorist attack on a container vessel or onshore terminal facility, much less dredging vessels and associated barges for transport of dredged materials. The perceived threat of a terrorist attack is a primary concern of the local population. Sinking a ship in order to block a strategic lane of commerce actually presents a relatively low risk, in large part because the targeting of such attacks is inconsistent with the primary motivation for most terrorist groups (i.e., achieving maximum public attention through inflicted loss of life). Sinking of a ship would likely cause greater environmental damage due to spilled fuel, but this is generally not a goal of terrorist groups.

However, at the national level, potential terrorist targets are plentiful, including those having national significance, those with a large concentration of the public (e.g., major sporting events, mass transit, skyscrapers, etc.), or critical infrastructure facilities. Currently, the United States has over 500 chemical facilities operating near large populations. U.S. waterways also transport over 100,000 annual shipments of hazardous marine cargo, including liquid petroleum gasoline (LPG), ammonia, and other volatile chemicals. All of these substances pose hazards that far exceed those associated with the various disposal sites that would be generated by Alternative 1.

Intermodal cargo containers could also be used to transport a harmful device into the San Pedro Bay Ports 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 San Pedro Bay Port infrastructure having no measurable effect on the probability of an attack. Additionally, the use of cargo containers to smuggle weapons of mass destruction (WMD) through the San Pedro Bay Ports 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 WMD would be substantial in terms of impacts to the environment and public health and safety. However, the consequences of a WMD attack would not be affected by cumulative growth at the San Pedro Bay Ports. Furthermore, the likelihood of such an event would not be impacted by cumulative infrastructure growth or throughput increases at the San Pedro Bay Ports, but would be based on the terrorist's desired outcome. Cargo containers represent only one of many potential methods to smuggle weapons of mass destruction, and with current security initiatives may be less desirable than other established smuggling routes (e.g., land-based ports of entry, cross border tunnels, illegal vessel transportation, etc.).

Unlike vessels carrying hazardous or highly flammable materials, such as bulk liquid carriers, an attack on a container ship would likely be economic in nature and designed to disrupt port operations. Container ships are not attractive targets in terms of loss of life or producing large fires and explosions. However, a catastrophic attack on a vessel within Port waters could block key channels and disrupt commerce, thus resulting in potential economic losses.

Currently, San Pedro Bay (POLA/POLB) handles approximately 37 percent of the national cargo container throughput. Nationally, cargo throughput is expected to double by 2020, while San Pedro Bay throughput is expected to more than triple during the same period (USACE and LAHD, 2007). As a result, under current growth projections, San Pedro Bay would be expected to handle 63 percent of the national cargo throughput volume by 2020 and then decline to 56 percent of the national total by 2030. While cumulative container throughput would continue to grow in importance on a national level, the San Pedro Bay Ports already represent a substantial fraction of national container terminal throughput, and by default, an attractive economic terrorist target. Given the relative importance of the San Pedro Bay Ports under baseline conditions, cumulative growth would not be expected to materially change the relative importance as a potential terrorist target.

Contribution of Alternative 1 (Prior to Mitigation)

Container ships represent a substantial segment of maritime commerce and are the focus of much of the attention regarding seaport security. Container ships carry stacks of marine containers loaded with a wide variety of goods. A large container ship can carry more than 3,000 containers, of which several hundred might be offloaded at a given port. The risk of a terrorist attack is considered part of the baseline for the project. Terrorism risk associated with container terminals currently exists, and is not influenced by changes in container traffic volume. Implementation of Alternative 1 would have no impact on regional and national growth projects for container terminals, as no new terminals would be developed as part of the Project. Therefore, Alternative 1 would not change the relative importance of the Port as a terrorist target. In addition, the measures outlined in Section 3.7.2.5 would serve to reduce the potential for a successful terrorist attack during Project construction as compared to the project baseline when many of these measures had not been implemented. Therefore, potential impacts associated with a potential terrorist attack on Alternative 1 are considered less than significant.

Terrorism risk is part of the regional baseline risk and would not change as a result of Alternative 1. Alternative 1 would result in no increase in the volume of container vessel traffic within the Port and as a result would not likely increase the potential of the Port to become a target of a terrorist attack. Therefore, impacts of Alternative 1 would not have the potential to combine with

impacts of other past, present, and reasonably foreseeable projects to result in a cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

6.2.8 Land Use

Scope of Analysis

As addressed in Section 3.8, Land Use, Alternative 1 would have the potential to affect other land uses within the Port; however, all potential effects have been found to be either less than significant or less than significant with mitigation incorporated. No direct or indirect land use-related impacts outside of the Port's boundaries would result from implementation of Alternative 1. To provide a consistent analysis with Alternative 1 and its alternatives, the same area of study as outlined in Section 3.8 has been applied to this cumulative analysis, including the Port itself, those portions of the communities of San Pedro and Wilmington that are adjacent to the Port, and those portions of the City of Long Beach and the Port of Long Beach which are also adjacent to the Port.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.8.5.

Cumulative Impact LU-1: The Proposed Action would not incrementally contribute to cumulative impacts related to existing and future adopted land use/density designations in the Community Plan, Redevelopment Plan, or Specific Plan

Past actions within the vicinity of Alternative 1 have been subject to consistency review with the land use and density designations specified, as applicable, in the Port's Port Master Plan, Port of Los Angeles Plan, Wilmington – Harbor City Community Plan, San Pedro Community Plan, City of Los Angeles zoning ordinances, Port of Long Beach's Port Master Plan, City of Long Beach General Plan, and City of Long Beach zoning ordinances. Existing projects within with the vicinity of Alternative 1 have been modified, as necessary, to ensure that their land use designations and densities are consistent these plans and ordinances. Within the Port, potential future projects directly related to land use primarily include: construction and operation of new marine container terminals and related facilities, such as operational buildings, cranes, wharves and backland areas; redevelopment and reconfiguration of wharves, backland container areas and other terminal and Berth-specific facilities; and, expansion of existing marine terminals and

backland areas. Additional land use-related projects include, but are not limited to, development and redevelopment of the west side of the Port's Main Channel, new public walkways and open space areas, a new Port of Los Angeles Police Headquarters and lease for operation of the Port of Los Angeles Charter School, and a new crude oil receiving facility.

Within the Port of Long Beach, potential land use-related future development projects are similar in nature to the Port, including (but not limited to): landfill development; new, expanded, reconfigured and replacement facilities such as marine container terminals and administration buildings; site-specific soil and groundwater remediation; a Liquid Nitrogen Gas import terminal; and, petroleum-related facilities.

Within the communities of San Pedro and Wilmington and the City of Long Beach, a variety of reasonably foreseeable future development projects have been identified, including new and expanded public schools and community facilities, new and redeveloped commercial, manufacturing and residential development, and new and expanded harbor facilities.

Within the Port itself, reasonably foreseeable future development and redevelopment projects are consistent with the Port's Master Plan and the City of Los Angeles General Plan and its related Community Plans, and would increase the Port's operational efficiencies. Terminal container facilities, intermodal container transport systems, and other industrial, commercial and intensive shipping operations will continue to be the primary land uses of the Port.

The rate of development and redevelopment of the Port and its surrounding areas has been, and will continue to be rapid. However, as addressed above, all of the currently proposed development and redevelopment projects would not be cumulatively considerable, as they would be consistent with designated land uses and related densities, and are intended to improve the overall quality of the Port and its surrounding communities.

Contribution of Alternative 1 (Prior to Mitigation)

As outlined in Section 3.8, Land Use, Alternative 1 sites are not located within the boundaries of a Redevelopment Plan or Specific Plan. In regards to land use designations, all of the proposed sites would be consistent the adopted land use designation of the Port Master Plan and POLA Plan, except the ARSSS alternative. However, redesignation of the site as a disposal and storage facility would be consistent with the Guidelines and Regulations of the Port Master Plan and would not be prohibited by the POLA Plan. Therefore, with a land use re-designation of the site prior to its use, use of the ARSSS would be consistent with the adopted land use designations and densities of applicable land use planning documents. Therefore, Alternative 1 would not incrementally contribute to a potentially significant cumulative impact related to existing and

future adopted land use/density designations in an applicable Community Plan, redevelopment plan, or specific plan. Therefore, since Alternative 1 would not contribute to the impacts related to existing and future land use/density designation, and Impact LU-1 would not combine with similar impacts from the projects identified in Table 6-1 to result in a significant cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact LU-2: The Proposed Action would not incrementally contribute to cumulative impacts related to inconsistencies with the General Plan or adopted environmental goals or policies contained in other applicable plans

As with Cumulative Impact LU-1, above, prior to their approval, past and reasonably foreseeable future projects in the vicinity of Alternative 1 are subject to consistency review with the General Plan applicable to their location, as well as the adopted environmental goals and policies contained in other applicable plans. As addressed in Section 3.8, Land Use, the Port of Los Angeles Plan is the governing General Plan document that regulates development, redevelopment and operation in the Port; this plan is consistent with the Port Master Plan. Historically, the Port has been developed in a manner that is consistent with the objectives of Port of Los Angeles Plan, which gives priority to water-dependent developments to ensure the Port is maintained as an important local, regional, and national resource. Past development of the Port has also been coordinated with adjacent communities, as stipulated by the Wilmington-Harbor City Community Plan and the San Pedro Community Plan. Similarly, past and current Port development and redevelopment projects have been coordinated with the City of Long Beach and Port of Long Beach to ensure that no conflicts with their respective land use plans and environmental goals and policies occur. As a result, the projects listed in Table 6-1 would not be cumulatively considerable.

Contribution of Alternative 1 (Prior to Mitigation)

As addressed in Section 3.8, Land Use, Alternative 1 would be consistent with, and support the Port of Los Angeles Plan and Port Master Plan. Additionally, Alternative 1 would include environmental enhancements (the CSWH Expansion Area and Eelgrass Habitat Area). Consequently, Alternative 1, both individually and in combination with the Artificial Reef Project at the San Pedro Breakwater (Cumulative Project Number 6), San Pedro Waterfront Enhancements Project (Cumulative Project Number 21), Inner Cabrillo Beach Water Quality

Improvement Program (Cumulative Project Number 32), and San Pedro Waterfront Project (Cumulative Project Number 3) would support, and contribute to the achievement of, the environmental goals and policies of adopted plans applicable to the Port and its surrounding areas. Consequently, Alternative 1 would not incrementally contribute to cumulative impacts associated with inconsistencies with the City of Los Angeles General Plan or the adopted environmental goals or policies contained in other applicable plans.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact LU-3: The Proposed Action would incrementally contribute to cumulative impacts related to the types and/or extent of existing land uses in the project area

Implementation of the Berths 136-147 Marine Terminal, West Basin Project (Cumulative Project Number 2), Berths 121-131 Yang Ming Container Terminal Project (Cumulative Project Number 29), and Berths 97-109 China Shipping Development Project (Cumulative Project Number 15) would be expected to result in the same types of impacts as described for Alternative 1. If Cumulative Project Numbers 2, 29 and 15 all implement measures similar to MM LU-1 and MM LU-2, impacts to surrounding land uses in the West Basin area would be reduced.

