

## **5.1 Introduction**

This chapter evaluates the potential for the proposed Project to make a cumulatively considerable contribution to a significant cumulative impact when the project’s impacts are combined with other past, present, and reasonably foreseeable future projects. The presentation of requirements related to cumulative impact analyses and a brief description of the related projects are discussed below. Section 5.2 addresses each environmental resource area for which the proposed Project may make a contribution to a cumulatively significant impact when combined with other reasonably foreseeable projects in the area.

### **5.1.1 Requirements for Cumulative Impact Analysis**

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

Cumulative impacts are further described as follows:

- (a) The individual effects may be changes resulting from a single project or a number of separate projects.
- (b) The cumulative impacts from several projects are the changes in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (40 Code of Federal Regulations 1508.7 and State CEQA Guidelines, Section 15355[b]).

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

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

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

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

1 Therefore, the following cumulative impact analysis focuses on whether the impacts of  
2 the proposed Project are cumulatively considerable within the context of impacts caused  
3 by other past, present, or future projects. The cumulative impact scenario considers other  
4 projects proposed within the area defined for each resource that would have the potential  
5 to result in a significant cumulative impact. Only those project impacts determined to be  
6 less than significant, less than significant with mitigation, or significant and unavoidable  
7 are analyzed for cumulative impacts.

8 For this EIR, related area projects with a potential to contribute to cumulative impacts  
9 were identified using one of two approaches: the “list” methodology or the “projection”  
10 methodology.

11 Biological resources and hazards are evaluated using a list of closely related projects that  
12 would be constructed in the cumulative geographic scope, which differs by resource and  
13 sometimes for impacts within a resource. The cumulative regions of influence are  
14 documented in Section 5.2 below. The list of related projects is provided in Table 5-1 in  
15 Section 5.1.2 below.

## 16 **5.1.2 Projects Considered in the Cumulative Analysis**

17 A total of 68 current or reasonably foreseeable future projects (approved or proposed)  
18 were identified within the general vicinity of the proposed Project that could contribute to  
19 cumulative impacts. The locations of these projects are shown in Figure 5-1. A  
20 corresponding list of the cumulative projects is provided in Table 5-1 compiled from  
21 sources that include the LAHD, the Port of Long Beach, Los Angeles Department of  
22 Transportation (LADOT), and the City of Los Angeles and other local jurisdictions. As  
23 discussed in Section 5.1.1 and further in the resource-specific sections below, analysis of  
24 some resource areas uses a projection approach encompassing a larger cumulative  
25 geographic scope and, for these resources, a larger set of past, present, and reasonably  
26 foreseeable future projects was included for analysis of cumulative impacts. This  
27 approach uses a summary of projections in an adopted planning document, or prior  
28 document that evaluates regional or areawide conditions.

29 For the purposes of this Draft EIR, the Project vicinity is defined as the area over which  
30 effects of the proposed Project or an alternative could contribute to cumulative effects.  
31 The cumulative regions of influence for individual resources are documented further in  
32 each of the resource-specific subsections in Section 5.2.





Figure 5-1  
Related and Cumulative Projects



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**Table 5-1: Related and Cumulative Projects**

No. in Figure	Project Title and Location	Project Description	Project Status
<b>Port of Los Angeles Projects</b>			
1	Berth 164 [Valero] Marine Oil Terminal Wharf Improvements Project	The proposed Project involves demolishing the existing 19,000-square-foot timber wharf and constructing a new, steel and concrete loading platform, access trestles, pipeline trestle, mooring structures, berthing structures, catwalks, topside equipment, and necessary utilities to comply with the MOTEMS. The project also consists of a 30-year lease for the facility.	NOP released July 21, 2016 and Public Review Period closed August 19, 2016. Environmental Impact Statement (EIS)/EIR is in preparation.
2	Berths 226-236 [Everport] Container Terminal Improvements Project	Proposed redevelopment of existing container terminal, including improvements to wharves, adjacent backland, crane rails, lighting, utilities, new gate complex, and modification of adjacent roadways and railroad tracks. Project also would include demolition of two unused buildings and other small accessory structures at the former Canner's Steam Company Plant in the Fish Harbor Area of the Port.	The Harbor Board of Commissioners (the Board) certified the EIR and approved the project on October 19, 2017. Construction is anticipated to start in 2018.
3	Berth 136–147 [TraPac] Container Terminal Project, Port of Los Angeles	Element of the West Basin Transportation Improvement Projects. Expansion and redevelopment of the TraPac Container Terminal to 243 acres, including improvement of Harry Bridges Boulevard and a 30-acre landscaped area, relocation of an existing rail yard and construction of a new on-dock rail yard, and reconfiguration of wharves and backlands (includes filling of the Northwest Slip, dredging, and construction of new wharves).	The Board certified the EIR and approved the project on December 6, 2007. Construction started in 2009.
4	Berths 191-194 Dry Bulk Terminal	Construction and operation of a dry bulk terminal for vessel unloading, milling, storage and trucking of ground, granulated blast furnace slag.	Conceptual planning underway.
5	Berths 212-224 (YTI) Container Terminal Improvements Project	Phase 1 consists of deepening Berths 217-220 and expanding the Terminal Island Container Transfer Facility (TICTF) on-dock rail by adding a single rail loading track. Phase II involves deepening Berths 214-216 and replacing four existing cranes, for a total of 14 operational cranes at full build out. Backland improvements would occur during both phases.	FEIR certified on November 7, 2014. Expansion approved and construction expected to be completed in early 2018.

**Table 5-1: Related and Cumulative Projects**

No. in Figure	Project Title and Location	Project Description	Project Status
6	801 Reeves Avenue Peel-Off Yard	Construction and operation of a peel-off yard (secondary cargo staging area) to provide cargo sorting and congestion relief for all container terminals in Port of LA and Port of Long Beach.	Draft Initial Study/ Mitigated Negative Declaration (IS/MND) – close of public comment period was October 23, 2017. Final MND is under preparation.
7	Westway Decommissioning	Decommissioning of the Westway Terminal along the Main Channel (Berths 70–71). Work includes decommissioning and removing 136 storage tanks with total capacity of 593,000 barrels and remediation of the site.	Decommissioning completed 2013. Remediation is in conceptual planning phase.
8	Berths 97–109, China Shipping Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, landfill and terminal construction, and backland development.	The Board certified the EIR and approved the project on December 8, 2009. Construction completed in 2014 (pending maintenance and office building). NOP for Supplemental EIR (SEIR) released September 2015. Draft SEIR released June 2017. Final SEIR under preparation.
9	Harbor Performance Enhancement Center Project	Construction and operation of a secondary cargo staging area to provide cargo sorting and congestion relief for all container terminals in Port of LA and Port of Long Beach. Located at the LAXT loop on Terminal Island.	Environmental assessment beginning 2018.
10	Wilmington Waterfront Master Plan (Avalon Boulevard Corridor Project)	Planned development intended to provide waterfront access and promoting development specifically along Avalon Boulevard.	EIR certified and project approved on June 18, 2009.
11	Berths 150-151 [Phillip 66/] Marine Oil Terminal Improvements Project	Demolition of the existing timber wharf and replacement with a new concrete loading platform, mooring and breasting dolphins, access ramps, catwalks, and underwater bulkhead. New topside and piping components would be included.	Notice of Preparation anticipated in 2018.

**Table 5-1: Related and Cumulative Projects**

No. in Figure	Project Title and Location	Project Description	Project Status
12	Adaptive Reuse of Warehouses 9 and 10	Adaptive reuse of Warehouses 9 and 10 for visitor-serving uses to complement recreational activity at adjacent 22 <sup>nd</sup> Street Park. Property leased to Crafted at the Port of Los Angeles. Also includes a brewery operation added in 2015.	Addendum to San Pedro Waterfront EIR completed. Operations began in summer of 2012.
13	Alternative Maritime Power (AMP <sup>TM</sup> )	AMP <sup>TM</sup> systems (also known as “cold-ironing”) at the Port include a shore side power source, a conversion process to transform the shore side power voltage to match the vessel power systems, and a container vessel that is fitted with the appropriate technology to utilize electrical power while at dock. AMP facilities are being constructed at container terminals throughout the Port to support ARB regulations and CAAP policy.	Construction completed at various terminal locations; construction still ongoing.
14	Southern California International Gateway Project (SCIG)	Construction and operation of a 157-acre dock railyard intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.	Final EIR certified May 2013. Construction on hold due to litigation.
15	Berths 121–131 (Yang Ming) Container Terminal Improvements Project	Wharf modifications at the Yang Ming Marine Terminal Project involves wharf upgrades and backland reconfiguration, including new buildings.	NOI/NOP released in 2014. EIR/EIS under preparation.
16	Port of Los Angeles Master Plan Update	Redevelopment of Fish Harbor, redevelopment of Terminal Island and consideration of on-dock rail expansion, and consolidation of San Pedro and Wilmington Waterfront districts.	The Board certified EIR in August 2013. Coastal Commission certification March 2014.
17	WWL Vehicle Services Cargo Terminal	Expansion of vehicle offloading processing and operations, including cargo increase up to 220,000 vehicles per year and construction of two additional rail loading tracks.	MND approved August 2012. Construction expected in 2018.
18	Maintenance Dredging	Maintenance dredging is the routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches, and port facilities. This is conducted regularly for navigational purposes (at least once every five years).	Continuous, but intermittent on average every 3–5 years.

**Table 5-1: Related and Cumulative Projects**

No. in Figure	Project Title and Location	Project Description	Project Status
19	Outer Harbor Cruise Terminal and Outer Harbor Park, Port of Los Angeles	Construction of two new, cruise terminals that would total up to 200,000 square feet (approximately 100,000 square feet each) and parking at Berths 45–47 and 49–50 in the Outer Harbor. The terminals would be designed to accommodate the berthing of a Freedom Class or equivalent cruise vessel (1,150 feet in length). A proposed Outer Harbor Park would encompass approximately 6 acres at the Outer Harbor. This project was evaluated in the San Pedro Waterfront Project EIS/EIR.	The Board certified the Final EIS/EIR and approved this project on September 29, 2009. Construction is on hold.
20	City Dock No. 1 Marine Research Project (AltaSea), Port of Los Angeles	This project includes development of a marine research center within a 28-acre area located between Berths 57–72. This project would change the break bulk areas east of East Channel (Berths 57–72) to institutional uses.	Addendum completed February 2017 for initial phase, including occupancy of transit sheds at Berths 58-60 and development of Launch Plaza. Design plans for full buildout are in progress.
21	San Pedro Public Market	This project includes redevelopment of the 30-acres, formerly known as the Ports O' Call Village, with up to 300,000 square feet of visitor-serving commercial uses and up to a 75,000 square feet conference center. This project would involve changing the industrial uses along Harbor Boulevard to commercial. This project also includes a waterfront promenade and 3 acres of open space. This project was evaluated in the San Pedro Waterfront Project EIS/EIR.	The Board certified the Final EIS/EIR and approved this project on September 29, 2009 and the Addendum in May 2016. Conceptual planning by private developer ongoing. Construction is anticipated to be completed in 2021.
22	Anchorage Road Soil Storage Site (ARSSS) Open Space, Port of Los Angeles	This project would create approximately 30 acres of passive open space at the ARSSS. The project may also include undergrounding utilities and roadway improvements at the Anchorage and Shore Road intersection.	On hold.
23	Trucking Support Center, Port of Los Angeles	This project would utilize approximately 33 acres at the former Navy Reserve site to provide a new trucking support center and restaurant. The project would allow fueling for new clean-technology drayage vehicles.	On hold.
24	SA Recycling Crane Replacement and Electrification Project	This project, located in Terminal Island, would involve the assembly of a Tier 4 diesel/electric hybrid replacement crane, the installation of conduit and wiring to electrify the wharf and the disposal of the existing diesel crane. There are no operational alternations or expansions proposed.	The Board adopted Negative Declaration in April 2016. Crane has been in operation since 2016.