Contribution of Alternative 1 (Prior to Mitigation)

As addressed in Section 3.8, Land Use, Alternative 1 would not affect the types or extent of land uses outside of the boundaries of the Port. However, during construction of the Northwest Fill Slip, water-based activities and operations at Berths 134 and 135 would be discontinued and water-based activities and operations associated with Berths 129 through 130 would be substantially restricted. Vessel access to and within the West Basin would also be restricted due to construction-related vessels and equipment, which may affect activities and operations of Berths 126 through 128, 136 through 139, and 142 through 147. These preclusions and restrictions could result in significant conflicts with surrounding land uses. The timing and volume of berth-specific cargo imports and exports would also be expected to require modification, as would the onshore activities and operations that support them. Although, Alternative 1 would include implementation MM LU-1 and MM LU-2 to minimize potential impacts associated with restricting or precluding surrounding land uses to a level of less than significant, if peak construction of all four projects in the vicinity of the West Basin (Alternative 1 and Cumulative Project Numbers 2, 29 and 15) occurs simultaneously, impacts to surrounding land uses could still be exacerbated to cumulatively significant levels and the contribution of Alternative 1 to this significant cumulative impact would be considerable. To minimize this

potential impact, MM LU-3 is recommended to ensure that cumulative construction-related effects are minimized.

Mitigation Measures and Residual Cumulative Impacts

Implementation of MM LU-3 below, in conjunction with MM LU-1 and MM LU-2, would be expected to reduce potentially significant cumulative impacts associated with existing land uses within the West Basin area to a less than significant level. Following construction, Alternative 1 would not incrementally contribute to any cumulative impacts associated with the types and/or extent of existing land uses in the vicinity of the Port or its surrounding areas.

MM LU-3 The Port shall ensure that all construction-related projects in the vicinity of, and entering into, the West Basin are phased in a manner that ensures that no more than one project falls within its peak-construction period at any given time. The Port shall provide all affected leaseholders with construction schedules for all construction-related projects within the West Basin area 60 days prior to their initiation, and continue with bi-weekly updates to each project's respective construction schedule until its completion. The Port shall additionally provide all affected leaseholders with the name and contact information for a Port-employed representative for the purpose of reporting concerns related to the effects that multiple construction-related activities have on their respective operations. The Port shall respond to all concerns within a 72-hour period.

Cumulative Impact LU-4: The Proposed Action would incrementally contribute to cumulative impacts related to the disruption, division or isolation of existing neighborhoods, communities, or land uses

Past and present projects within the project vicinity have resulted in acquisition of new property by the Port that has been attributed to the encroachment of Port-related industrial uses into surrounding communities. Past Port projects have resulted in the use of container storage yards for storage of other equipment and materials (i.e., new and used truck chassis) and related maintenance, and the location of rail and highway infrastructure within surrounding communities. Over the years, the Port's growth in cargo throughput has increased truck volumes within surrounding communities.

Construction and operation associated with present and future container terminal projects, including the Pier 400 Container Terminal and Transportation Corridor Project (#1), the Evergreen Container Terminal Expansion (#7), and Berths 97-109, China Shipping Development (#15), would be subject to the recent controls and limitations implemented by the City of Los

Angeles on container storage in Wilmington. However, these projects would contribute to increased truck traffic in surrounding residential areas and indirectly contribute to the proliferation and use of off-site container storage facilities.

Contribution of Alternative 1 (Prior to Mitigation)

As addressed under Cumulative Impact LU-3, above, Alternative 1 would temporarily impact existing land uses in the area of the Port's West Basin. Alternative 1 includes implementation of MM LU-1 and MM LU-2 to reduce these impacts to less than significant. However, if peak construction activities associated with the Norwest Slip, Berths 136-147 Marine Terminal, West Basin Project (Cumulative Project Number 2), Berths 121-131 Yang Ming Container Terminal Project (Cumulative Project Number 29), and Berths 97-109 China Shipping Development Project (Cumulative Project Number 15) occur simultaneously, impacts to surrounding land uses could still be exacerbated to cumulatively significant levels and the contribution of Alternative 1 to this significant cumulative impact would be considerable. To minimize this potential impact, MM LU-3 is recommended to ensure that cumulative construction-related effects are less than cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

To reduce the significant cumulative impacts associated with the disruption of existing land uses within the West Basin area to less than significant, implementation of MM LU-3, as provided under Cumulative Impact LU-3, is recommended. Following construction, Alternative 1 would not incrementally contribute to any cumulative impacts associated with the disruption, division or isolation existing neighborhoods, communities, or land uses.

Cumulative Impact LU-5: The Proposed Action would not contribute to cumulative impacts associated with secondary impacts to surrounding land uses

Due to the proximity of past projects within the project vicinity to surrounding residential areas, these actions may have resulted in generally lower residential property values in adjacent communities. However, as the residential property values in communities adjacent to the Port have risen in recent years and do not exhibit depreciated values, the incremental development of past and present projects have not contributed to decreased property values.

Construction and operation associated with present and reasonably foreseeable future projects, including the Wilmington Waterfront Master Plan (Avalon Blvd. Corridor Project) (#25), the Pier 400 Container Terminal and Transportation Corridor Project (#1), the Evergreen Improvements (#7), Berths 97-109, China Shipping Development (#15), the Pier 400 Oil Marine Terminal (#11), and the Ultramar Lease Renewal Project (#12) would result in increased jobs.

However, this increase would not significantly contribute to increased property values within surrounding communities.

Contribution of Alternative 1 (Prior to Mitigation)

As addressed in Section 3.8, Land Use, Alternative 1 would not induce growth or create other effects that would change land use patterns or intensities, either within the Port itself or in the surrounding area. Consequently, Alternative 1 would not incrementally contribute to cumulative impacts associated secondary impacts. No cumulative impacts would occur.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

6.2.9 Marine Transportation

Scope of Analysis

The Channel Deepening Project would allow a greater number of larger container vessels to call at the Port. Like all commercial vessels, these ships would follow designated traffic channels (also used by other vessels) when approaching and leaving the Harbor. Similarly, dredging and in-water construction activities associated with Alternative 1 would occur within the Port's existing federal channel limits (i.e., channel and berthing areas). Since Alternative 1 has the capacity to affect vessel transportation only within these channels or the berths the vessels are accessing, the region of analysis for cumulative marine transportation impacts includes the vessel traffic channels that ships use to access berths within the Port Outer Harbor area and main navigation channels, and the berths themselves.

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

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.9.5.

Cumulative Impact VT-1: Interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, East Basin and West Basin areas, and Cerritos Channel

As discussed in Section 3.9.2, vessel traffic levels are highly regulated by the COTP and the Marine Exchange of Southern California via the VTS to ensure the total number of vessels

transiting the Port does not exceed the design capacity of the federal channel limits. Mariners are required to report their position to the COTP and the VTS prior to transiting through the Port; the VTS monitors the positions of all inbound/outbound vessels within the Precautionary Area and the approach corridor traffic lanes. In the event of scheduling conflicts and/or vessel occupancy when the Port is operating at capacity, vessels are required to anchor at the anchorages outside the breakwater until mariners receive COTP authorization to initiate transit into the Port.

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

Reasonably foreseeable Port projects could result in marine vessel safety impacts if they introduced construction equipment to the Main Channel, the West Basin, the East Basin, Cerritos Channel, Turning Basin, and/or interfered with USCG designated vessel traffic lanes. In-water construction activities associated with the Pier 400 Container Terminal and Transportation Corridor Project, Berths 97-109 China Shipping Development Project, Berths 136-147 TraPac Terminal Project, Pier 400 Pacific Energy Project, the Berth 212-224 YTI Wharf Upgrades Project, Evergreen Marine Terminal Expansion Project, SSA Outer Harbor Fruit Facility Relocation Project, the Ultramar Berths 163-164 Lease Renewal Project, and the Berths 171-181 Pasha Marine Terminal Improvements Project would introduce construction equipment into the Main Channel Turning Basin and East Basin. Potentially significant impacts would occur if fill, dredge, and wharf rehabilitation activities occurred simultaneously, as the construction equipment for these projects could block access to, and increase the risk of vessel conflicts within the Port's main navigation channels and turning basins. However, compliance with LAHD standards for construction and dredging safety, requiring navigation hazard markings and compliance with USCG Anchorage Waiver Permit regulations (i.e., notifying the COTP of expected activities, providing official and ongoing notice to mariners during construction, developing a mooring plan, and marking equipment and debris for visibility) would minimize potential impacts on marine vessel safety during proposed construction activities and other reasonably foreseeable projects within the Main Channel area. Therefore, Alternative 1

considered together with other reasonably foreseeable projects in the area, would result in less than significant cumulative impacts on vessel transportation safety.

Contribution of Alternative 1 (Prior to Mitigation)

The transport of dredged materials by barge could create in-water hazards to vessel traffic and increase the potential for accidents within the harbor. Although marine-based construction equipment would restrict vessel movement within the Port's existing federal channel limits (i.e., channel and berthing areas), derrick and supply barges would be highly visible and relatively stationary, and would only move during transport to another location. These activities are routinely conducted in the Port and contractors performing in-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts, including navigation hazard markings. Prior to activities that require anchoring vessels in the main navigation channels, the Port's standard vessel safety regulations require dredging contractors to acquire an Anchorage Waiver Permit from the USCG. An Anchorage Waiver Permit requires notifying the COTP of expected activities; providing official and ongoing notice to mariners during construction; developing a mooring plan; and marking equipment and debris for visibility. Compliance with Anchorage Waiver Permit requirements would ensure compliance with regulations governing the Port's Outer Harbor and main navigation channel areas.

Additionally, as the majority of proposed sediment disposal areas are located outside the Outer Harbor area and main navigation channels, sediment disposal activities would not bring construction barges in the proximity of vessels entering and exiting the Port's Outer Harbor. Barge trips required to transport rock material from Santa Catalina Island would increase traffic within the approach corridors to the Precautionary Area; however, the additional 1,189 barge trips that would occur over the 15-month (approximately 2.6 trips per day) construction period would not represent a substantial contribution to vessel congestion within the approach corridors. Two disposal locations, the CSWH Expansion Area and the Eelgrass Habitat Area, are located in the Outer Harbor area. However, since no piers/wharfs are located adjacent to these sites, cargo vessels would not access these areas.

Similar to the Federal Channel Deepening Project, compliance with COTP Public Notice No. 02-001 vessel traffic procedures would be required, ensuring adequate communication between dredging contractors, dredge and vessel operators, and shoreside vessel traffic managers. As standard safety precautions would be utilized by all contractors, the short-term presence of supply barges/support boats would not substantially impact marine vessel safety within the main channels and connected basin areas. Therefore, impacts of Alternative 1 would not have the potential to combine with impacts of other past, present and reasonably foreseeable projects to result in a cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

6.2.10 Noise

Scope of Analysis

The geographic scope for cumulative noise impacts includes fire stations that are occupied on a full-time basis and that have a residential occupancy associated with them (Fire Station Nos. 49, 110 and 111). Other sensitive receptors include live-aboard residents located primarily in marina areas such as the West Channel area near the City of San Pedro, near the East Basin and Cerritos Channel in the northern portion of the Port, and the Al Larson Marina northeast of the Berths 243-245 disposal site project site. Noise-sensitive areas located beyond the Harbor include the residential area in the City of Wilmington north of "C" Street, and residents of San Pedro located west of and adjacent to the Harbor.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.10.5.

Cumulative Impact NOI-1: Result In Construction Activities That Exceed Existing Ambient Exterior Noise Levels By 5 dBA Or More at a Noise-Sensitive Use.

The list of cumulative development projects provided on Table 6-1 was reviewed to determine if construction activities associated with any of the identified projects could, in combination with Alternative 1, cause a cumulative construction noise impact to a sensitive receptor. Projects that may have the potential to result in significant cumulative noise impacts were identified based on their proximity to the location of proposed disposal facility sites and the potential for Project-related construction or sediment disposal activities to occur concurrently with construction operations of a cumulative development project.

Berths 243-245. A cumulative development project that would have the potential to result in construction/demolition activities concurrently with sediment disposal operations at the Berths 243-245 disposal site project would be the Southwest Marine Building Demolition Project (No. 30 on Table 6-1), which is located north of and adjacent to Berths 243-245, and southwest of the Al Larson Marina.

Northwest Slip. A proposed development project located at Berths 136-147 (No. 2 on Table 6-1) would be located in the vicinity of the Northwest Slip project site. .

CSWH. There are no cumulative development projects located in the vicinity of the CSWH Expansion Area project site, or in the vicinity of Fire Station 110, which is the sensitive noise receptor located closest to the project site. Therefore, the proposed CSWH Expansion Area would not add a cumulatively considerable contribution to significant cumulative noise impacts.

Eelgrass Habitat Area. There are no cumulative development projects located in the vicinity of the Eelgrass Mitigation Area, or in the vicinity of Fire Station No. 40, which is the sensitive noise receptor located closest to the Project site. Therefore, the proposed Eelgrass Habitat Area would not add a cumulatively considerable contribution to significant cumulative noise impacts.

Contribution of Alternative 1 (Prior to Mitigation)

Berths 243-245. The noise impact analysis conducted for the Southwest Marine Building Demolition Project (LAHD, 2006) determined that demolition/construction noise resulting from that demolition project would range between 59-62 dBA Leq during the day at Fire Station 111, and between 63-69 dBA at the Al Larson Marina. All predicted noise levels resulting from the Southwest Marine Building Demolition Project would be below existing ambient noise conditions at the Fire Station (63 dBA CNEL) and marina (76 dBA CNEL). If peak noise levels at the Fire Station from the Southwest Marine Building Demolition project (62 dBA) were to occur concurrently with peak noise from the Berths 243-245 project (73 dBA), the additional noise from the Southwest Marine Building site would not cause peak noise levels at the Fire Station to be increased above 73 dBA. If peak noise levels at the Al Larson Marina resulting from the demolition project (69 dBA) were to occur concurrently with peak noise from the Berths 243-245 project (64 dBA), the additional noise from the Southwest Marine Building site would not cause construction-related peak noise levels at the marina to be increased above 70 dBA, which is lower than existing ambient conditions at the marina (76 dBA). Therefore, short-term cumulative noise impacts from construction/demolition-related activities that may occur simultaneously at the Berths 243-245 disposal site and at the Southwest Marine site would not result in significant cumulative noise impacts to Fire Station No. 111 or liveboards at the Al Larson Marina.

Northwest Slip. The Berth 136-147 Container Terminal Project EIR/EIS (USACE and LAHD, 2007) concluded that cumulative noise levels at residences located along C Street in Wilmington that may result from combined construction operations at the Northwest Slip and at Berth 147 would be in the range of 58-60 dBA CNEL, 5 to 11 dBA below existing ambient noise levels that result from street traffic and other contributing sources of community noise. As a result, the cumulative noise levels would not be significant.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the combined effects of Alternative 1 and adjacent projects that have the potential to occur in a similar timeframe would be less than cumulatively considerable.

Cumulative Impact NOI-2: Exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. on Saturday, or at any time on Sunday.

The only proposed 24-hour Project-related activities are trench excavations at the Berths 243-245, Northwest Slip and CSWH Expansion Area sites. No other construction or sediment disposal operations are planned to occur between the hours of 9:00 PM and 7:00 AM, Monday through Friday, before 8:00 AM or after 6:00 pm on Saturday, or at any time on Sunday. Construction-related activities that may occur at the Southwest Marine Building Demolition project site and at the Berths 136-147 project site are not expected to occur during nighttime hours or on weekends. Therefore, impacts of Alternative 1 would not have the potential to combine with impacts of other past, present, and reasonably foreseeable projects to result in a cumulative impact.

Cumulative Impact NOI-3: Cause ambient noise levels at an affected land use to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase.

This cumulative impact significance threshold is not applicable to short-term construction-related impacts that may result from the proposed disposal facilities. No long-term activities are proposed at the Berths 243-245 disposal site, therefore, that disposal facility would not contribute to or result in a cumulatively considerable increase in long-term noise levels in surrounding areas. Long-term improvements in truck movement at the Northwest Slip site would not result in increased ambient noise levels at the sensitive receptors located closest to the project site along C Street in the City of Wilmington. Therefore, impacts of Alternative 1 would not have the potential to combine with impacts of other past, present, and reasonably foreseeable projects to result in a cumulative impact.

6.2.11 Recreation

Scope of Analysis

The geographic scope for analysis of cumulative impacts includes local parks, land-based recreational facilities and water-related recreational facilities within a five-mile radius of the Proposed Action.

The recreational opportunities that would be altered by the Proposed Action would primarily be water-related activities as dredging and disposal activities would require closures and restrictions around work equipment and disposal sites. This would preclude water-based activities in the vicinity of the Proposed Action sites which would include recreational boating and sport fishing.

Past, present, planned, and foreseeable future development that could contribute to cumulative impacts on recreational resources are those that have involved, or would cause temporary closures and restrictions throughout open water areas of the Port.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.11.5.

Cumulative Impact REC-1: Create an increased demand for recreation and park services that exceeds the available resources.

Construction and operation of past projects has resulted in existing demands for recreational resources that are accommodated by the various services in the Port area. Related present and reasonably foreseeable future projects in the area of Alternative 1 are predominantly berth and terminal expansion or traffic circulation improvements undertaken by the Ports of Los Angeles and Long Beach. These projects are noted in Table 6-1, and include the following: Pier 400 Container Terminal and Transportation Corridor Project (#1); Evergreen Improvements Project (#7); Berths 121-131 Yang Ming Container Terminal (#29); Middle Harbor Terminal Redevelopment (POLB) (#69); Berths 97-109 China Shipping Development Project (#15); Berths 171-181 Pasha Marine Terminal Improvements (#16); and Berths 302-305 APL Container Terminal (#23). These actions represent expansion or intensification of existing uses and would not result in significant cumulative impacts on recreation. It should also be noted that the following projects would provide new open space and recreation resources for the public: San Pedro Waterfront Promenade (#3); Cabrillo Marine Aquarium Expansion (#45); and East Wilmington Greenbelt Community Center (#58). The expansion and intensification of existing land use would not significantly impact existing recreational resources and a number of cumulative projects would result in additional available recreational opportunities.

Contribution of Alternative 1 (Prior to Mitigation)

Alternative 1 would have no impact on the demand for recreation and park services because neither construction nor operation would result in local population increases. Consequently, the diminished quality of recreational opportunities or facilities would be less-than-cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

As Alternative 1 would have less than cumulatively considerable impacts on recreational resources, no mitigation measures would be required and no cumulative residual impacts would occur.

Cumulative Impact REC-2: Result in a substantial loss or diminished quality of recreational opportunities, facilities, or resources.

The past, present and reasonably foreseeable projects identified in Table 6-1 could result in cumulative impacts by causing boaters to use other recreational facilities (i.e. open water areas) and displacing recreational opportunities (i.e. boating, fishing). The projects that would contribute to these cumulative impacts are those that include dredging, landfilling, or use of heavy equipment within the ports' waterways that would either remove open water from use as an aquatic recreation area, or create obstacles and disincentives, such as the presence of barges, dredging equipment, or pipelines, the creation of turbidity, or the enactment of restrictions. However, these impacts would be less than significant because most of these construction areas are highly industrial with very little recreational activity, most closures and restrictions would be temporary, and there are other areas in the vicinity of the Port in which aquatic recreation could be conducted.

In addition, there are several projects in the vicinity of the Port, including the Pacific Corridors Redevelopment Project in San Pedro; and the Renaissance Hotel Project, D'Orsay Hotel Project, City Place Development, Pike at Rainbow Harbor, and Queensway Bay Master Plan in the City of Long Beach, which would increase the temporary or permanent residential units or hotels. The increase of either permanent or temporary population could increase the use of existing aquatic recreational facilities at the Port such that a substantial physical deterioration of the facility would occur or be accelerated. However, this impact would be less than significant because there is ample open water in the Port, and the vicinity to accommodate all recreationists without causing degradation.