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No. in Figure	Project Title and Location	Project Description	Project Status
25	Relocation of Jankovich Marine Fueling Station, Port of Los Angeles	This project would develop a new fueling station at Berth 73. The proposed improvements would include new storage tanks.	Addendum to the certified Final EIR for the San Pedro Waterfront Project was released in June 2017. Conceptual planning ongoing.
26	Al Larson Boat Shop Improvement Project, Port of Los Angeles	Modernization of existing boat yard and 30-year lease extension.	The Board certified the EIR and approved the project on April 29, 2009. Currently on hold.
27	Berths 302–306 [APL] Container Terminal Project, Port of Los Angeles	Improvements and expansion of the existing terminal, including the addition of cranes, modifications to the main gate, converting an existing dry container storage unit to a refrigerated unit, and the expansion of the terminal onto 41 acres adjacent to the existing terminal.	The Board certified the EIR and approved the project on June 7, 2012 and approved an Addendum in October 2016. Expansion project on hold. Revised project is ongoing.
28	International Longshore and Warehouse Union Local 13 Dispatch Hall Project, Port of Los Angeles	The project will accommodate current and anticipated needs of the International Longshore and Warehouse Union by providing a meeting space and administrative offices for dispatching longshore workers to cargo terminals within the Port and Port of Long Beach.	The Board adopted the MND. Operations are on hold.
29	Wilmington Youth Sailing and Aquatic Center, Port of Los Angeles	Construction of a facility that includes a sailing center and adjacent boat dock and launch ramp at Berth 183 in Wilmington.	MND approved November 15, 2012. New long-term site is being determined. Project on hold for permanent facility.
30	Solar Panel Installation Program, Port of Los Angeles	Installation of 10 MW of solar power within the Port.	Construction at some sites began in 2009. Construction ongoing through at least 2018.
31	Fish Processing in Fish Harbor	Upgrades of existing facilities and construction of new facilities for fish processing operations	Conceptual planning stage.

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No. in Figure	Project Title and Location	Project Description	Project Status
32	Avalon and Fries Street Segments Closure Project	Physical closure of segments of Avalon Boulevard and Fries Avenue by installing street modifications that include cul-de-sacs, curbs and gutters, and fencing and signage.	On hold.
33	Avalon Freight Services Relocation Project	Shifting existing Catalina Island freight operations from Berth 184 in Wilmington to Berth 95 in San Pedro.	The Board adopted ND on January 22, 2015. Project complete in 2016.
34	Fisherman's Pride Fish Processing Facility Project	Redevelop a vacant and under-utilized industrial space into a state-of-the-art commercial seafood processing facility.	The Board adopted MND on February 6, 2014. Project is underway.
35	Berths 238-239 [PBF Energy] Marine Oil Terminal Wharf Improvements Project	Demolition of the existing concrete wharves at Berths 238 and 239 and replacement with a new concrete loading platform, vehicular access ramp, berthing and mooring structures, catwalks, and other utilities at Berth 238 to comply with MOTEMS.	CEQA documentation expected in 2018.
<b><i>Port of Los Angeles and/or Port of Long Beach Potential Port-Wide Operational Projects</i></b>			
36	Navy Way/Seaside Avenue Interchange, Port of Los Angeles and Port of Long Beach	Construction of a new flyover connector from northbound Navy Way to westbound Seaside Avenue.	Conceptual planning stage.
<b><i>ICTF Joint Powers Authority</i></b>			
37	Union Pacific Railroad ICTF Modernization and Expansion Project	Union Pacific proposal to modernize existing intermodal yard 4 miles from the Port.	Draft EIR on hold.
<b><i>Community of San Pedro Projects</i></b>			
38	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.
39	319 N. Harbor Blvd	Construction of 94 unit residential condominiums.	Construction has not started according to LADOT Planning Department.

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40	Ponte Vista/Naval Site	Construct 1,135 residential units, including single family homes, apartments, and condominiums, and open space.	NOP released in October 2010. Construction began in May 2014. Homes are under construction.
41	Single Family Homes 1427 N. Gaffey St, San Pedro (at Basin St)	Construction of 135 single-family homes—about 2 acres.	Project approved; construction ongoing.
42	Palos Verdes Urban Village 550 South Palos Verdes St, San Pedro	Construction of 251 condominiums and 4,000 square feet of retail space. 550 South Palos Verdes Street, San Pedro.	No construction has started.
43	Mixed-use development, 281 W 8th Street, San Pedro	Project to construct 72 condominiums and 7,000 square feet retail. 281 West 8th Street (near Centre Street), San Pedro.	Under construction according to City of Los Angeles Zoning Information and Map Access System.
<b>Community of Wilmington Projects</b>			
44	Distribution Center and Warehouse 755 E. L St, Wilmington (at McFarland Avenue)	Construction of a 135,000-square-foot distribution center and warehouse on a 240,000-square-foot lot with 47 parking spaces.	No construction has started; lot is vacant and bare. LADOT Planning Department has no estimated completion year.
45	Dana Strand Public Housing Redevelopment Project	413 units of mixed-income affordable housing to be constructed in four phases: Phase I: 120 rental units; Phase II: 116 rental units; Phase III: 100 senior units; Phase IV: 77 single family homes. The plans also include a day care center, lifelong learning center, parks, and landscaped open space.	Initial three phase completed by 2012, and are being leased; construction of last phase is not yet underway.
46	931 N. Frigate	Private school expansion for 72 students increase for a total of 350 students.	Construction has not started according to LADOT Planning Department.

**Table 5-1: Related and Cumulative Projects**

No. in Figure	Project Title and Location	Project Description	Project Status
47	Wilmington Redevelopment Plan Amendment/ Expansion Project, Wilmington	The existing Wilmington Industrial Park would be expanded by an additional 2,487 acres, for a total of approximately 2,719 acres. Under the probable maximum level of development, the overall project area could support up approximately 7,326 residential units (primarily multi-family; zone changes under the Plan would permit multi-use and higher density residential development). In addition to the residential development, the Project could accommodate up to approximately 207 acres (9 million square feet) of commercial development and up to 333 acres (14.5 million square feet) of industrial development.	NOP for Program EIR out for public review August 2010. Currently on hold.
<b>Port of Long Beach Projects</b>			
48	Middle Harbor Terminal Redevelopment, Port of Long Beach	Consolidation of two existing container terminals into one 345-acre (138-hectare) terminal. Construction includes approximately 54.6 acres of landfill, dredging, and wharf construction; construction of an intermodal rail yard; and reconstruction of terminal buildings.	Approved project in 2009. Under construction and scheduled to be completed in 2020.
49	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine container terminals into one terminal. The Piers G and J redevelopment project is in the Southeast Harbor Planning District area of the Port of Long Beach. The project will develop a marine terminal of up to 315 acres by consolidating two existing terminals on Piers G and J and several surrounding parcels. Construction will occur in four phases and will include approximately 53 acres of landfills, dredging, concrete wharves, rock dikes, and road and railway improvements.	Approved project. Construction underway
50	Inner Harbor Turning Basin Project	Dredging of approximately 50,000 cubic yards (cy) of material to widen the Turning Basin to 1.190 feet and deepen it to -52 feet mean lower low water.	Approved project. Construction pending.
51	Gerald Desmond Bridge Replacement Project, Port of Long Beach and Caltrans/FHWA	Replacement of the existing 4-lane Gerald Desmond highway bridge over the Port of Long Beach Back Channel with a new 6- to 8-lane bridge.	FEIR/EA certified. Approved project, construction ongoing, expected to be completed mid-2018.
52	Pier B Rail Yard Expansion (On-Dock Rail Support Facility)	Expansion of the existing Pier B Rail Yard in two phases, including realignment of the adjacent Pier B Street and utility relocation.	FEIR certified January 2018. Construction start date has not yet been determined.

**Table 5-1: Related and Cumulative Projects**

No. in Figure	Project Title and Location	Project Description	Project Status
53	Mitsubishi Cement Corporation Facility Modifications	Facility modification, including the addition of a catalytic control system, construction of four additional cement storage silos, and upgrading existing cement unloading equipment on Pier F.	Project approved in April 2015. Project on hold.
54	Baker Cold Storage, Inc. Cold Storage Facility	Construction of a 250,000 square-foot cold storage facility for the import/export of food products.	Final MND certified in 2013. Construction completed in 2017.
<b>Alameda Corridor Transportation Authority and Caltrans Projects</b>			
55	Schuyler Heim Bridge Replacement and SR-47 Terminal Island Expressway	ACTA/Caltrans project to replace the Schuyler Heim Bridge with a fixed structure and improve the SR-47/Henry Ford Avenue/ Alameda Street transportation corridor by constructing an elevated expressway from the Heim Bridge to SR 1 (Pacific Coast Highway [PCH]).	Project approved, construction began in 2011 and is ongoing. Elevated expressway deferred indefinitely.
56	I-710 (Long Beach Freeway) Corridor Study	Develop multi-modal, timely, cost-effective transportation solutions to traffic congestion and other mobility problems along approximately 18 miles of the I-710, between the San Pedro Bay ports and SR 60. Early Action Projects include: a) Port Terminus: Reconfiguration of SR 1 (PCH) and Anaheim Interchange, and expansion of the open/green space at Cesar Chavez Park. b) Mid Corridor Interchange: Reconfigurations Project for Firestone Boulevard Interchange and Atlantic/Bandini Interchange.	Study completed in 2005. NOP/NOI released August 2008. Draft EIR/EIS circulated. Comment period ended September 28, 2013 Preliminary design and traffic forecasts for use in updated studies is being prepared. Recirculated Draft EIR was circulated July 2017.
57	Cerritos Channel Bridge	New rail bridge adjacent to existing Badger Avenue Rail Bridge	Project delayed; start date undetermined. Deferred indefinitely.
58	Vincent Thomas Bridge Seismic Restoration	Construction includes replacing bridge dampers and installing buckling restrained braces.	Construction is ongoing and is anticipated to be complete in 2019.