Contribution of Alternative 1 (Prior to Mitigation)

Dredging and disposal activities of Proposed Action would cause temporary closures and restrictions throughout open water areas of the Port, which could result in the loss or diminished quality of recreational opportunities, facilities, or resources. All dredging sites and all water-based disposal sites under Alternative 1 are accessible to boaters; however, most sites are not used for recreational activities. Therefore, Alternative 1's contribution to potential cumulative impacts would be negligible and therefore would not be cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

As Alternative 1 would have less than cumulatively considerable impacts on recreational resources, no mitigation measures would be required and no cumulative residual impacts would occur.

6.2.12 Utilities

Scope of Analysis

Cumulative impacts on utilities can result from the combined demand of Alternative 1 along with past, present, and future related projects on any of the utilities on which Alternative 1 may have impacts (i.e., storm drains, water supply, landfill and wastewater treatment capacities, and energy infrastructure). The geographic scope depends on the service area of the individual utility provider and the jurisdiction over which increased demand for services from Alternative 1 could reduce the availability of such services. Direct impacts of Alternative 1 would be localized to the Port area, and indirect impacts could extend further within the City. For stormwater, the geographic scope is Alternative 1 disposal sites, namely the Berths 243-245 and the Northwest Slip, and immediately adjacent lands within the Harbor's subwatershed because this represents the drainage area that would be influenced by Alternative 1. The service area of the Bureau of Sanitation (wastewater and solid waste), and Los Angeles Department of Water and Power (LADWP) (water and electricity) encompasses the City of Los Angeles. The Southern California Gas Company (SCG) (natural gas) serves most of central and Southern California. However, the analysis region for cumulative utilities impacts focuses on the Port and Harbor District because the infrastructure immediately serving the Project is located within this service area, and service subareas of utility providers are sufficiently separated such that increased service demands from Alternative 1 would not threaten such provisions in other areas.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.12.5.

Cumulative Impact PS-1: Require or result in the construction or expansion of water, wastewater, or storm drain lines

Construction and operation of past projects has created a demand for storm drain, water, and wastewater line infrastructure that is currently accommodated by existing utility lines. Storm drains within the Port area are maintained by the LAHD and have sufficient capacity to accommodate current demands (USACE and LAHD, 2007). The LADWP has a built capacity to ensure adequate accommodation of increased future growth and demand through at least 2015; therefore, existing water infrastructure demands can be accommodated (USACE and LAHD, 2007). Lastly, the Terminal Island Treatment Plant (TITP) has a capacity of 30 million gallons per day and is projected to not have any capacity gaps through the year 2020 (City of Los Angeles, 2003); therefore, it is able to adequately accommodate current wastewater generations that are a result of past projects.

Many of the projects identified in Table 6-1 involve relocation of existing facilities within the Port and vicinity, and generally do not require any expansion of facilities. Therefore, it is expected that storm water runoff, water consumption, and wastewater generation would remain similar to current levels. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional demand on utilities. These projects include the Pier 400 Container Terminal and Transportation Corridor Project (#1), Berth 226-236 (Evergreen) Container Terminal Improvements Project and Cannery Steam Demolition (#7), Berths 121-131 Yang Ming Container Terminal (#29), Middle Harbor Terminal Redevelopment (POLB) (#69), Berths 97-109 China Shipping Development Project (#15), Berths 171-181 Pasha Marine Terminal Improvements (#16), Berths 302-305 (APL) Container Terminal Improvements Project (#23), Ponte Vista (#66) and Dana Strand Public Housing Redevelopment Project (#60). Cumulative projects would place an additional demand on utilities, and reasonably foreseeable future development would require the construction and/or expansion of utility lines and infrastructure.

Contribution of Alternative 1 (Prior to Mitigation)

Construction activities associated with Alternative 1 would impact water and storm drain lines; however, no wastewater lines have been identified in the area of the disposal sites. The final project design would incorporate the relocation, abandonment, or redesign of any water distribution lines and storm drainage systems that would be impacted by the placement of dredge materials and containment dikes. To avoid disruption in service, existing utility lines would not be taken out of service until the new lines are available. Coordination between the Port and the responsible agencies (LADWP for water; LAHD, City of Los Angeles, or Los Angeles County

for storm drains) would reduce potential Project impacts. Therefore, Alternative 1 would not result in disruptions of service and impacts would be less than cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

As Alternative 1 would have less than cumulatively considerable impacts, no mitigation measures would be required and no cumulative residual impacts would occur.

Cumulative Impact PS-2: Exceed existing water supply, wastewater, or landfill capacities

Construction and operation of past projects has resulted in existing demands for water and generations of wastewater and solid waste. These demands and generations are currently accommodated by existing facilities. In order to properly plan for water supply, the LADWP determines water demands using factors such as demographics, weather, economy, and trends in development. The LADWP determined an existing water demand of 680,000 acre-feet per year within the DWP service area which can be accommodated by the planned water supply of the same amount (USACE and LAHD, 2007). The LADWP Urban Water Management Plan (UWMP) projects overall water supply reliability within the DWP service area through 2030. LADWP expects it will be able meet the demand through 2030 with a combination of existing supplies, planned supplies and MWD purchases (existing and planned). The TITP wastewater treatment plant is currently operating at 54 percent of its daily capacity of 30 million gallons per day, resulting in an available capacity of 13.8 million gallons of additional wastewater flow per day (USACE and LAHD, 2007). The two landfills that serve the Port area are the Bradley Landfill and the Sunshine Canyon Landfill. Bradley Landfill has an allotted daily throughput capacity of 10,000 tons and is currently operating at 12 percent capacity. The Sunshine Canyon Landfill has a daily throughput capacity of 5,500 tons allotted for City use and is expected to accommodate demands until 2011 (USACE and LAHD, 2007).

Many of the projects identified in Table 6-1 are Port redevelopment projects within Alternative 1 vicinity, and generally do not require any expansion of facilities. Therefore, it is expected that water consumption, and wastewater and solid waste generation would remain similar to current levels. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional utility demands and generations. These projects include the Pier 400 Container Terminal and Transportation Corridor Project (#1), Berth 226-236 (Evergreen) Container Terminal Improvements Project and Cannery Steam Demolition (#7), Berths 121-131 Yang Ming Container Terminal (#29), Middle Harbor Terminal Redevelopment (POLB) (#69), Berths 97-109 China Shipping Development Project (#15), Berths 171-181 Pasha Marine Terminal Improvements (#16), Berths 302-305 (APL) Container Terminal Improvements Project (#23), Ponte Vista (#66) and Dana Strand Public Housing Redevelopment Project (#60).

Cumulative projects would increase the demands for water as well as generation of wastewater and solid waste. Further, because of the finite capacities and supplies of applicable facilities, reasonably foreseeable development may result in increased demands and generations that would contribute to the depletion of the remaining facility capacities.

Contribution of Alternative 1 (Prior to Mitigation)

For Alternative 1, use of water during construction activities at disposal locations would not exceed existing water supplies and would therefore not result in significant impacts to water suppliers. Furthermore, the amount of wastewater generated by construction personnel would be minimal and short-term. No impacts to landfill capacities would occur as dredge materials would not be sent to off-site landfills. Therefore, impacts of Alternative 1 would be less than cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

None are required, as the contribution of Alternative 1 of the Proposed Action to cumulative impacts would not be considerable.

Cumulative Impact PS-3: Require new, offsite energy supply and distribution infrastructure, or capacity-enhancing alterations to existing facilities that are not anticipated by adopted plans or programs

Construction and operation of past and present projects has resulted in existing demands for water and generations of wastewater and solid waste. These demands and generations are currently accommodated by existing facilities as provided by the LADWP and SCG. Many of the projects identified in Table 6-1 involve relocation of existing facilities within the Port and vicinity, and generally do not require any expansion of facilities. Therefore, it is expected that electricity and natural gas consumption would remain similar to current levels. However, several of the projects involve new or expanded land uses or throughput operations that may result in additional demand on electricity and natural gas. These projects include the Pier 400 Container Terminal and Transportation Corridor Project (#1), Berth 226-236 (Evergreen) Container Terminal Improvements Project and Cannery Steam Demolition (#7), Berths 121-131 Yang Ming Container Terminal (#29), Middle Harbor Terminal Redevelopment (POLB) (#69), Berths 97-109 China Shipping Development Project (#15), Berths 171-181 Pasha Marine Terminal Improvements (#16), and Berths 302-305 (APL) Container Terminal Improvements Project (#23). These cumulative projects would place an additional demand on electricity and natural gas. As there is only a finite supply of these resources, reasonably foreseeable development may require the construction and/or expansion of utility infrastructure.

Contribution of Alternative 1 (Prior to Mitigation)

Construction activities associated with Alternative 1 would impact electrical, gas, and oil lines in the area of some of the disposal sites, namely Berths 243-245 and the Northwest Slip. The final project design would incorporate the relocation, abandonment, or redesign of any electrical, natural gas, or oil lines that would be impacted by the placement of dredge materials and containment dikes. To avoid disruption in service, existing utility lines would not be taken out of service until the new lines are available. Coordination between the Port and the responsible agencies (GATX) would reduce potential Project impacts. Since Therefore, Alternative 1 would not result in disruptions of service and impacts would be less than cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

As Alternative 1 would have less than cumulatively considerable impacts, no mitigation measures would be required and no cumulative residual impacts would occur.

6.2.13 Water Quality, Sediments, and Oceanography

Scope of Analysis

The geographic scope for the evaluation of potential cumulative water and sediment quality impacts is the inner and outer harbor areas of the POLA and POLB. This evaluation area receives surface water flows from the cumulative development project areas described on Table 6-1, and is the area that could potentially be affected by the Proposed Action. The project-specific analysis of Project-related impacts determined that all potential water quality impacts of the Proposed Action would be confined to areas in the vicinity of the proposed sediment disposal sites. The geographic scope for the evaluation of potential cumulative oceanographic impacts consists of the areas adjacent to the proposed in-water sediment disposal facilities. The geographic scope for potential water circulation impacts is limited to the immediate project areas because the project-specific impact analysis (USACE, 2007) determined that potential project-related water circulation impacts would be small and limited to localized areas adjacent to the proposed disposal sites.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 3.13.5.

Cumulative Impact WQ-1: Result in discharges that create pollution, contamination, or a nuisance as defined in Section 13050 of the California Water Code

Water and sediment quality within the POLA and POLB are affected by activities within the harbors, (e.g. shipping activities and waste water discharges from the Terminal Island Treatment

Plant), and the discharge of runoff water from the watersheds upstream of the harbors. Portions of the POLA and POLB are identified on the current 303(d) list as having impaired water quality due to elevated concentrations of metals, pesticides, PCB's, polynuclear aromatic hydrocarbons and fecal coliform. Management strategies (i.e., TMDLs) to address the sources of these contaminants are to be developed and adopted, but until those strategies are implemented, it is expected that the existing impaired water quality conditions within the harbors will continue to exist.