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<b>Wilmington/Carson</b>			
59	Kinder Morgan Terminal Expansion	The project involves the construction of 18 new, 80,000-barrel product storage tanks and one new, 30,000-barrel transmix storage tank with related piping, pumps, and control systems on the southwestern portion of the existing Carson Terminal facility.	Construction activities for the Kinder Morgan Terminal Expansion project are expected to occur over a 10-year period.
60	ConocoPhillips Refinery Tank Replacement Project	ConocoPhillips operators are in the process of removing seven existing petroleum storage tanks and replacing them with six new tanks, four at the Carson Plant, and two new tanks at the Wilmington Plant.	An ND has been prepared for this project.
61	BP Logistics Project	The project involves the construction and operation of two 260-foot diameter covered external floating roof crude oil storage tanks. The two crude oil storage tanks have a capacity of 500,000 barrels each, and will require related piping and process control systems.	FEIR has been prepared and certified by City of Carson. Project on hold.
62	Ultramar Inc. Wilmington Refinery Cogeneration Project	The proposed Project consists of the addition of a 35 MW Cogeneration Unit including a gas turbine, heat recovery steam generator, a selective catalytic reduction unit, an evaporative cooler, and connections to an existing aqueous ammonia tank at the Refinery	Final EIR certified October 10, 2014.
63	WesPac Smart Energy Transport System Project	WesPac is proposing to construct a jet fuel pipeline system to support airport operations at Los Angeles International Airport (LAX) and other airports in the western United States.	Revised EIR certified July 2011. Not yet constructed.
64	Tesoro Refining and Marketing Company LLC Los Angeles Refinery Integration and Compliance Project	This project will integrate the newly purchased facility in Carson with the current facility in Wilmington. Modifications to various units at the Carson and Wilmington Operations will be made to ensure compliance and increase operation efficiency. Pipelines will also be installed to improve efficiency within and between the two sites.	Draft EIR released March 2016. Comment period closed June 2016. Construction anticipated to begin late 2016 to 2021.
65	Warren E&P, Inc. WTU Central Facility, New Equipment Project	Implement gas sales without interim gas reinjection and to modify the gas handling component of the 2011 Project to facilitate gas sales.	Final ND published August 2014.
66	Shell Oil Products – Carson Revitalization Project – Specific Plan	Shell Oil Products is proposing the redevelopment of the 448-acre Shell Carson Terminal facility located at 20945 South Wilmington Avenue. The project will allow for subsequent development over a 15 to 25 year time period. The initial phases will include development of an 8.8 acre retail center at Del Amo and Wilmington Avenue, a 12.3 acre business park on Chico Street and the addition of product storage tanks within the center of the property.	DEIR commend period ended March 26, 2014. FEIR under preparation.

67	Wilmington/I-405 Interchange Project	The proposed project includes modification of the ramps, construction of a new I-405 northbound onramp, widening of Wilmington Avenue from 223 <sup>rd</sup> Street, south of I-405, to I-405 northbound onramp north of the Interchange, and construction of a right turn lane from Wilmington Avenue northbound to 223 <sup>rd</sup> Street eastbound. Additionally, this project includes synchronizing all traffic signals at this location, extending from 220 <sup>th</sup> Street to the north, to 223 <sup>rd</sup> Street to the south.	MND approved in January 2009. Currently, under construction and expected to be completed in 2018.
68	Phillip 66 Los Angeles Carson Plant – Crude Oil Storage Capacity Project – 1520 E Sepulveda Blvd.	Phillip 66 is proposing to increase crude oil storage capacity at its Los Angeles Refinery Carson Plant by installing one new 615,000 barrel crude oil storage tank with a geodesic dome, increasing the annual permit throughput limit of two existing 320,000 barrel crude oil storage tanks, and installing geodesic domes on the same two existing 320,000 barrel crude oil storage tanks. Tie-ins to the Pier “T” crude oil delivery pipeline from Berth 121 would be installed.	Final ND approved December 2014. Currently under construction.

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## 5.2 Cumulative Impact Analysis

The following sections provide an analysis of the cumulative impacts identified for each resource area relative to past, present, and reasonably foreseeable future projects (identified in Table 5-1) for the proposed Project.

### 5.2.1 Air Quality and Meteorology

#### 5.2.1.1 Scope of Analysis

The region of analysis for cumulative effects on regional air quality is the SCAB. For localized effects of air quality, the SCAQMD typically assesses cumulative projects within one mile of a project site. Contribution of the proposed Project and alternatives to cumulative impacts was assessed using SCAQMD's guidance, which states that projects that exceed SCAQMD's project-level significance thresholds are considered by SCAQMD to be cumulatively considerable. Conversely, projects that do not exceed the project-level thresholds are generally not considered to be cumulatively considerable. SCAQMD guidance does not distinguish between attainment and nonattainment pollutants and this analysis assumes that (for Cumulative Impacts AQ-1, AQ-2, AQ-3, AQ-4, and AQ-5) exceedance of any project-level threshold would also constitute a cumulatively considerable impact. Cumulative Impact AQ-6 is addressed qualitatively, in accordance with SCAQMD's qualitative threshold.

For odors, the area of influence includes the cumulative projects within the immediate vicinity of the proposed Project and their effects on any nearby sensitive receptors.

For health effects, the area of influence includes the cumulative projects within the Port complex and their effects on the surrounding communities of San Pedro, Wilmington, and Long Beach. Each potential cumulative impact and its corresponding impact number from Section 3.1 is outlined below.

#### 5.2.1.2 Cumulative Impact AQ-1: The proposed Project would make a cumulatively considerable contribution to construction-related emissions that exceed an SCAQMD threshold of significance – Cumulatively Considerable Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Several large construction projects (including but not limited to Berth 164 [Valero] [#1], Berths 226-236 [Everport] [#2], Berths 150-151 [Phillip 66] [#11], and Berths 121-131 [Yang Ming] [#15]) and numerous small construction projects would occur concurrently at the Port and surrounding areas (see Table 5-1). The construction impacts of these related projects would be cumulatively significant if their combined construction emissions would exceed the SCAQMD daily emission thresholds for construction. Because this almost certainly would be the case for all analyzed criteria pollutants and precursors (PM<sub>10</sub>, PM<sub>2.5</sub>, nitrogen oxides [NO<sub>x</sub>], sulfur oxides [SO<sub>x</sub>], CO, and volatile organic compounds [VOCs]), the related projects would result in a significant cumulative air quality impact for PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>x</sub>, CO and VOC.

## Contribution of the Proposed Project

Proposed Project unmitigated construction emissions would exceed SCAQMD daily emission thresholds for NO<sub>x</sub> during Years 1, 2, 3 and 5 of construction. Therefore, unmitigated proposed Project construction emissions would be significant for NO<sub>x</sub> prior to mitigation. These impacts would combine with cumulatively significant impacts from concurrent related construction projects. As a result, without mitigation, proposed Project construction emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for NO<sub>x</sub> emissions.

Proposed Project overlapping construction and operational emissions during the peak years of construction would exceed the SCAQMD daily emission thresholds for construction for PM<sub>2.5</sub>, NO<sub>x</sub>, and VOC. These impacts would combine with cumulatively significant impacts from concurrent related construction projects. As a result, without mitigation, the proposed Project overlapping construction and operational emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for PM<sub>2.5</sub>, NO<sub>x</sub>, and VOC.

## Mitigation Measures and Residual Cumulative Impacts

After application of mitigation measures MM AQ-1 through MM AQ-4 (for construction), the proposed Project's construction emissions would be reduced but would continue to exceed SCAQMD significance thresholds for NO<sub>x</sub> in years 2, 3, and 5 of construction.

After application of mitigation measures MM AQ-1 through MM AQ-4 (for construction) and MM AQ-5 (for operation), the proposed Project's overlapping construction and operational emissions would be reduced but would continue to exceed SCAQMD significance thresholds for PM<sub>2.5</sub>, NO<sub>x</sub> and VOC.

These impacts would combine with impacts from concurrent related construction projects, which would already be cumulatively significant. Therefore, after mitigation, construction of the proposed Project would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for PM<sub>2.5</sub>, NO<sub>x</sub>, and VOC emissions.

### 5.2.1.3 Cumulative Impact AQ-2: The proposed Project construction would make a cumulatively considerable contribution to off-site ambient air pollutant concentrations that exceed the SCAQMD thresholds of significance – Cumulatively Considerable

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

Several large construction projects (including but not limited to Berth 164 [Valero] [#1], Berths 226-236 [Everport] [#2], Berths 150-151 [Phillip 66] [#11], and Berths 121-131 [Yang Ming] [#15]) and numerous small construction projects would occur concurrently at the Port and surrounding areas (see Table 5-1). The construction impacts of these related projects would be cumulatively significant if their combined construction ambient pollutant concentrations would exceed the ambient concentration thresholds for construction. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without performing dispersion modeling of the related projects, cumulative air quality impacts are likely to exceed the thresholds for

1 PM<sub>10</sub>, PM<sub>2.5</sub>, and NO<sub>2</sub> and are unlikely to exceed the thresholds for CO and SO<sub>2</sub> based on  
2 construction equipment emission profiles and existing ambient pollutant levels.  
3 Consequently, construction of the related projects would result in a significant cumulative  
4 air quality impact for PM<sub>10</sub>, PM<sub>2.5</sub>, and NO<sub>2</sub>.

### 5 **Contribution of the Proposed Project**

6 Construction of the proposed Project would exceed the off-site federal and state 1-hour  
7 NO<sub>2</sub> ambient concentration thresholds. These impacts would combine with impacts from  
8 concurrent related construction projects, which would already be cumulatively  
9 significant. As a result, without mitigation, impacts from proposed Project construction  
10 would make a cumulatively considerable contribution to an existing significant  
11 cumulative impact related to ambient NO<sub>2</sub> levels.

12 Overlapping construction and operation of the proposed Project would exceed the off-site  
13 federal and state 1-hour NO<sub>2</sub> ambient concentration thresholds. These impacts would  
14 combine with impacts from concurrent related construction projects, which would  
15 already be cumulatively significant. As a result, without mitigation, impacts from  
16 proposed Project overlapping construction and operation would make a cumulatively  
17 considerable contribution to an existing significant cumulative impact related to ambient  
18 NO<sub>2</sub> levels.

### 19 **Mitigation Measures and Residual Cumulative Impacts**

20 After application of mitigation measures MM AQ-1 through MM AQ-4, the proposed  
21 Project's construction impacts would be reduced but would continue to exceed  
22 significance thresholds for federal and state 1-hour NO<sub>2</sub> concentrations. These impacts  
23 would combine with impacts from concurrent related construction projects, which would  
24 already be cumulatively significant. Therefore, after mitigation, construction of the  
25 proposed Project would make a cumulatively considerable and unavoidable contribution  
26 to an existing significant cumulative impact for NO<sub>2</sub>.

27 After mitigation, proposed Project overlapping construction and operation impacts would  
28 be reduced but would continue to exceed significance thresholds for federal and state 1-  
29 hour NO<sub>2</sub> concentrations. These impacts would combine with impacts from concurrent  
30 related construction projects, which would already be cumulatively significant.  
31 Therefore, after mitigation, overlapping construction and operation of the proposed  
32 Project would make a cumulatively considerable and unavoidable contribution to an  
33 existing significant cumulative impact for NO<sub>2</sub>.

## 34 **5.2.1.4 Cumulative Impact AQ-3: The operation of the proposed** 35 **Project would make a cumulatively considerable** 36 **contribution to a criteria pollutant that exceeds the** 37 **SCAQMD peak day emission thresholds of significance –** 38 **Cumulatively Considerable**

### 39 **Impacts of Past, Present, and Reasonably Foreseeable Future** 40 **Projects**

41 Concurrent related projects at the Port and surrounding areas (see Table 5-1) would  
42 contribute to cumulatively significant impacts. The operational impacts of related  
43 projects would be cumulatively significant if their combined operational emissions would  
44 exceed the SCAQMD daily emission thresholds for operations. Because this almost



1 certainly would be the case for all analyzed criteria pollutants and precursors, the related  
2 projects would result in a significant cumulative air quality criteria pollutant impact.

### 3 **Contribution of the Proposed Project**

4 Proposed Project operational emissions would exceed SCAQMD significance thresholds  
5 for NO<sub>x</sub> and VOC in 2019, 2031, and 2048. These impacts would combine with impacts  
6 from concurrently operating related projects, which would already be cumulatively  
7 significant. As a result, without mitigation, proposed Project operational emissions  
8 would make a cumulatively considerable contribution to an existing significant  
9 cumulative impact for NO<sub>x</sub> and VOC.

### 10 **Mitigation Measures and Residual Cumulative Impacts**

11 After application of mitigation measure MM AQ-5 and implementation of lease measure  
12 LM AQ-1, proposed Project operational emissions would be reduced but would continue  
13 to exceed SCAQMD significance thresholds for NO<sub>x</sub> and VOC in all analysis years.  
14 These impacts would combine with impacts from concurrent related projects, which  
15 would already be cumulatively significant. Therefore, after mitigation, the proposed  
16 Project would make a cumulatively considerable and unavoidable contribution to an  
17 existing significant cumulative impact for NO<sub>x</sub> and VOC emissions.

## 18 **5.2.1.5 Cumulative Impact AQ-4: Proposed Project operations** 19 **would not make a cumulatively considerable contribution** 20 **to an off-site ambient air pollutant concentration that** 21 **exceeds a SCAQMD threshold of significance – Less Than** 22 **Cumulatively Considerable**

### 23 **Impacts of Past, Present, and Reasonably Foreseeable Future** 24 **Projects**

25 Concurrent related projects at the Port and surrounding areas (see Table 5-1) would  
26 contribute to cumulatively significant impacts. The operational impacts of related  
27 projects would be cumulatively significant if their combined operational ambient  
28 pollutant concentrations would exceed the ambient concentration thresholds for  
29 operations. Although there is no way to be certain if a cumulative exceedance of the  
30 thresholds would happen for any pollutant without performing dispersion modeling of the  
31 related projects, cumulative air quality impacts are likely to exceed the thresholds for  
32 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>2</sub>, and are unlikely to exceed the thresholds for CO because the  
33 entire SCAB is in attainment for CO, and Project level evaluations for other large Port  
34 projects have not found exceedances of the CO threshold, even at congested intersections.  
35 Consequently, operation of the related projects would result in a significant cumulative  
36 air quality impact for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>2</sub>.

### 37 **Contribution of the Proposed Project**

38 Operation of the proposed Project would not exceed the project-level significance  
39 thresholds for ambient concentrations of NO<sub>2</sub>, SO<sub>2</sub>, CO, PM<sub>10</sub>, or PM<sub>2.5</sub>. Although the  
40 related projects would likely result in significant cumulative impacts for PM<sub>10</sub>, PM<sub>2.5</sub>,  
41 SO<sub>2</sub>, and NO<sub>2</sub>, the proposed Project would not generate concentrations of these pollutants  
42 in excess of the significance thresholds. Therefore, the proposed Project would not make  
43 a cumulatively considerable contribution to a significant cumulative impact related to  
44 ambient pollutant concentrations.

## Mitigation Measures and Residual Cumulative Impacts

Mitigation is not required because the proposed Project would not make a cumulatively considerable contribution to ambient pollutant concentrations.

### 5.2.1.6 Cumulative Impact AQ-5: The proposed Project would not make a cumulatively considerable contribution to an objectionable odor at the nearest sensitive receptor – Less Than Cumulatively Considerable

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

There are temporary and semi-permanent sources of odors within the Port region, including mobile sources powered by diesel and residual fuels, and stationary industrial sources. Some individuals may find that diesel combustion emission odors are objectionable in nature, although quantifying the odorous impacts of these emissions on the public is difficult. Due to the mobile nature of emission sources and the distances between residents (sensitive receptors) and the sources in the Project vicinity, odorous emissions in the proposed Project region would be less than cumulatively significant.

#### Contribution of the Proposed Project

Operation of the proposed Project would increase air pollutants primarily due to vessel exhaust. The distance between the Shell Marine Oil Terminal and the nearest residents (approximately 0.9 mile southwest of the Project site) is expected to be far enough to allow for adequate dispersion of these emissions to below objectionable odor levels. Furthermore, the existing industrial setting of the proposed Project represents an already complex odor environment and the proposed Project would not likely result in changes to the overall odor environment in the vicinity. As a result, proposed Project operations would not make a considerable contribution to cumulative odor impacts.

## Mitigation Measures and Residual Cumulative Impacts

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

### 5.2.1.7 Cumulative Impact AQ-6: The proposed Project would make a cumulatively considerable contribution to expose receptors to significant levels of TACs –Cumulatively Considerable

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

The *Multiple Air Toxics Exposure Study* (MATES-IV) conducted by SCAQMD in 2015 (SCAQMD, 2015) reported that carcinogenic risk is particularly high in areas surrounding the Port, near Central Los Angeles, and near major transportation corridors and freeways. MATES IV estimated the existing cancer risk from toxic air contaminants (TACs) in the San Pedro and Wilmington areas to be approximately 480 in a million on a population-weighted average basis. Based on this information, cancer risks associated with TACs in the vicinity of the Port are considered to be a significant cumulative impact. Chronic and acute non-cancer cumulative impacts are also assumed to be significant.

1 The Port has implemented port-wide air pollution control measures through the 2006 and  
2 2010 versions of the Clean Air Action Plan (CAAP). Implementation of these measures  
3 has reduced the health risk impacts from Port-related sources. For example, San Pedro  
4 Bay port-related emissions of DPM have already dropped 87 percent since 2005 (POLA  
5 and POLB, 2017). MATES IV reports that between 2005 and 2012, carcinogenic risk  
6 near the Ports has dropped by 66 percent (SCAQMD, 2015). Future rules proposed by  
7 CARB and EPA and implementation of the measures in the 2017 CAAP would further  
8 reduce air emissions and associated cumulative health impacts from future Port  
9 operations. However, because future rules and many of the 2017 CAAP measures have  
10 not yet been implemented, they have not been accounted for in the emission calculations  
11 or health risk assessment for the proposed Project. It is unknown at this time how these  
12 future measures would reduce cumulative health risk impacts within the Project area.  
13 Therefore, airborne cancer and non-cancer impacts within the proposed project region  
14 must be considered to be cumulatively significant.

### 15 **Contribution of the Proposed Project**

16 Project operations would emit TAC emissions that could affect public health. A health  
17 risk assessment (HRA) evaluated four different types of health effects: individual cancer  
18 risk, acute noncancer hazard index, chronic noncancer hazard index, and population  
19 cancer burden. The HRA determined that the maximum incremental cancer risks, acute  
20 hazard index impacts, chronic hazard index impacts, and population cancer burden  
21 associated with construction and operation of the proposed Project would be less than  
22 significant.

23 As discussed in Section 3.1, Air Quality and Meteorology, the proposed Project would  
24 not increase cancer risk for any receptor above the significance threshold. However,  
25 although proposed Project cancer risk would be below the Project-level significance  
26 thresholds, the impacts would be greater than the CEQA baselines and would combine  
27 with impacts from the related projects, which would already be cumulatively significant.  
28 As a result, the proposed Project would make a cumulatively considerable contribution to  
29 an existing significant cumulative impact for cancer risk and population cancer burden.

30 Although the proposed Project would not increase non-cancer chronic or acute impacts  
31 above significance thresholds, the impacts would be greater than the future CEQA  
32 baseline and would combine with impacts from concurrent related projects and  
33 background risk levels, which would already be cumulatively significant. As a result,  
34 without mitigation, the proposed Project would make a considerable contribution to  
35 significant cumulative non-cancer chronic and acute health impacts.

### 36 **Mitigation Measures and Residual Cumulative Impacts**

37 Mitigation measures MM AQ-1 through MM AQ-4 would reduce proposed Project  
38 construction-related emissions and TACs, and mitigation measure MM AQ-5 would  
39 reduce operational emissions, including TACs. However, even with mitigation, the  
40 cancer risk and cancer burden increases would be greater than the CEQA baselines and  
41 would combine with impacts from the related projects, which would already be  
42 cumulatively significant. Therefore, the proposed Project would make a cumulatively  
43 considerable contribution to an existing significant cumulative impact for cancer risk,  
44 non-cancer chronic and acute health impacts, and population cancer burden.

## 5.2.1.8 Cumulative Impact AQ-7: The proposed Project would not conflict with or obstruct implementation of an applicable AQMP – Less Than Cumulatively Considerable

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

Concurrent related projects at the Port and surrounding areas (see Table 5-1) would result in significant cumulative impacts if they result in population growth or operational emissions that exceed the assumptions in SCAQMD's 2016 Air Quality Management Plan (AQMP) (SCAQMD, 2017). The related projects would be subject to regional planning efforts and applicable land use plans (such as the General Plan, Community Plans, or the Particulate Measurement Program) or transportation plans such as the Regional Transportation Plan and the Regional Transportation Improvement Program. Since the AQMP accounts for population projections that were developed by the Southern California Association of Governments (SCAG) and accounts for planned land use and transportation infrastructure growth, the related projects would be consistent with the AQMP. Therefore, the related projects would not result in significant cumulative impacts related to an obstruction of the AQMP.

### Contribution of the Proposed Project

Project operations would produce emissions of nonattainment pollutants primarily in the form of diesel exhaust from ocean going vessels.