Present and reasonably foreseeable projects with in-water construction components, such as dredging and pier upgrades, would generally result in temporary and localized effects to water quality, similar to the short-term construction-related effects of Alternative 1. Cumulative water quality impacts would occur only if the spatial influences of concurrent projects overlapped. Of the cumulative development projects listed on Table 6-1, only the Berths 136-147 project (No. 2 on Table 6-1) involves in-water construction activities and is located in the vicinity of a proposed sediment disposal site (the Northwest Slip). Although the Berths 136-147 and Northwest Slip project sites are adjacent to each other, the dredging and sediment disposal activities that would occur at the Northwest Slip would occur over a relatively short period of time (approximately 25 days), which would minimize the potential for construction-related impacts to overlap with construction activities required to implement the Berths 136-147 project.

The subsequent use of upland areas created by the proposed sediment disposal sites would also have the potential to contribute to cumulative water quality impacts. The upland area to be developed by the Northwest Slip project would be used to improve existing truck maneuvering operations and as such, would not result in an increase in existing pollutant loading in runoff from upland areas. No subsequent land use has been identified for the Berths 243-245 project site, and no subsequent land uses could be established at the other proposed and alternative sediment disposal sites. All uses developed on upland areas located in the POLA and POLB would be required to implement best management practices consistent with NPDES regulations and port policies. Compliance with these programs would minimize the potential for adverse cumulative effects to water quality and the beneficial use of receiving waters.

Contribution of Alternative 1 (Prior to Mitigation)

Dredging and sediment disposal operations that would occur at the Berths 243-245, Northwest Slip, CSWH Expansion, Eelgrass Habitat area and LA-2 would result in suspended bottom sediments with resulting effects on some water quality parameters such as dissolved oxygen, nutrients and turbidity. These changes, however, are generally of short duration and affect only a localized area adjacent to the project site. Dredging and sediment disposal operations at the Berths 243-245, CSWH Expansion, Eelgrass Habitat area and LA-2 would not occur in

proximity to other cumulative development projects. Therefore, the water quality effects of those sediment disposal projects would not be cumulatively considerable. Dredging and sediment disposal activities at the Northwest Slip and Berths 243-245 disposal sites would occur concurrently for approximately four days. Due to this relatively short period of time, potential cumulative water quality and sediment impacts would not be considerable.

Mitigation Measures and Residual Cumulative Impacts

None are required Alternative 1 would not substantially contribute to potential impacts to the quality of water and sediments in the POLA and POLB.

Cumulative Impact WQ-2: Result in discharges that violate standards defined in the applicable NPDES permit or Water Quality Control Plan for the receiving water body

Cumulative development projects that may occur in the POLA and POLB could have the potential to contribute to receiving water quality impacts. However, it is expected that all projects planned to take place within the Project area will comply with applicable state and federal regulations, including: NPDES requirements (General Construction Activities Storm Water Permit, Storm Water Pollution Prevention Plan, and Best Management Practices) and County of Los Angeles SUSMP requirements. The implementation of appropriate regulatory standards, practices and if necessary mitigation measures to reduce impacts to water quality would minimize the potential for cumulative water quality impacts and protect the beneficial uses of receiving waters.

Contribution of Alternative 1 (Prior to Mitigation)

The construction and operation of proposed and alternative sediment disposal sites would not result in significant project-specific impacts to water quality, and reasonably foreseeable land uses on the upland areas that would be created by Alternative 1 (realigned roadway at the Northwest Slip and an unspecified industrial use at Berths 243-245) would be required to comply with applicable regulatory program requirements. Therefore, Alternative 1 would not contribute to significant cumulative water quality impacts related to compliance with applicable water quality regulations.

Mitigation Measures and Residual Cumulative Impacts

None are required as Alternative 1 would not substantially contribute to potential impacts related to water quality protection regulation compliance.

Cumulative Impact WQ-3: Result in the creation of site conditions that may result in soil erosion and sediment runoff during construction or following Project completion

Past development projects located in the watersheds that drain to the POLA and POLB harbors have resulted in the disturbance of soils, however, the potential for substantial erosion and sedimentation impacts from those development sites has been minimized by the structures, vegetation and urban development that was subsequently provided. Cumulative development projects in the in the POLA and POLB will also disturb soils and make them subject to erosion by wind or water, with a resulting potential for the transport of sediment to the harbor waters. However, projects that disturb soils within the ports are required to implement best management practices to minimize the potential for erosion and associated water quality impacts.

Contribution of Alternative 1 (Prior to Mitigation)

The CSWH Expansion Area and LA-2 disposal sites would not achieve an elevation above water level and would not become a source of erosion. The rock dike that would be developed as part of the proposed Eelgrass Habitat Area would extend above the water surface but would not be a potential source of future erosion-related impacts. After the CDF at the Berths 243-245 disposal site and the new land area at the Northwest Slip achieve elevations above water level, the exposed sediments could be affected by erosion and sedimentation processes, however, potential impacts would be minimized by implementing existing regulatory requirements, including preparation and implementation of a SWPPP and implementation of applicable erosion/sedimentation control BMPs. With implementation of these regulatory requirements, impacts of Alternative 1 related to erosion and sedimentation would not be cumulatively considerable.

Mitigation Measures and Residual Cumulative Impacts

None are required as Alternative 1 would not substantially contribute to erosion-related impacts that have the potential to adversely affect the quality of water in the POLA and POLB harbors.

Cumulative Impact WQ-4: Result in permanent adverse impacts to water circulation – Less than Cumulatively Considerable

Past dredging filling and shoreline development projects in the POLA harbor have substantially altered water circulation patterns throughout the harbor area. Changes to water circulation patterns could affect water quality by inhibiting the exchange of water between different portions of the harbor, which could result in limited mixing and dilution of runoff. However, previous studies and ongoing water quality monitoring have indicated that dissolved oxygen levels in the harbor have improved since the late 1960's, and that low oxygen concentrations or other conditions that could reflect stagnation or limited water exchange between areas within the harbor do not persist. This is to be expected because channels and waterways are constructed

and maintained to accommodate vessel navigation, which also maintains conditions that allow adequate water circulation throughout the harbor.

Contribution of Alternative 1 (Prior to Mitigation)

The evaluation of Project-related water circulation impacts prepared by the USACE (2007) determined that the Berths 243-245 and Northwest Slips would have effects that are minimal and localized. Therefore, these project components would not result in a cumulatively considerable contribution to water circulation impacts. The water circulation evaluation the proposed CSWH Expansion Area and Eelgrass Habitat Area concluded that water velocities would be lowered inside the Eelgrass Habitat Area, and increased velocities and the formation of an eddy would occur immediately to the west of the Eelgrass Habitat Area. Increases in bottom residual velocity to the west of the Eelgrass Habitat Area could have the potential to result in increased erosion depending on the character of the bottom material, however, none of the predicted changes in water movement were considered to be significant. No other cumulative development projects have been proposed in the vicinity of the Eelgrass Habitat Area. As a result, no other reasonably foreseeable development projects would contribute to the localized and less than significant water circulation impacts that could be caused by the Eelgrass Habitat Area project. Therefore, Alternative 1 would not result in a cumulatively considerable contribution to potential water circulation impacts.

Mitigation Measures and Residual Cumulative Impacts

None are required as Alternative 1 would not substantially contribute to water circulation impacts in the harbor.

Cumulative Impact WQ-5: Result in a substantial reduction or increase in the amount of surface water in the Los Angeles Harbor

The entire POLA harbor area has been extensively modified by past dredging, filing and shoreline development, which has resulted in the current configuration of the harbor. Reasonably foreseeable future development projects in the POLA would add over 700 acres of fill to the harbor (including Alternative 1), and approximately 600 of these acres are completed or are under construction. Therefore, the construction of fill areas has and will continue to reduce the amount of surface water within the harbor.

Contribution of Alternative 1 (Prior to Mitigation)

Implementation of Alternative 1 would result in removal of approximately 8 acres of water area at Berths 243-245 and 5-acres of water area at the Northwest Slip. The Port currently consists of approximately 3,300 acres of water area. The 13 acres of water area that would be displaced by

Alternative 1 would represent an approximately 0.4 percent reduction in surface water area in the Port. As described in the analysis of Impacts WQ-1 and WQ-4, the proposed reductions in water area would not result in significant changes to the water quality or water circulation that presently exists within the harbor. Therefore, Alternative 1 would not result in a cumulatively considerable loss of water surface area in the harbor. Therefore impacts of Alternative 1 would not have the potential to combine with impacts of past, present, and reasonably foreseeable projects to result in a cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

None are required as Alternative 1 would not substantially contribute to the loss of water surface area in the harbor.

6.2.14 Socioeconomics

Scope of Analysis

As addressed in Section 4, Socioeconomics, no direct or indirect socioeconomic impacts outside of the Port's boundaries would result from implementation of Alternative 1; all socioeconomic impacts associated with Alternative 1 are either beneficial, mitigable to a level of less than significant, or none. To provide a consistent analysis with Alternative 1 and its alternatives, the same study area outlined in Section 4 has been applied to this cumulative impact analysis, including the four U.S. Postal Service zip code areas surrounding the Port, (please refer to Figure 4-1 of Section 4). Similarly the same thresholds of significance applied to Alternative 1 and its alternatives have been used for this cumulative impact analysis. Because these thresholds of significance are addressed collectively in Section 4, the same approach has been taken for this cumulative impacts discussion. In sum, Alternative 1 would not incrementally contribute to cumulative impacts related to: substantial changes in local employment (SOCIO-1); the displacement of substantial numbers of existing housing or persons, thereby necessitating the construction of replacement housing elsewhere (SOCIO-2); or, substantial changes in public agency revenues (SOCIO-4). Alternative 1's impacts related to substantial changes in the revenue of local businesses (SOCIO-3) would be anticipated to be less than significant with implementation of MM LU-1 and MM LU-2 (please refer to Section 3.8, Land Use); these impacts are specific to leaseholders within the Port and involve the disruption or preclusion of their operations during construction of the Northwest Slip. Alternative 1's incremental contribution to this cumulative impact is discussed below.

The significance criteria used for the cumulative analysis are the same as those used for the Proposed Action in Section 4.4.1.