The 2016 AQMP proposed emission reduction measures designed to bring the SCAB into attainment of the state and national ambient air quality standards. Many of these AQMP control measures are adopted as SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the region. Proposed sources would have to comply with all applicable SCAQMD rules and regulations; therefore, the proposed Project would not conflict with or obstruct implementation of the AQMP.

The attainment demonstration included in the 2016 AQMP accounts for the emissions generated by projected future growth at the Port. As a result, the proposed Project would not make a cumulatively considerable contribution to a cumulative impact in terms of conflicting with or obstructing implementation of an applicable AQMP.

### Mitigation Measures and Residual Cumulative Impacts

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

## 5.2.2 Biological Resources

### 5.2.2.1 Scope of Analysis

The region of analysis for cumulative effects on biological resources is the Port Complex and includes the Precautionary Area (within 25 nautical miles of Port). Past, present, and reasonably foreseeable future development that could contribute to significant cumulative impacts on terrestrial resources are those projects that involve land disturbance such as grading, paving, landscaping, construction of roads and buildings, and related noise and traffic impacts. Marine organisms could be affected by activities in the water, such as dredging, pile driving, and vessel traffic. Runoff of pollutants from construction and

1 operations activities on land into Harbor waters via storm drains or sheet runoff also has  
2 the potential to affect marine biota, at least near the storm drains.

### 3 **5.2.2.2 Cumulative Impact BIO-1: The proposed Project has the** 4 **potential to contribute to a cumulative loss of individuals,** 5 **or the reduction of existing habitat, of a state or federally** 6 **listed endangered, threatened, rare, protected, or candidate** 7 **species, or a Species of Special Concern or the loss of** 8 **federally designated critical habitat – Less Than** 9 **Cumulatively Considerable**

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

#### 14 **Impacts of Past, Present, and Reasonably Foreseeable Future** 15 **Projects**

16 Construction of past fill projects in the Harbor has reduced the amount of marine surface  
17 water present, and thus reduced foraging and resting areas for special-status bird species,  
18 but these projects have also added more land and structures that can be used for perching  
19 near the water. In 1979, LAHD began providing nesting habitat for the California least  
20 tern at a 15-acre nesting site. The location of this nesting site has changed over time due  
21 to Port development activities, and it is now on the southern tip of Pier 400. Shallow  
22 water areas to provide foraging habitat for the California least tern and other bird species  
23 have been constructed on the east side of Pier 300 and inside the San Pedro breakwater as  
24 mitigation for loss of such habitat from past projects. Established roosting areas for birds  
25 and the occasional harbor seal occur along the breakwaters, particularly the Middle  
26 Breakwater, which is isolated from human access is also available. Due to the isolated  
27 nature of the nesting, and construction of foraging habitat, impacts to special-status  
28 species and reduction in marine habitat would not be cumulatively significant.

29 Periodic maintenance dredging (Related Project #18), and other projects that involve  
30 dredging or in-water construction, including but not limited to, the TraPac Marine  
31 Terminal (#3), Outer Harbor Cruise Terminal Project (#19) Relocation of Jankovich  
32 Marine Fueling Station (#25), Everport Container Terminal Improvements (#2), Yang  
33 Ming Container Terminal (#15), Al Larson Boat Shop Improvement Project (#26),  
34 Middle Harbor Terminal Redevelopment (#48), and Piers G & J (#49) have the potential  
35 to adversely affect California least tern foraging during construction activities. These  
36 activities have affected or could affect a small portion of the Harbor during any single  
37 episode and are of limited duration for each project. Any significant impacts to the  
38 California least tern could be mitigated through timing of construction activities in areas  
39 used for foraging to avoid work when the California least terns are present. Those  
40 projects that are occurring at the same time but that are not near the nesting colony and  
41 would not be expected to have cumulatively significant effects on the California least  
42 tern. For these reasons, potential impacts to the California least tern would not be  
43 cumulatively significant. The nesting and/or foraging habitats of other special-status bird  
44 species would also not be expected to be negatively affected due to related project  
45 developments.



1 In-water/over-water construction activities (i.e., TraPac Marine Terminal [#3], the Outer  
2 Harbor Cruise Terminal Project [#19], San Pedro Public Market [#21], Relocation of  
3 Jankovich Marine Fueling Station [#25], Everport Container Terminal Improvements  
4 [#2], Yang Ming Container Terminal [#15], Middle Harbor Terminal Redevelopment  
5 [#48], Piers G & J [#49], Gerald Desmond Bridge [#51], Schuyler F. Heim Bridge [#55],  
6 and Cerritos Channel Bridge [#57]) could disturb special-status birds, in addition to the  
7 California least tern addressed above. Because these projects would occur at different  
8 locations throughout the Harbor and only some are likely to overlap in time, the birds  
9 could use other undisturbed areas in the Harbor, and few individuals would be affected at  
10 any one time. Impacts to other special-status bird species would be less than  
11 cumulatively significant.

12 Past, present, and future related projects have increased and will continue to increase  
13 vessel traffic. Ship strikes involving marine mammals have been documented for several  
14 listed (threatened or endangered) species under the ESA found in the eastern North  
15 Pacific, such as, blue whale, fin whale, humpback whale, sperm whale, gray whale  
16 (although the Eastern Pacific gray whale was delisted in 1994), minke whale, and killer  
17 whale. In Southern California, potential strikes to blue whales are of the most concern  
18 due to the migration patterns of blue whales and the established shipping channels. Blue  
19 whales normally pass through the Santa Barbara Channel en route from breeding grounds  
20 in Mexico to feeding grounds farther north. Additionally, blue whales have historically  
21 been a target of commercial whaling activities worldwide, which has reduced the  
22 population. In the North Pacific, pre-whaling populations were estimated at  
23 approximately 4,900 blue whales; the recent population estimate is approximately 1,600  
24 blue whales (Carretta et al., 2013). Along the California coast, there is evidence that  
25 despite vessel strikes blue whale abundance has increased over the past three decades  
26 (Calambokidis et al., 1990; Barlow 1995; Calambokidis, 1995; Carretta et al., 2009). The  
27 increase is too large to be accounted for by population growth alone and is more likely  
28 attributed to a shift in distribution. Incidental ship strikes and fisheries interactions are  
29 listed by NMFS as the primary threats to the California population. Despite ship strikes,  
30 the blue whale population is estimated to be at 97 percent of its carrying capacity,  
31 suggesting density dependence (not ship strikes) is the primary factor affecting  
32 population size (Monnahan et al., 2015). Other potential causes of whale mortality in the  
33 region include domoic acid, mid-frequency acoustic testing, ambient noise, and infectious  
34 disease (Abramson and Petras, 2009).

35 Historical data on whale strikes suggest that vessel-speed reduction would substantially  
36 reduce the potential for whale strikes because 80 percent of recorded strikes occurred  
37 with ships traveling faster than 12 knots. The Port has in place its VSRP, which lowers  
38 vessel speeds to 12 knots from Point Fermin out to 40 nautical miles from the Port. Port  
39 records show more than 90 percent participation in the VSRP, thereby reducing potential  
40 for present and future increases in whale strikes due to vessels entering the Harbor. In  
41 2013, the International Maritime Organization (IMO) amended the Traffic Separation  
42 Scheme (TSS) in the Santa Barbara Channel and the approach to the Ports of Los  
43 Angeles and Long Beach. Traffic Separation Schemes are maritime traffic management  
44 systems used to regulate vessel traffic in busy waterways, and to minimize the risk of  
45 head-on collisions. The TSS amendment reduced the width of the separation zone from  
46 two nautical miles to one nautical mile by shifting the inbound lane shoreward and away  
47 from known whale concentrations (NOAA, 2013). The outbound lane remained  
48 unchanged. Narrowing the separation zone is expected to reduce co-occurrence of ships  
49 and whales while maintaining navigational safety. Nonetheless, operation of many of the  
50 past projects have and present and future projects would result in increased vessel traffic

1 to and from the Harbor; therefore, the related projects could potentially increase whale  
2 mortalities from vessel strikes, which is considered to be a significant and unavoidable  
3 cumulative impact.

4 The past projects that have increased vessel traffic have also increased underwater sound  
5 in the Harbor and in the ocean from the vessel traffic lanes to Angels Gate and Queens  
6 Gate. Ongoing and future terminal upgrade and expansion projects (i.e., TraPac Marine  
7 Terminal [#3], Outer Harbor Cruise Terminal [#19], Everport Container Terminal [#2],  
8 China Shipping Development Project [#8], Yang Ming Container Terminal [#15], Berth  
9 164 [Valero] Marine Oil Terminal [#1], Berths 238-239 [PBF Energy] Marine Oil  
10 Terminal [#35], Middle Harbor Terminal Redevelopment [#48], and Piers G & J [#49])  
11 would increase vessel traffic and its associated underwater sound. As described in  
12 Section 3.2 Biological Resources, a baseline hydroacoustic study in Cerritos Channel (in  
13 both Los Angeles and Long Beach Harbors) recorded L90 values (sound levels that were  
14 exceeded 90 percent of the time during the measurement period) of 120 to 132 dB in  
15 2011. The increase in frequency of vessel sound events could cause some individual  
16 marine mammals to avoid the vessels as they move into, through, and out of the Harbor.  
17 The overall increase in the total number of vessels calling in the Port of Los Angeles  
18 from the cumulative projects identified in Table 5-1 would increase underwater noise  
19 levels. However, the increase is not expected to result in a significant cumulative impact,  
20 as a measurable change of 3 dB would require that the number of vessels would need to  
21 double in the Harbor. A 3 dB increase in noise levels above existing levels (120-132 dB)  
22 would not result in harassment or injury to marine mammals (noise levels would have to  
23 reach 160 dB to reach levels before harassment occurs (see Section 3.2.4.4 for a  
24 discussion of noise level impacts on marine mammals), and 180 dB before injury occurs.  
25 Therefore, no significant cumulative in-water noise impacts would be expected to occur  
26 that could affect sensitive species.

27 Some related projects such as the Berth 164 (Valero) Marine Oil Terminal (#1) and  
28 Berths 238-239 (PBF Energy) Marine Oil Terminal (#3), and potentially operation of  
29 other marine oil terminals in the Port Complex, could result in the increase in vessels  
30 transporting petroleum products, which would have the effect of increasing the risk that  
31 an accidental release or spill occurs. However, an increased risk of spills Port-wide  
32 doesn't necessarily equate to a cumulative impact to sensitive or protected species, as the  
33 risk of a potential spill is not the same as an actual spill. Concurrent spills of petroleum  
34 products are not likely to occur, therefore, cumulative impacts to sensitive or protected  
35 species from the related projects are not likely.

36 In-water construction activities, and particularly pile driving, would also result in  
37 underwater sound pressure waves that could affect marine mammals, if they are present  
38 and persist in the area. Any seals or sea lions present in the vicinity of Port construction  
39 projects would likely avoid the disturbance areas and thus would not be injured. In  
40 addition, in-water construction of related projects (Berth 164 [Valero] Marine Oil  
41 Terminal [#1], Everport Container Terminal Improvement Project [#2], Phillip 66 Marine  
42 Oil Terminal [#11], and Yang Ming Container Terminal [#15]), near the proposed Project  
43 could occur concurrently; however, concurrent construction activities in the Harbor are  
44 unlikely to have an adverse cumulative effect on the marine mammals, because ample  
45 area exists for any marine mammals that happen to be in the Harbor to move in order to  
46 avoid any disturbance. As a consequence, construction of the related projects would not  
47 be expected to result in significant cumulative impacts to marine mammals.

## Contribution of the Proposed Project

Construction of the proposed Project is not likely to result in the loss of individuals or the reduction of existing critical habitat of a state or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a Species of Special Concern. There are no known special-status species (such as the California least tern) or habitats at the Project site; therefore, construction of the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to special status species or their habitat (i.e., the Project's contribution is less than cumulatively considerable).

Mitigation measure MM BIO-1 requires the establishment of a Level B (harassment) safety zone and a Level A (injury) safety zone to be established around the pile driving site and monitored for marine mammals. This would reduce potential cumulative effects from the noise from pile driving associated with noise impacts to marine mammals. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to marine mammals related to impacts of pile driving noise. Residual impacts would be less than significant. Pile driving associated with other projects in the vicinity of the proposed Project (i.e., Everport Container Terminal Improvement Project [#2], YTI Container Terminal [#5], and Yang Ming Container Terminal [#15]) are located far enough away or space in time that additive noise impacts from in-water activities are not anticipated. As such, possible concurrent pile driving activities with these projects are not expected to be cumulatively significant. However, the Berth 164 (Valero) Marine Oil Terminal (#1) is located to the immediate north of the Shell Marine Oil Terminal, and construction of the new wharf at Berth 164 would likely overlap with construction of the first platform at Berth 168 under the proposed Project. In addition, there is a potential for Berths 150-151 (Phillip 66) Marine Oil Terminal (#11) construction to overlap with Project construction. With implementation of mitigation measure MM BIO-1, noise impacts to marine mammals would not be expected to be cumulatively significant.

Vessel traffic would increase during operation of the proposed Project; therefore, the proposed Project could result in slight increase in overall noise. However, impacts are not considered cumulatively considerable because this would not lead to the loss of individuals or habitat of sensitive species. The small increase in vessels calling at the Shell Marine Oil Terminal relative to the total number of vessels calling in the Port of Los Angeles would not result in a measurable change in overall noise (the number of vessels would need to double to increase sound in the harbor by 3 dB, and even then, the underwater noise levels would not reach a point that could result in harassment or injury). Further, as discussed above, the increase in underwater noise from the related projects would not represent a significant cumulative impact. Therefore, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from underwater noise.

Because vessel traffic could increase as part of the proposed Project, there would be a proportional increase in the potential for vessel strikes with marine mammals and sea turtles. The increase in vessel traffic associated with the proposed Project as compared with the CEQA baseline would slightly increase the likelihood of a vessel collision with a marine mammal or sea turtle, which could result in injury or mortality. The related projects could result in a significant cumulative impact to marine mammals related to vessel strikes, as discussed above. The proposed Project would increase the likelihood of a vessel collision with a marine mammal or sea turtle only slightly, and this increase is less than cumulatively considerable. Therefore, operation of the proposed Project would

1 not make a cumulatively considerable contribution to a significant cumulative impact to  
2 marine mammals (the potential contribution to whale mortality) from vessel strikes under  
3 CEQA.

#### 4 **Mitigation Measures and Residual Cumulative Impacts**

5 Mitigation measure MM BIO-1 requires the establishment of a Level B (harassment)  
6 safety zone and a Level A (injury) safety zone to be established around the pile driving  
7 site and monitored for marine mammals. This would reduce potential cumulative effects  
8 from pile driving due (in conjunction with pile driving associated with the Valero Marine  
9 Oil Terminal loading platform (at Berth 164 – Related Project #1) and the Phillip 66  
10 Marine Oil Terminal (#11) loading platform to marine mammals and ensure that the  
11 proposed Project would not make a cumulatively considerable contribution to a  
12 significant cumulative impact related to pile driving. Residual impacts would be less  
13 than significant.

14 The proposed Project would not make a cumulatively considerable contribution to a  
15 significant impact to marine mammal from vessel strikes due to the low probability of a  
16 vessel strike. Although not required to reduce impacts to biological resources, mitigation  
17 measure MM AQ-5 requiring ships calling at the Shell Marine Oil Terminal to participate  
18 in the VSRP would reduce the potential for vessel collision with marine mammals for the  
19 proposed Project.

20 Since a cumulative impact to sensitive species or protected species is not likely to occur,  
21 a spill from a Project-related vessel would not represent a substantial contribution to a  
22 significant cumulative impact to biological resources.

#### 23 **5.2.2.3 Cumulative Impact BIO-2: The proposed Project has the** 24 **potential to result in a reduction or alteration of a state,** 25 **federally, or locally designated natural habitat, special** 26 **aquatic site, or plant community, including wetlands – Less** 27 **Than Cumulatively Considerable**

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

#### 32 **Impacts of Past, Present, and Reasonably Foreseeable Future** 33 **Projects**

34 Essential Fish Habitat (EFH) has been and would be lost due to past, present, and future  
35 landfill projects in the Harbor. The EFH protection requirements began in 1996, and  
36 thus, only apply to projects since that time. The projects in Table 5-1 that could  
37 potentially result in a loss of EFH include the TraPac Marine Terminal (#3), China  
38 Shipping Development Project (#8), Yang Ming Container terminal (#15), Middle Harbor  
39 Terminal Redevelopment (#48), and Piers G & J (#49) (see Table 5-1 and Figure 5-1),  
40 and any other project that would result in fill. The loss of EFH since 1996 is significant  
41 but mitigable, as the use of mitigation bank credits for the loss of marine habitat offset  
42 the losses of EFH. Impacts of fill for the future projects would also be offset by use of  
43 mitigation bank credits. Temporary disturbances to EFH also would occur during in-  
44 water construction activities from cumulative projects: Everport Container Terminal  
45 Improvements (#2), China Shipping Development Project (#8), YTI Container Terminal

1 Improvements (#5), Yang Ming Container Terminal Improvements (#15), Middle Harbor  
2 Terminal Redevelopment (#48), and Piers G & J (#49). These disturbances occur at  
3 specific locations that are scattered in space and time across the harbor and would not  
4 likely cause a significant impact on EFH.

5 Thus, cumulative impacts on EFH would be less than significant from past, present, and  
6 reasonably foreseeable future projects.

7 As discussed in Section 3.2, Biological Resources, natural habitats, special aquatic sites  
8 (e.g., eelgrass beds, kelp, mudflats), and plant communities (wetlands) have a limited  
9 distribution and abundance in the harbor. Prior to agreements to preserve natural habitats  
10 such as mitigation credit systems, losses of eelgrass, kelp, mudflats, and saltmarsh from  
11 early harbor development projects were not documented but were likely to have occurred  
12 due to the physical changes to the Port. Therefore, cumulative impacts of construction  
13 activities on natural habitats are considered significant.

#### 14 **Contribution of the Proposed Project**

15 There are no wetlands or riparian habitats at the Project site or in the vicinity that would  
16 be affected by construction of the proposed Project. Wharf demolition and replacement  
17 activities would temporarily disrupt marine biota; however, the impacts would be limited  
18 in areal extent and duration and the proposed Project would not make a cumulatively  
19 considerable contribution to a significant impact.

20 Eelgrass occurs in several locations in the Port, including adjacent to Berth 169.  
21 Increased turbidity during pile removal, pile installation, and/or dredging could smother  
22 or otherwise inhibit eelgrass growth. This impact is considered significant and the  
23 proposed Project would make a cumulatively considerable contribution to a significant  
24 impact.

25 Operation of the proposed Project is not expected to result in the permanent loss of  
26 marine habitat, or the reduction of marine habitat (the Project does not involve fill); it  
27 would not make a cumulatively considerable contribution to the significant cumulative  
28 impact.

#### 29 **Mitigation Measures and Residual Cumulative Impacts**

30 Compliance with the California Eelgrass Mitigation Policy (mitigation measure MM  
31 BIO-2), would reduce the potential for impacts to eelgrass, and the proposed Project's  
32 contribution to a significant cumulative impact would not be cumulatively considerable.

### 33 **5.2.2.4 Cumulative Impact BIO-3: The proposed Project would not** 34 **result in a cumulatively considerable disruption of local** 35 **biological communities – Less Than Cumulatively** 36 **Considerable**

37 Cumulative Impact BIO-3 represents the potential of the proposed Project along with  
38 other projects to cause a cumulatively substantial disruption of local biological  
39 communities (i.e., from the introduction of noise, light, or invasive species).

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

### Construction

Construction of past projects in the Harbor has involved in-water disturbances such as dredging and wharf construction that removed surface layers of soft-bottom habitat, and temporarily removed or permanently added hard substrate habitat (i.e., piles and rocky dikes). These disturbances altered the benthic habitats present at the location of the specific projects, but effects on benthic communities were localized and of short duration, as benthic and invertebrate communities are shown to recolonize quickly following dredging. Because these activities affected a small portion of the Harbor during any single episode, and recovery has occurred or is in progress, biological communities in the Harbor have not been substantially degraded. Similar construction activities and impacts (i.e., wharf construction/reconstruction and dredging) would occur for these cumulative related projects that are currently under way and for some of those that would be constructed in the future, including the Everport Container Terminal Improvements (#2), TraPac Marine Terminal (#3), China Shipping Development Project (#8), Yang Ming Container Terminal (#15), Al Larson Boat Shop Improvement Project (#26), Middle Harbor Terminal Redevelopment (#48), and Piers G & J (#49)]. Because recolonization of dredged areas and new riprap and piles begins immediately, and within a short time provides a food source for other species such as fish, multiple projects that are spread over time and space within the Harbor would not be expected to substantially disrupt benthic communities. Construction disturbances caused by the cumulative projects at specific locations in the water and at different times can cause fish and marine mammals to avoid the work area but are not expected to substantially alter the distribution and abundance of these organisms in the Harbor and would not substantially disrupt biological communities. Turbidity results from in-water construction activities occurring in the immediate vicinity of the work and lasts for short durations after the activities that disturb bottom sediments have been completed. Effects on marine biota are thus localized to relatively small areas of the Harbor and are of limited duration for each project. Thus, those projects that are occurring at the same time but that are not nearby would not be expected to have additive effects.