Cumulative Impact Analysis

Table 6-1 summarizes the cumulative projects associated with Alternative 1. Although the rate of development associated with the study area is relatively high, it is not appreciably different than the rate of development and redevelopment occurring within either the City or County of Los Angeles as whole. At a regional scale, development and redevelopment has been rapid and is anticipated to continue at this rate in response to the area's growing population (City of Los Angeles, 2006; County of Los Angeles, 2006). Within the boundaries of the Port itself, reasonably foreseeable future projects vary considerably and include the improvement, development, redevelopment or expansion of shipping related facilities such as container terminals and backland areas, wharves, marinas, and industrial and commercial facilities. Projects related to recreational facilities and environmental enhancements are also proposed within the Port. Outside of the Port's boundaries numerous types of reasonably foreseeable projects have also been identified, including projects related to community infrastructure improvements (such as roads, parks and schools), new residential and commercial developments and redevelopments, and business and industrial developments.

Contribution of Alternative 1 (Prior to Mitigation)

The cumulative effects of Alternative 1 would be anticipated to include increased local and regional employment opportunities (SOCIO-1), increased local and regional business revenues (SOCIO-3), and increased Port and local public agency tax revenues (SOCIO-4). Therefore, Alternative 1's incremental contribution to cumulative impacts associated with these socioeconomic attributes would be beneficial. Housing would not be anticipated to be affected due to the availability of existing local and regional housing (please refer to Table 4-8 of Section 4), in conjunction with proposed new housing development in the study area (please refer to Table 6-1). Therefore, Alternative 1 would not incrementally contribute to any potentially adverse housing attributes, either locally or regionally (SOCIO-2).

Mitigation Measures and Residual Cumulative Impacts

During construction of Alternative 1, activities at the Northwest Slip would temporarily disrupt or prohibit existing operations. These temporary disruptions and preclusions would be expected to affect short-term, leaseholder-specific revenues (SOCIO-3). To reduce these potential impacts to a level of less than significant, mitigation measures MM LU-1 and MM LU-2, as outlined in Section 3.8 (Land Use), are recommended. However, as addressed in Section 6.2.8, above, construction of the Berths 136-147 Marine Terminal, West Basin Project (Cumulative Project Number 2), Berths 121-131 Yang Ming Container Terminal Project (Cumulative Project Number 29), Berths 97-109 China Shipping Development Project (Cumulative Project Number 15) would

be expected to result in the same types of impacts as construction of the Northwest Slip. If Cumulative Project Numbers 2, 29 and 15 all implement measures similar to MM LU-1 and MM LU-2, impacts to the operations and revenues of the leaseholders in the West Basin area would be reduced. However, if peak construction of all four projects in the vicinity of the West Basin (Alternative 1, and Cumulative Project Numbers 2, 29 and 15) occurs simultaneously, these impacts could still be exacerbated to cumulatively significant levels. To minimize the contribution of Alternative 1 to these potential impacts, MM LU-3 is recommended. With implementation of MM LU-3, it is expected that the incremental contribution of Alternative 1 to adverse cumulative impacts related to local and regional business revenues (SOCIO-3) would be less than considerable.

6.2.15 Summary of Alternative 1 Cumulative Analysis

As shown below in Table 6-4, implementation of Alternative 1 of the Proposed Action would result in significant and unavoidable cumulative impacts to Air Quality. No mitigation measures are available to reduce these impacts to a less than significant level.

Table 6-4 Summary of Cumulative Analysis

Impact Statement	Summary of Cumulative Analysis
Aesthetics and Visual Resources	
Cumulative Impact AES-1: Have a significant demonstrable negative aesthetic effect	Impacts would not be cumulatively considerable.
Cumulative Impact AES-2: Significantly affect recognized or valued views, scenic vistas, or scenic highways	Impacts would not be cumulatively considerable.
Cumulative Impact AES-3: Create substantial negative shadow effects on nearby shadow-sensitive uses	Impacts would not be cumulatively considerable.
Cumulative Impact AES-4: Create significant light or glare	Cumulative impacts would not be significant.
Air Quality	
Cumulative Impact AQ-1: Potential conflict with or obstruction of implementation of an applicable air quality management plan (the 2007 AQMP)	Impacts would not be cumulatively considerable.
Cumulative Impact AQ-2: Potential to 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	Cumulative impacts would be significant and unavoidable.
Cumulative Impact AQ-3: Potential to Produce Emissions that Exceed an Ambient Air Quality Standard or Substantially Contribute to an Existing or Projected Air Quality Standard Violation	Cumulative impacts would be significant and unavoidable.
Cumulative Impact AQ-4: Potential to Create Objectionable Odors at the Nearest Sensitive Receptor	Cumulative impacts would be significant and unavoidable.
Cumulative Impact AQ-5: Potential to Expose Receptors to Significant Levels of Toxic Air Contaminants (TACs)	Cumulative impacts would be significant and unavoidable.
Cumulative Impact AQ-6: Potential to contribute to Global Climate Change	Cumulative impacts would be significant and unavoidable.
Biological Resources	
Cumulative Impact BIO-1: Cumulative impacts to special status species	Impacts would not be cumulatively considerable.
Cumulative Impact BIO-2: Cumulative alteration or reduction of natural habitats, special aquatic sites, or plant communities	Impacts would not be cumulatively considerable.

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Impact Statement	Summary of Cumulative Analysis
Cumulative Impact BIO-3: Cumulative interference with migration/movement corridors	Impacts would not be cumulatively considerable.
Cumulative Impact BIO-4: Cumulative disruption of local biological communities	Impacts would not be cumulatively considerable.
Cumulative Impact BIO-5: Cumulative loss of marine habitat	Impacts would not be cumulatively considerable.
Cultural Resources	
Cumulative Impact CR-1: Result in disturbance, damage, or degradation to paleontological resources	Impacts would not be cumulatively considerable.
Cumulative Impact CR-2: Cumulative Impacts on Archaeological or Ethnographic Resources	Impacts would not be cumulatively considerable.
Cumulative Impact CR-3: Cumulative Impacts on Historic Architectural Resources	Impacts would not be cumulatively considerable.
Geology	
Cumulative Impact GEO-1: Accelerate geologic hazards that could result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury	Impacts would not be cumulatively considerable.
Cumulative Impact GEO-2: Cumulative Acceleration of Rates of Erosion and Sedimentation	Impacts would not be cumulatively considerable.
Ground Transportation	
Cumulative Impact Trans-1: Short term impacts to streets would not occur during construction.	Impacts would not be cumulatively considerable.
Cumulative Impact Trans-2: An intersection's V/C ratio would not be increased, in accordance with LADOT guidelines.	Impacts would not be cumulatively considerable.
Cumulative Impact Trans-3: Project operations would not result in a significant increase in related public transit use.	Impacts would not be cumulatively considerable.
Cumulative Impact Trans-4: Project operation operations would not result in a significant increase in freeway congestion.	Impacts would not be cumulatively considerable.
Cumulative Impact Trans-5: Delays in regional traffic would not be caused by increased rail activity.	Impacts would not be cumulatively considerable.
Hazards and Hazardous Material	
Cumulative Impact HAZ-1: Failure to comply with applicable regulations and policies guiding development within the Port	Impacts would not be cumulatively considerable.
Cumulative Impact HAZ-2: Increase the probable frequency and severity of consequences to people from exposure to health hazards	Impacts would not be cumulatively considerable.
Cumulative Impact HAZ-3: Substantially increase the probable frequency and severity of consequences to people or property from exposure to health hazards as a result of a potential accidental release or explosion of a hazardous material	Impacts would not be cumulatively considerable.
Cumulative Impact HAZ-4: Substantially interfere with emergency response plans or emergency evacuation plans, and would increase the risk of injury or death	Impacts would not be cumulatively considerable.
Cumulative Impact HAZ-5: Increase the frequency or severity of an accidental release or explosion of hazardous materials, and would increase the risk of injury or death	Impacts would not be cumulatively considerable.
Cumulative Impact HAZ-6: Tsunami-induced flooding would result in fuel releases from demolition/construction equipment, which in turn would result in risks to persons and/or the environment	Impacts would not be cumulatively considerable.
Cumulative Impact HAZ-7: Measurable increase in the probability of a terrorist attack, which would result in adverse consequences to the Proposed Action and nearby areas	Impacts would not be cumulatively considerable.
Land Use	
Cumulative Impact LU-1: The Proposed Action would not incrementally contribute to cumulative impacts related to existing and future adopted land use/density designations in the Community Plan, Redevelopment	Impacts would not be cumulatively considerable.

Impact Statement	Summary of Cumulative Analysis
Plan, or Specific Plan	
Cumulative Impact LU-2: The Proposed Action would not incrementally contribute to cumulative impacts related to inconsistencies with the General Plan or adopted environmental goals or policies contained in other applicable plans	Impacts would not be cumulatively considerable.
Cumulative Impact LU-3: The Proposed Action would incrementally contribute to cumulative impacts related to the types and/or extent of existing land uses in the project area	Impacts would not be cumulatively considerable.
Cumulative Impact LU-4: The Proposed Action would incrementally contribute to cumulative impacts related to the disruption, division or isolation of existing neighborhoods, communities, or land uses	Impacts would not be cumulatively considerable.
Cumulative Impact LU-5: The Proposed Action would not contribute to cumulative impacts associated with secondary impacts to surrounding land uses	Impacts would not be cumulatively considerable.
Marine Transportation	
Cumulative Impact VT-1: Interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, East Basin and West Basin areas, and Cerritos Channel	Impacts would not be cumulatively considerable.
Noise	
Cumulative Impact NOI-1: Result In Construction Activities That Exceed Existing Ambient Exterior Noise Levels By 5 dBA Or More at a Noise-Sensitive Use.	Cumulative impacts would be less than significant.
Cumulative Impact NOI-2: Exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. on Saturday, or at any time on Sunday.	Impacts would not be cumulatively considerable.
Cumulative Impact NOI-3: Cause ambient noise levels at an affected land use to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" category, or any 5 dBA or greater noise increase.	Impacts would not be cumulatively considerable.
Recreation	
Cumulative Impact REC-1: Create an increased demand for recreation and park services that exceeds the available resources.	Impacts would not be cumulatively considerable.
Cumulative Impact REC-2: Result in a substantial loss or diminished quality of recreational opportunities, facilities, or resources.	Impacts would not be cumulatively considerable.
Utilities	
Cumulative Impact PS-1: Require or result in the construction or expansion of water, wastewater, or storm drain lines	Impacts would not be cumulatively considerable.
Cumulative Impact PS-2: Exceed existing water supply, wastewater, or landfill capacities	Impacts would not be cumulatively considerable.
Cumulative Impact PS-3: Require new, offsite energy supply and distribution infrastructure, or capacity-enhancing alterations to existing facilities that are not anticipated by adopted plans or programs	Impacts would not be cumulatively considerable.
Water Quality	
Cumulative Impact WQ-1: Result in discharges that create pollution, contamination, or a nuisance as defined in Section 13050 of the California Water Code	Impacts would not be cumulatively considerable.
Cumulative Impact WQ-2: Result in discharges that violate standards defined in the applicable NPDES permit or Water Quality Control Plan for the receiving water body	Impacts would not be cumulatively considerable.
Cumulative Impact WQ-3: Result in the creation of site conditions that may result in soil erosion and sediment runoff during construction or following Project completion	Impacts would not be cumulatively considerable.
Cumulative Impact WQ-4: Result in permanent adverse impacts to water circulation – Less than Cumulatively Considerable	Impacts would not be cumulatively considerable.

Impact Statement	Summary of Cumulative Analysis
Cumulative Impact WQ-5: Result in a substantial reduction or increase in the amount of surface water in the Los Angeles Harbor	Impacts would not be cumulatively considerable.
Socioeconomics	
No Cumulative Impacts	Impacts would not be cumulatively considerable.

6.3 Alternative 2 Cumulative Impacts Analysis

This section provides a discussion of the anticipated cumulative impacts of Alternative 2 of the Proposed Action in conjunction with the other approved or proposed actions within the Ports of Los Angeles and Long Beach. The cumulative impacts discussion is organized by resource area as presented in Chapter 3.

Alternative 2 (Environmental Enhancement and Ocean Disposal) and Alternative 1 (the Proposed Project) would each involve dredging and disposal of the same amount of material from the Port, but would each utilize a different combination of disposal sites. Due to this similarity, under most significance criteria the contribution of Alternative 2 to cumulative impacts would be similar or identical to that of Alternative 1. In comparison with Alternative 1, the contribution of Alternative 2 to certain cumulative impacts (as identified in Section 6.2) may be incrementally increased or decreased due to the use of different disposal sites.

Alternative 2 consists of placing dredge material at the following locations: CSWH Expansion Area, Eelgrass Habitat Area, Anchorage Road Soil Storage Site (ARSSS), and LA-2. No new land area would be created as a result of this alternative. Implementation of Alternative 2 would result in the same type and extent of development at the CSWH Expansion Area and the Eelgrass Habitat Area disposal locations as described for Alternative 1. Under Alternative 2, approximately 0.080 mcy of sediments would be disposed at the ARSSS, a disposal site which is not included under Alternative 1. In addition, Alternative 2 would not include sediment disposal at Berths 243-245 or Northwest Slip, as would Alternative 1; rather Alternative 2 would transport such sediments to Ocean Disposal Site LA-2, thereby resulting in greater temporary construction impacts at this location.

Methodology

In order to determine if the contribution of Alternative 2 to a cumulative impact would differ from that of Alternative 1, the impacts of Alternative 2 (as discussed in Sections 3.1 through 3.13 and Chapter 4) were reviewed in the context of the Cumulative Analysis for Alternative 1, which is presented above in Section 6.2. As part of this analysis, the following questions were considered for each impact identified:

- Would the overall effect of the impact under Alternative 2 be the same, greater, or, less than that of Alternative 1? For example, would implementation of Alternative 2:
 - Avoid impacts to a particular resource or sensitive receptor?
 - Impact a resource or sensitive receptor that would not be affected by implementation of Alternative 1?
 - Impact a resource or receptor for a longer or shorter duration than Alternative 1?
- Based on the location of Alternative 2 disposal sites in relation to past, present and reasonably foreseeable projects that would have similar impacts, would the potential for impacts of Alternative 2 to combine with impacts of these projects be substantially different than that of Alternative 1?
- Is there anything else about Alternative 2 that would reduce or increase the type, intensity, or duration of impacts identified under Alternative 1?

The geographic extent of the cumulative analysis and existing cumulative conditions for each issue area for Alternative 2 would be the same as those identified for Alternative 1 in Section 6.1. Additionally, each of the disposal sites included under Alternative 2 would be within the same relative proximity to the past, present, and reasonably foreseeable projects identified in Table 6-1 as the disposal sites associated with Alternative 1. Table 6-5, below, presents the results of the analysis of how Alternative 2 would affect the Project's contributions to cumulative impacts analyzed for Alternative 1.

Table 6-5 Alternative 2 Cumulative Impacts Analysis

Impact	Project-Level Significance*	Environmental Effect of Alt 2 Compared to Alt. 1	Differences in Resources Affected (compared to Alt. 1)	Cumulatively Considerable?	Cumulative Significance
Aesthetics and Visual Resources					
AES-1: Have a significant demonstrable negative aesthetic effect.	Less than significant	Same significance with different distribution of visual effects and longer duration of impact.	The ARSSS (not affected under Alt. 1) would have temporary and permanent visual effects; Ocean Disposal Site LA-2 would have temporary visual effects of longer duration during construction (90 days, vs. 10 days under Alt. 1)	No	N/A
AES-2: Significantly affect a recognized or valued view, scenic vista, or scenic highway.	Less than significant	Same significance with different distribution of visual effects and longer duration of impact.	The high visual quality of the view at Ocean Disposal Site LA-2 would be temporarily affected for a longer duration during construction (90 days, vs. 10 days under Alt. 1).	No	N/A
AES-3: Create substantial negative shadow effects on nearby shadow-sensitive uses.	Less than significant	Same significance with longer duration of impact.	Duration of temporary effects at the Eelgrass Habitat Area would be eight days longer under Alt. 2.	No	N/A
AES-4: Create significant light or glare.	Less than significant	Same significance with different distribution of visual effects.	Nighttime construction lighting would not be required at Berths 243-245 or at the Northwest Slip, but it would be required at the CSWH Expansion Area (for 10 days less than Alt. 1), the Eelgrass Habitat Area (same as Alt. 1), and the ARSSS (not affected under Alt. 1).	Yes	Less than significant
Air Quality					
AQ-1. Would not conflict with or obstruct implementation of the applicable air quality plans.	Less than significant	Same significance with lower level of emissions	Alternative 2 would result in 3.56 tons of annual PM10 emissions (compared to 4.27 tons under Alternative 1) and 3.3 tons of annual PM2.5 emissions (compared to 4. tons under Alternative 1).0	No	N/A
AQ-2. Construction activities would produce emissions that would exceed SCAQMD emission significance thresholds.	Significant and unavoidable	Same significance with lower level of emissions	Alternative 2 construction activities would remain below all SCAQMD daily emission thresholds. However, individual construction activities would produce mitigated emissions that would exceed the SCAQMD daily threshold for NOx.	Yes	Significant and unavoidable
AQ-3. Emissions would substantially contribute to an existing or projected air quality standard violation.	Significant and unavoidable	Same significance with lower level of overall emissions	Although overall emissions would be lower under Alternative 2, NO2 exceedance would be identical to that of Alternative 1	Yes	Significant and unavoidable
AQ-4. Would not create objectionable odors that affect a substantial number of people.	Less than significant	Same significance with two fewer odor sources	Odors of decomposing organic material at the Berths 243-245 and Northwest Slip landfills would not occur. But	Yes	Significant and unavoidable
AQ-5. Would not expose the public to substantial concentrations of TACs.	Less than significant	Same significance with lower level of emissions	Alternative 2 would result in 3.56 tons of diesel particulate matter emissions (compared to 4.27 tons under Alternative 1)	Yes	Significant and unavoidable

Impact	Project-Level Significance*	Environmental Effect of Alt 2 Compared to Alt. 1	Differences in Resources Affected (compared to Alt. 1)	Cumulatively Considerable?	Cumulative Significance
AQ-6: Would not produce GHG emissions that exceed CEQA thresholds.	Significant and unavoidable	Same significance with lower level of emissions	Alternative 2 would result in 10,881 tons of CO2 emissions (compared to 14,016 tons under Alternative 1)	Yes	Significant and unavoidable
Biological Resources					
BIO-1: Affect individuals of or habitat for the California least tern and other special status species.	Less than significant	Identical to Alternative 1	This impact would only occur at the CSWH Expansion Area, which is equally affected by both alternatives.	No	N/A
BIO-2: Result in a substantial reduction or alteration of a state-, federally-, or locally-designated natural habitat, special aquatic site, or plant community.	Less than significant with mitigation	Same significance – 12.4 fewer acres affected	Alt. 2 would avoid the permanent loss of 4.8 acres (1.9 ha) of Essential Fish Habitat (EFH) at the Northwest Slip and 7.6 acres (3.1 ha) of EFH at Berths 243-245 that would occur under Alt. 1. The permanent loss of 1.7 acres (0.7 ha) of EFH at the Eelgrass Habitat Area would be the same as Alt. 1.	No	N/A
BIO-3: Interfere with any wildlife migration/movement corridors.	No Impact	Identical to Alternative 1	N/A	No	N/A
BIO-4: Substantially disrupt local biological communities.	Less than significant	Same significance; greater environmental effect	Alt. 2 would avoid short-term and permanent habitat changes at the Northwest Slip and Berths 243-245, including potential effects of runoff to local biological communities. Contaminants at Berths 243-245 would remain in place and would continue to result in adverse effects to benthic infaunal organisms and their predators. Other projects, including past operations at the Ports of Los Angeles and Long Beach that involved accidental discharge of contaminants into the harbor, as well as projects throughout the metropolitan Los Angeles and Long Beach areas that have resulted in contaminants that have entered the harbor as runoff have combined to result in the existing contamination within harbor sediments. Future projects that may result in accidental discharge of contaminants to the harbor could combine with the existing contaminants within the harbor to result in a significant impact.	Because Alternative 2 would not result in the discharge of contaminants to the harbor and would simply allow an existing condition to persist, the contribution of Alternative 2 to a significant impact would not be cumulatively considerable.	N/A
BIO-5: Result in permanent losses of marine habitat.	Less than significant with mitigation	Same significance with smaller area of impact	Alt. 2 would avoid loss of marine habitat, as defined by water surface area, at the Northwest Slip and Berths 243-245.	No	N/A
Cultural Resources					
CR-1: Disturb, damage, or degrade paleontological resources.	No Impact	Identical to Alternative 1	Although this impact is considered unlikely to occur, Alt. 2 would completely avoid any disturbance to Berths 243-245.	No	N/A
CR-2: Disturb, damage, or degrade archeological resources.	No Impact	Identical to Alternative 1	N/A	No	N/A
CR-3: Adversely change significance of historical resource.	No Impact	Identical to Alternative 1	N/A	No	N/A