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

Furthermore, based on biological baseline studies described in Section 3.2, the benthic marine resources of the Harbor have not declined during Port development activities occurring since the late 1970s. An assessment of dominant species in the Harbor indicates a gradient of increasing environmental stress (enrichment/contamination) from the Outer Harbor to Inner Harbor and from basins to slips (MEC and Associates, 2002). In 2013–2014, infaunal abundance in the Port Complex was higher in summer than in

1 spring, at Outer Harbor stations than at Inner Harbor stations, and at shallow stations than  
2 at deep stations (MBC, 2016). Overall, water circulation appears to influence infaunal  
3 communities. Abundance, species richness, diversity, and biomass were lower in the  
4 Inner Harbor, where most of the stations sampled were in dead-end slips and basins, than  
5 in the Outer Harbor.

6 While major dredging and filling activities within the harbor (including TraPac Marine  
7 Terminal [#3], Everport Container Terminal Improvements (#2), China Shipping  
8 Development Project [#8], Yang Ming Container Terminal [#15], Al Larson Boat Shop  
9 Improvement Project [#26], Middle Harbor Terminal Redevelopment [#48], and Piers G  
10 & J [#49]) can disturb benthic communities, recolonization of disturbed marine  
11 environments begins rapidly and is characterized by high production rates of a few  
12 colonizing species. However, establishment of a climax biological community could take  
13 several years.

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

### 17 **Vessel Traffic**

18 Cumulative marine terminal projects (i.e., Everport Container Terminal Improvements  
19 [#2], TraPac Marine Terminal [#3], China Shipping Development Project [#8], Yang  
20 Ming Container Terminal [#15], Middle Harbor Terminal Redevelopment [#48], and  
21 Piers G & J [#49]) that involve vessel transport of cargo into and out of the Harbor, as  
22 well as the Berths 238-239 (PBF Energy) Marine Oil Terminal Project (#35) have  
23 increased vessel traffic in the past and would continue to do so in the future. The past  
24 vessel calls are assumed to have potentially introduced invasive exotic species into the  
25 Harbor through ballast water discharges and via their hulls. Ballast water discharges are  
26 now regulated so that the potential for introduction of invasive exotic species by this  
27 route has been greatly reduced. The potential for introduction of invasive exotic species  
28 via vessel hulls has been reduced through the use of antifouling paints and periodic  
29 cleaning of hulls to minimize frictional drag from growth of organisms keeps this source  
30 low. While invasive exotic species are present in the Harbor, there is no evidence that  
31 these species have disrupted the biological communities in the Harbor. Biological studies  
32 conducted in the Harbor continue to show the existence of diverse and abundant  
33 biological communities. However, given that invasive exotic species have become  
34 established in the Harbor over time, operation of many of the past, present, and  
35 reasonably foreseeable future projects are considered to have resulted in significant  
36 cumulative impacts with respect to invasive species.

### 37 **Contribution of the Proposed Project**

#### 38 **Construction**

39 Construction activities in the study area, particularly pile driving, could cause short-term  
40 impacts on individuals (i.e., marine mammals and fishes) in the immediate vicinity of pile  
41 driving or other construction activities (including sources of noise and light).  
42 Construction-related impacts on marine biological communities are expected to be  
43 temporary, lasting through the construction period and for a short time thereafter. These  
44 include physical disturbance, underwater and overwater noise, and turbidity resulting  
45 from dredging, pile removal, and pile driving. Project-level impacts on biological  
46 communities resulting from increased noise, changes in light, and the introduction of  
47 invasive species are addressed under Impact BIO-3. Due to the limited extent of acoustic

1 impacts, many aquatic communities would not be directly affected (i.e., algae, epibenthic  
2 invertebrates, and benthos) due to their distribution throughout the Harbor (marine  
3 mammals, and fishes), and the temporary construction period, the Project's contribution  
4 to effects to marine biological resources would be less than cumulatively considerable.

5 Considering the *Caulerpa* survey requirement and absence of *Caulerpa* in the Harbor to  
6 date, and with implementation of the aforementioned *Caulerpa* protocols, the potential  
7 for proposed underwater construction activities to spread this species at the project site is  
8 unlikely.

9 As a result, the proposed Project construction activities would not make a cumulatively  
10 considerable contribution to a significant cumulative impact to the local biological  
11 community.

## 12 **Vessel Traffic/Operations**

13 The number of tank vessels calling at Berths 167–169 could increase as part of the  
14 proposed Project. Many exotic species have already been introduced into the Harbor, and  
15 many of these introductions occurred prior to implementation of ballast water regulations.  
16 These regulations reduce the potential for introduction of non-native species from future  
17 vessel calls. Further, the potential for introduction of invasive exotic species via vessel  
18 hulls has been minimized through the use of antifouling paints and periodic cleaning of  
19 hulls to minimize frictional drag from growth of organisms. With ballast water control  
20 regulations and vessel hull coating with antifouling paints and cleaning intervals, the  
21 proposed Project has a low potential to increase the introduction of nonnative species into  
22 the Harbor that could substantially disrupt local biological communities. Therefore, the  
23 proposed Project is not expected to make a cumulatively considerable contribution to a  
24 significant cumulative impact regarding invasive species.

## 25 **Mitigation Measures and Residual Cumulative Impacts**

26 Although construction noise impacts on fishes would not be significant, MM BIO-1,  
27 which requires initiating pile driving with a soft-start to minimize noise impacts on  
28 marine mammals, would also minimize adverse effects to fishes near construction  
29 activities because they would likely leave the area.

30 The proposed Project would not be expected to make a cumulatively considerable  
31 contribution to a significant impact to the biological community from in-water  
32 construction activities or runoff from construction and operation.

33 Although the proposed Project includes an increase in vessel calls, vessel hulls are  
34 generally coated with antifouling paints and cleaned at intervals to reduce the frictional  
35 drag from growths of organisms on the hull, which would reduce the potential for  
36 transport of exotic species. In addition, legal requirements regarding ballast waters  
37 would also reduce the introduction of invasive species. For these reasons, the proposed  
38 Project has a low potential to increase the introduction of nonnative species into the  
39 Harbor that could substantially disrupt local biological communities. Consequently, the  
40 proposed Project would not make a cumulatively considerable and unavoidable  
41 contribution to a significant impact to biological resources relative to invasive species.



## 5.2.3 Greenhouse Gas Emissions

### 5.2.3.1 Scope of Analysis

Scientific evidence indicates a trend of warming global surface temperatures over the past century due at least partly to the generation of greenhouse gas (GHG) emissions from human activities as discussed in Section 3.3, Greenhouse Gas Emissions. Some observed changes include shrinking glaciers, thawing permafrost, and shifts in plant and animal ranges. Credible predictions of long-term impacts from increasing GHG levels in the atmosphere include sea level rise, changes to weather patterns, changes to local and regional ecosystems including the potential loss of species, and significant reductions in winter snow packs. These and other effects could have environmental, economic, and social consequences on a global scale. Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. According to the IPCC's Climate Change 2014 Synthesis Report (IPCC, 2014), global anthropogenic emissions of GHGs in 2010 were approximately 49.0 gigatonnes of carbon dioxide equivalent (CO<sub>2</sub>e). In California alone, CO<sub>2</sub>e emissions totaled approximately 441.5 million metric tons or 0.5 gigatonnes in 2014 (CARB, 2016).

### 5.2.3.2 Cumulative Impact GHG-1: The proposed Project would make a cumulatively considerable contribution, either directly or indirectly, to GHG emissions that would exceed the SCAQMD 10,000 mty CO<sub>2</sub>e threshold – Cumulatively Considerable

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

Past, present, and reasonably foreseeable future projects in the area (Table 5-1) have generated and will continue to generate GHGs from the combustion of fossil fuels and the use of coatings, solvents, refrigerants, and other products. Because of the long-lived nature of GHGs in the atmosphere and the global nature of GHG emission impacts, no specific quantitative level of GHG emissions from related projects in the region or state-wide has been identified below which no impacts would occur. It is therefore conservatively assumed that related projects result in a significant cumulative impact.

#### Contribution of the Proposed Project

The proposed Project would exceed SCAQMD's 10,000 mty threshold when the terminal operations accommodate 139 vessel calls annually. Emissions for all source categories would increase over the life of the proposed Project because of terminal throughput increase. Overall tanker vessel emissions would increase because of terminal throughput increase.

Impacts of the proposed Project would combine with impacts from related projects, which would already be cumulatively significant. As a result, without mitigation, impacts from proposed Project construction and operation would make a cumulatively considerable contribution to a significant cumulative impact related to GHG and global climate change.

## Mitigation Measures and Residual Cumulative Impacts

Proposed Project impacts would combine with impacts from related projects, which would already be cumulatively significant. Some mitigation measures required to reduce air quality impacts during construction and operation (specifically, MM AQ-2 and MM AQ-5) would have the effect of reducing fossil fuel consumption and therefore reducing GHG emissions. However, GHG emissions would still remain above the significance threshold. There are no other feasible mitigation measures available to reduce the generation of GHG emissions from the proposed Project. As a result, after mitigation, GHG emissions from the proposed Project would make a cumulatively considerable contribution to a significant cumulative impact related to GHG and global climate change.

## 5.2.4 Hazards

### 5.2.4.1 Scope of Analysis

The geographic scope for cumulative impacts associated with accidental spills of hazardous materials encompasses the overall Port Complex and Precautionary Area. Past, present, and reasonably foreseeable future projects that could contribute to these cumulative impacts include those projects that transport hazardous materials in the vicinity of the Port Complex.

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

### 5.2.4.2 Cumulative Impact RISK-1a: Construction of the proposed Project would not make a cumulatively considerable increase in the probable frequency or severity of consequences to people or property, as a result of a potential accidental release of a hazardous substance – Less Than Cumulatively Considerable

Cumulative Impact RISK-1a represents the risk associated with the construction of the proposed Project when combined with past, present, and reasonably foreseeable future projects to substantially increase the likelihood of an accidental release of hazardous materials.

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

Construction of other present and reasonably foreseeable future projects in the Port would result in an increase in hazardous materials and petroleum products that could potentially spill during construction activities. Such spills could result in soil contamination, groundwater contamination, marine water quality contamination, and health and safety impacts on onsite personnel and the public. However, construction of the related projects must comply with all existing hazardous material regulations in place through the local, state, and federal government. These regulations are in place to reduce the potential of accidents, accidental releases of hazardous materials and to minimize the public health impacts should one occur. All construction vessels are required to be marked and have lighting in accordance with USCG regulations. Further, Port Pilots and tug operators are experienced in navigating vessels in proximity to in-water construction.

1 Although the related projects cannot completely eliminate the probability associated with  
2 an accidental release or spill during construction activities, the existing regulations reduce  
3 the overall probability and minimize the impacts during a release. Therefore, the related  
4 projects would not result in a significant cumulative impact with regard to increasing the  
5 likelihood of an accidental release of hazardous material during construction activities.