6. Cumulative Impacts

Impact	Project-Level Significance*	Environmental Effect of Alt 2 Compared to Alt. 1	Differences in Resources Affected (compared to Alt. 1)	Cumulatively Considerable?	Cumulative Significance
Geology					
GEO-1: Cause or accelerate geologic hazards that would result in substantial damage to structures or infrastructure, or expose people to substantial risk of injury.	Less than significant	Same significance with different distribution of effects.	Temporary and permanent risk of damage to Project infrastructure from geologic hazards would be avoided at Berths 243-245 and the Northwest Slip, but would be introduced at the ARSSS.	No	N/A
GEO-2: Constitute a geologic hazard to other properties by causing or accelerating instability from erosion; or accelerate natural processes of wind and water erosion and sedimentation, resulting in sediment runoff or deposition that would not be contained or controlled on-site.	Less than significant	Same significance with different distribution of effects.	Risk or hazards associated with erosion and soil movement would be avoided at Berths 243-245 and the Northwest Slip, but would be introduced at the ARSSS.	No	N/A
Ground Transportation and Circulation					
TRANS-1: Short term impacts to streets would occur during construction.	Less than significant	Same significance, with greater duration of impact	Vehicle trips related to construction of Alternative 2 would have less than significant impacts to area roads for two months longer than Alternative 1.	Yes	Less than significant
TRANS-2 : Increase an intersection's V/C ratio in accordance with the following guidelines: <ul style="list-style-type: none"> • V/C ratio increase ≥ 0.040 if final LOS is C, • V/C ratio increase ≥ 0.020 if final LOS is D, or • V/C ratio increase ≥ 0.010 if final LOS is E or F. 	No impact	Same significance	N/A	No	N/A
TRANS-3: Operations would not result in a significant increase in related public transit use.	No Impact	Identical to Alternative 1	N/A	No	N/A
TRANS-4: Operations would not result in a significant increase in freeway congestion.	No Impact	Identical to Alternative 1	N/A	No	N/A
TRANS-5: Operations would not cause an increase in rail activity that would cause delays in regional traffic.	No Impact	Identical to Alternative 1	N/A	No	N/A

Impact	Project-Level Significance*	Environmental Effect of Alt 2 Compared to Alt. 1	Differences in Resources Affected (compared to Alt. 1)	Cumulatively Considerable?	Cumulative Significance
Hazards and Hazardous Materials					
HAZ-1: Compliance with regulations and policies guiding development within the Port.	No Impact	Identical to Alternative 1	N/A	No	N/A
HAZ-2: Increase the probable frequency and severity of consequences to people from exposure to a health hazard.	Less than significant	Same significance with different distribution and longer duration of effects.	Contaminated dredge materials would be transported and disposed at the ARSSS instead of Berths 243-245.	No	N/A
HAZ-3: Substantially increase the probable frequency and severity of consequences to people or property from exposure to the health hazard as a result of a potential accidental release or explosion of a hazardous material.	No Impact	No Impact	N/A	No	N/A
HAZ-4: Construction or operation activities would substantially interfere with emergency response plans or emergency evacuation plans, thereby increasing risk of injury or death.	Less than significant	Same significance with different distribution of effects.	Alt. 2 would avoid the use of construction equipment that could potentially impede emergency response or evacuation plans at Berths 243-245 and the Northwest Slip, but would introduce such equipment at the ARSSS.	No	N/A
HAZ-5: Increase the frequency or severity of an accidental release or explosion of hazardous materials, thereby increasing risk of injury or death.	No impact.	No impact	N/A	No	N/A
HAZ-6: Increased probability of an accidental spill as a result of a tsunami.	Less than significant	Same significance with different distribution of effects.	Although the risk of damage due to tsunami would be the same at all disposal sites, the risk of an accidental spill related to such damage would be avoided at Berths 243-245 and the Northwest Slip under Alt. 2, but would be introduced at the ARSSS. Such risk of spill is considered to be extremely low.	No	N/A
HAZ-7: A measurable increase in the probability of a terrorist attack, which would result in adverse consequences to the Proposed Action area and nearby areas.	No impact	Identical to Alternative 1	N/A	No	N/A
Land Use					
LU-1: Inconsistent with the adopted land use/density designation in the Community Plan, redevelopment	No impact	Identical to Alternative 1	N/A	No	N/A

PORT OF LOS ANGELES CHANNEL DEEPENING PROJECT

6. Cumulative Impacts

Impact	Project-Level Significance*	Environmental Effect of Alt 2 Compared to Alt. 1	Differences in Resources Affected (compared to Alt. 1)	Cumulatively Considerable?	Cumulative Significance
plan, or specific plan for the site.					
LU-2: Inconsistent with the General Plan or adopted environmental goals or policies contained in other applicable plans.	No impact	Identical to Alternative 1	N/A	No	N/A
LU-3: Substantially affect the types and/or extent of existing land uses in the project area.	Less than significant	Decreased extent of disruption	Temporary and permanent disruptions to existing uses at Berths 243-245 and the Northwest Slip would be avoided under Alt. 2. Although construction activities would be required at the ARSSS for Alt. 2, such activities would be consistent with existing land uses and would not affect ongoing use of the ARSSS.	No	N/A
LU-4: Disrupt, divide or isolate existing neighborhoods, communities, or land uses.	Less than significant	Same significance with increased effect.	Impacts would not occur in association with Berths 243-245 or Northwest Slip, but would occur in association with the ARSSS. As such, full-time residents of the privately operated marinas adjacent to Shore and Anchorage Roads (which surround the ARSSS) would be affected (for instance through noise and air quality impacts of construction) but would not be displaced or divided.	No	N/A
LU-5: Result in secondary impacts to surrounding land uses.	No impact	Same significance	N/A	No	N/A
Marine Transportation					
VT-1: Interfere with operation of designated vessel traffic lanes and impair the level of safety for vessels navigating the Main Channel, East Basin and West Basin areas, and Cerritos Channel.	Less than significant	Same significance with decreased effect	Alternative 2 would require approximately 5.7 barge trips per day compared to 7.2 trips per day for Alternative 1, resulting in an incremental decrease in the risk of interference with operation of vessel traffic lanes.	No	N/A
Noise					
NOI-1: Construction noise would exceed existing ambient noise by more than 5 dBA.	Less than significant with mitigation incorporated	Same significance with different distribution of effects.	Under Alternative 2, construction noise would be significant at receptors located west of the ARSSS for approximately 25 days. No impacts would occur at Berths 243-245 (compared to 1-year of impacts at this location under Alternative 1).	Yes	Less than significant
NOI-2: Construction noise exceeds nighttime and weekend ambient noise standard.	No Impact	Identical to Alternative 1	N/A	No	N/A
NOI-3: Operation would increase ambient noise by 3 dBA.	No Impact	Identical to Alternative 1	N/A	No	N/A
Recreation					
REC-1. Demand for recreation and park services would not exceed the available resources.	No Impact	Identical to Alternative 1	N/A	No	N/A

Impact	Project-Level Significance*	Environmental Effect of Alt 2 Compared to Alt. 1	Differences in Resources Affected (compared to Alt. 1)	Cumulatively Considerable?	Cumulative Significance
REC-2. A substantial loss or diminished quality of recreational, educational, visitor-oriented opportunities, facilities, or resources would not occur.	Less than significant	Identical to Alternative 1	Temporary closures and/or restrictions of open water available to recreational boaters at the CSWH.	No	N/A
Utilities					
PS-1: Require or result in the construction or expansion of water, wastewater, or storm drain lines.	No Impact	Slightly less than Alt 1	Alt. 2 would avoid revisions of the storm drain system at Berths 243-245 (as required under Alt. 1).	No	N/A
PS-2: Exceed existing water supply, wastewater, or landfill capacities.	Less than significant	Same significance but slightly increased impact	Due to the 2-month longer construction duration, Alt. 2 would require slightly more water for construction workers and would generate slightly more wastewater.	No	N/A
PS-3: 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 significant	Identical to Alternative 1	N/A	No	N/A
Water Quality, Sediments, and Oceanography					
WQ-1. Discharges that create pollution, contamination, or a nuisance as defined in Section 13050 of the California Water Code would not occur.	Less than significant	Same significant but greater environmental effect	Temporary impacts to water quality would occur at two fewer water disposal sites (Berths 243-245 and the Northwest Slip) than for Alternative 1. Existing contaminants within Berths 243-245 would not be capped and would have the potential to be resuspended during storm events.	No	N/A
WQ-2. Discharges that violate standards defined in the applicable NPDES permit or Water Quality Control Plan for the receiving water body would not occur.	Less than significant	Same	No violations would occur	No	N/A
WQ-3. The creation of site conditions that may result in soil erosion and sediment runoff during construction or following Project completion would not occur.	Less than significant	Slightly less	Dredging disposal at 1 upland site would incrementally decrease potential for erosion under Alternative 2 compared to Alternative 1.	No	N/A
WQ-4. Permanent adverse impacts to water circulation would not occur.	Less than significant	Slightly less	Changes in water currents would be nearly identical to Alternative 1, even though no new land would be created.	No	N/A
WQ-5. The amount of surface water in Los Angeles Harbor would not substantially reduce or	Less than significant	Less	Alternative 1 would reduce surface water by 14.7 acres. Alternative 2 would reduce surface water by 1.7 acres.	No	N/A

6. Cumulative Impacts

Impact	Project-Level Significance*	Environmental Effect of Alt 2 Compared to Alt. 1	Differences in Resources Affected (compared to Alt. 1)	Cumulatively Considerable?	Cumulative Significance
increase.					
Socioeconomics					
SOCIO-1: Substantially change local employment.	No Impact	Same	N/A	No	N/A
SOCIO-2: Displace substantial numbers of existing housing or persons, thereby necessitating the construction of replacement housing elsewhere	No Impact	Same	N/A	No	N/A
SOCIO-3: Substantially change revenue for local businesses	No Impact	Less	Alternative 2 would avoid potential temporary impacts at the Northwest Slip.	No	N/A
SOCIO-4: Substantially change public agency revenue	No Impact	Same	N/A	No	N/A

- Project-level significance refers to the level of impact that would be caused by Alternative 2 alone (not cumulative).

As presented above in Table 6-5, implementation of Alternative 2 would result a significant contribution to cumulative Air Quality Impacts AQ-2, AQ-3, AQ-4, AQ-5 and AQ-6.