### 6 **Contribution of the Proposed Project**

7 Construction activities at the Shell Marine Oil Terminal have the potential to increase  
8 vessel traffic congestion in the vicinity. Various marine vessels such as pile-driving  
9 barges, barges transporting materials, and associated tugs could be used during the wharf  
10 demolition and platform construction process. These vessels, as well as equipment on the  
11 barges (pile-driver, cranes, generators) would contain fuel tanks, lube oils, hydraulic  
12 fluids that have the potential to contribute to spills but at a much lower magnitude than  
13 the tank vessels calling at the terminal. However, the same regulations and procedures  
14 governing in-water construction and navigation (LAHD safe navigation rules, Local  
15 Notice to Mariners, Vessel Traffic Management System, etc.) would apply to in-water  
16 construction of the proposed project.

17 Therefore, the incremental contribution of the proposed Project to cumulative impacts  
18 associated with accidental release of hazardous materials from construction would be less  
19 than significant and would not make a cumulatively considerable contribution to a  
20 significant cumulative impact.

### 21 **Mitigation Measures and Residual Cumulative Impacts**

22 The contribution of the proposed Project to accidental release of hazardous materials  
23 impacts during construction would be less than cumulatively considerable. No mitigation  
24 measures are required.

## 25 **5.2.4.3 Cumulative Impact RISK-1b: Operation of the proposed** 26 **Project would not make a cumulatively considerable** 27 **increase in the probable frequency or severity of** 28 **consequences to people or property, as a result of a** 29 **potential accidental release of a hazardous substance –** 30 **Less Than Cumulatively Considerable**

31 Cumulative Impact RISK-1b represents the risk associated with the operation of the  
32 proposed Project when combined with past, present, and reasonably foreseeable future  
33 projects to substantially increase the likelihood of an accidental release of hazardous  
34 materials.

### 35 **Impacts of Past, Present, and Reasonably Foreseeable Future** 36 **Projects**

37 Many of the past, present, and reasonably foreseeable future projects include typical Port  
38 land uses that may store large quantities of hazardous materials.

39 Besides the proposed Project, other present and reasonably foreseeable future projects in  
40 the Port, such as marine oil terminal improvement projects at Berth 164 (Valero) Marine  
41 Oil Terminal (#1), Berths 150-151 (Phillip 66) Marine Oil Terminal (#11) and Berths  
42 238-239 (PBF Energy) Marine Oil Terminal (#35), or other Port projects that involve  
43 handling of liquid bulk materials, would result in an increase in transport of hazardous

1 materials and petroleum products that could potentially increase the risks of a potential  
2 accidental release.

3 However, the related projects, and in particular other marine oil terminals must comply  
4 with all existing regulations governing the handling and transport of petroleum products,  
5 terminal and vessel security, and USCG procedures. In addition, tank vessels are  
6 required to comply with navigational safety protocols and requirements, including speed  
7 limits, use of Port Pilots, and use of assist tugs.

8 These regulations and procedures are in place to reduce the potential of accidental  
9 releases of hazardous materials, to ensure that adequate emergency response equipment  
10 and capabilities are in place at all times, and to minimize the public health impacts should  
11 an accident one occur. Although projects cannot completely eliminate the probability  
12 associated with an accidental release, the existing regulations reduce the overall  
13 probability and minimize the impacts during a release. Implementation of these  
14 preventative measures is required through various regulations and procedures, would  
15 minimize the adverse impacts of a release, and would minimize the potential for additive,  
16 proximate, or sequential spills to cumulatively impact members of the public. Therefore,  
17 the cumulative impact of risk from accidental releases is less than significant.

### 18 **Contribution of the Proposed Project**

19 The presence of petroleum products and handling of petroleum products associated with  
20 the continued operation of the Shell Marine Oil Terminal after renovation under the  
21 proposed Project would continue to result in the potential for accidental releases.  
22 Because the proposed Project would improve the terminal's loading and unloading  
23 infrastructure and would improve safety, it would not increase the potential severity of an  
24 accidental release (e.g. the proposed Project would not increase in the maximum size or  
25 capacity of tank vessels that would serve the terminal). The proposed Project would  
26 extend a new 30-year for the terminal, which would allow for a projected 166 vessel calls  
27 by 2048, which is 80 vessel calls greater than the baseline. Thus, the proposed Project  
28 would increase the frequency of a potential accidental product release, which is  
29 considered significant at a Project-level. However, as discussed above, because there is a  
30 minimal likelihood for cumulative (additive, proximate, or sequential) product released  
31 from multiple spills from different related projects, the cumulative impact associated with  
32 accidental release is less than significant. Therefore, the project's contribution to the  
33 cumulative impact would be less than cumulatively considerable.

### 34 **Mitigation Measures and Residual Cumulative Impacts**

35 One of the main purposes of the MOTEMS upgrades is to increase the operational safety  
36 of the terminal. The requirements of MOTEMS are considered to be state-of-the-art and  
37 should mitigate the potential for accidents at the facility to the maximum extent feasible.  
38 Therefore, operation of the proposed Project would not make a cumulatively considerable  
39 contribution to increase the probable frequency or severity of consequences to people or  
40 property, as a result of a potential accidental release of a hazardous substance.

#### 5.2.4.4 Cumulative Impact RISK-2: The proposed Project would not result in a measurable increase in the probability of a terrorist attack, which would result in adverse consequences to the Project site and nearby areas – Less Than Cumulatively Considerable

Cumulative Impact RISK-2 represents the potential of the proposed Project along with other cumulative projects to increase the risk that a potential terrorist action would result in adverse consequences to areas near the Project site.

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

Historical experience provides little guidance in estimating the probability of a terrorist action on a terminal facility. The Port of Los Angeles is one of the world's largest trade gateways, and the economic contributions to the regional and national economy are substantial.

The likelihood of a terrorist event would not be affected by cumulative infrastructure growth or throughput increases at the Port Complex, but would be based on the motivations of terrorists. Because there are no measurable and/or definitive links between cargo throughput and the consequences of a terrorist action, and because many factors other than cargo throughput would be the likely or primary motivations that would dictate the probability and consequences of a terrorist action, the infrastructure growth and cargo throughput increases and increased activity at the Port associated with the related projects would not result in a significant cumulative impact related to an increased probability of a terrorist action.

##### Contribution of the Proposed Project

As described in Section 3.4, the probability of a terrorist attack on the proposed Project facilities is not likely to appreciably change over current conditions. It is possible that the increase in vessel traffic over baseline could lead to a greater opportunity of a successful terrorist attack; however, existing Port security measures described in Section 3.4 would counter the potential for unauthorized access to the terminal. Further, such an act would be dependent on the motivations of any particular terrorist rather than a function of throughput or vessel calls.

Based on this, the proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

##### Mitigation Measures and Residual Cumulative Impacts

The proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact. Therefore, no mitigation measures would be required.

## 5.2.5 Energy Conservation

### 5.2.5.1 Scope of Analysis

The geographic scope for cumulative impacts related to energy conservation encompasses the overall Port Complex and region. Past, present, and reasonably foreseeable future projects required and will continue to require energy for their construction and operation. Energy is required for virtually every day to day activity in

1 the region, be it for transportation, manufacturing, construction, agricultural production,  
2 material distribution, or personal conveniences. These ongoing activities and their  
3 associated energy requirements are supported in part by various marine oil terminals in  
4 the Port, and by other energy providers throughout and beyond the region. The majority  
5 of the energy that serves the region is derived from fossil fuels. Although the demand for  
6 non-fossil fuel energy sources is increasing, fossil fuels are a finite resource, and it is  
7 therefore important that energy be used in an efficient manner.

## 8 **5.2.5.2 Cumulative Impact: The proposed Project would not result** 9 **in the wasteful, inefficient, or unnecessary consumption of** 10 **energy, or wasteful use of energy resources, during project** 11 **construction or operation – Less Than Cumulatively** 12 **Considerable**

### 13 **Impacts of Past, Present, and Reasonably Foreseeable Future** 14 **Projects**

15 Construction and operation of past, present, and reasonably foreseeable future projects  
16 (Table 5-1) has resulted in, and will continue to cause, demands for energy, in particular  
17 liquid fuels. These demands are currently accommodated by existing facilities as  
18 provided by local and regional marine oil terminals, refineries, pipelines and storage  
19 facilities. The Related Projects within the ports and in adjacent communities involve new  
20 or expanded uses that have resulted or will result in additional demands on energy.

21 According to the California Energy Commission, the State of California consumed about  
22 14 billion gallons of gasoline in 2015, with demand for gasoline projected to decline to  
23 about 11 billion gallons per year by 2024 (CEC, 2017). California consumed about 3  
24 billion gallons of diesel fuel in 2015, with demand expected to increase to about 3.2  
25 billion gallons per year by 2025. Demand for gasoline is predicted to continue to decline  
26 over the next 10 years and demand for diesel fuel will remain stable or increase slightly.  
27 Although some future related projects would increase their fuel consumption related to  
28 increased levels of activity, others would be expected to reduce vehicular fuel use by  
29 encouraging the use of alternative modes of transportation and other project features. On  
30 balance, because fuel use is not predicted to increase substantially, Southern California is  
31 expected to have adequate fuel supplies to accommodate the related projects, and those  
32 projects would not have a significant cumulative impact with respect to petroleum fuel  
33 energy supplies or infrastructure.

### 34 **Contribution of the Proposed Project**

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

41 The proposed Project operations would consume more fossil fuel (diesel, gasoline, and  
42 LPG) than under baseline conditions because more tank vessels are projected by 2048 to  
43 increased transport petroleum products to and from the terminal. As discussed in Section  
44 3.5, Energy Conservation, the proposed Project would not substantially adversely affect  
45 fuel consumption per bbls handled by the Terminal, and would therefore result in no  
46 meaningful change in energy efficiency. Because fuel would not be used in a wasteful

1 manner, the proposed Project's impacts on fossil fuel energy resources during both  
2 construction and operation would be less than significant.

3 Future terminal operations would be subject to the Port of Los Angeles' conservation and  
4 sustainability goals, standards, and initiatives, as set forth in the Sustainability  
5 Assessment and Plan Formation (LAHD, 2008). These include a number of programs  
6 under the CAAP (currently being updated), various greenhouse gas reduction and zero-  
7 emissions programs, recycling and other sustainability programs, and the Port Leasing  
8 Policy.

9 In addition, as discussed in Section 3.5, Energy Conservation, electricity resources and  
10 reserves at LADWP will adequately provide electricity for all of its customers, including  
11 the proposed Project, through the current Power IRP planning horizon of 2040 (LADWP,  
12 2017); and LADWP does not forecast that peak demand will reach capacity through  
13 2040. The proposed Project's estimated annual electrical consumption represents a  
14 negligible fraction of LADWP's generating capacity.

15 Therefore, the proposed Project would not make a cumulatively considerable contribution  
16 to a significant cumulative impact with respect to energy.

### 17 **Mitigation Measures and Residual Cumulative Impacts**

18 The proposed Project would not use energy in a wasteful or inefficient manner, and its  
19 contribution to impacts on energy resources would be less than cumulatively  
20 considerable. No mitigation measures are required.

21  
22