Chapter 5
Cumulative Analysis

Chapter Summary

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

Chapter 5, Cumulative Analysis, provides the following:

- A description of the geographic scope of cumulative impacts;
- A description of California Environmental Quality Act (CEQA) policies that apply to the cumulative impact analysis;
- A description of the past, present and reasonable foreseeable future projects in the surrounding area;
- An impact analysis of both the cumulative impacts related to the Proposed Project and alternatives; and
- A description of any mitigation measures proposed to reduce any potential impacts and residual cumulative impacts, as applicable.

Key Points of Chapter 5

The Proposed Project would construct an improved Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS)-compliant marine oil terminal and associated upland improvements at Berths 148-151. Its operations would be generally consistent with other uses in the Project area, which include liquid bulk, dry bulk, and container terminals. The Proposed Project would make cumulatively considerable contributions to significant cumulative impacts after mitigation in the following resource area under CEQA:

- Air Quality and Meteorology

The No Project Alternative (Alternative 1) would not contribute to any significant cumulative impacts as marine oil terminal (MOT) operations at the Project site would be terminated and the site would be idle. The Reduced Project Alternative (Alternative 2) would contribute to the same cumulative impacts as the Proposed Project.

5.1 Introduction

This chapter presents CEQA requirements for a cumulative impact analysis and analyzes the potential for the Proposed Project or an alternative to contribute to a cumulatively considerable effect when its impacts are combined with those of other past, present, and reasonably foreseeable future projects. Following the presentation of the requirements related to the cumulative impact analyses and a description of the related projects (Sections 5.1.1 and 5.1.2, respectively), the analysis in Section 5.2 addresses each of the resource areas for which the Initial Study/Notice of Preparation (IS/NOP) concluded that the Proposed Project or an alternative may make a cumulatively considerable contribution to a significant cumulative impact when combined with impacts from other reasonably foreseeable projects in the area.

5.1.1 Requirements for Cumulative Impact Analysis

CEQA Guidelines (14 California Code of Regulations [CCR] §15130) require a reasonable analysis of the cumulatively considerable impacts of a proposed project. Cumulative impacts are defined by CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines §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 [CFR] §1508.7 and State CEQA Guidelines §15355(b)).

Furthermore, according to State CEQA Guidelines §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 [Environmental Impact Report] 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, §5064(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.*

Therefore, the following cumulative impact analysis focuses on whether the impacts of the Proposed Project or alternatives make a cumulatively considerable contribution to a significant cumulative impact within the context of impacts caused by other past, present, or reasonably foreseeable future projects. The cumulative impact scenario considers other projects proposed within the area defined for each resource that would have the potential to contribute to significant cumulative impacts.

For this Draft EIR, related projects in the general area with a potential to contribute to cumulative impacts were identified using one of two approaches: the "list" methodology or the "projection" methodology. The Biological Resources, Energy, and Hazards and

Hazardous Materials resource areas were analyzed using a list of closely related projects that would be constructed in the cumulative geographic scope, which differs by resource and sometimes for impacts within a resource; cumulative regions of influence are documented in Section 5.2 below. The Air Quality and Meteorology and Greenhouse Gas Emissions analyses use a combined list and projection approach as described below. The list of related projects is provided in Section 5.1.2 below.

5.1.2 Projects Considered in the Cumulative Analysis

Table 5-1 lists 37 recent, current, or reasonably foreseeable future projects (approved or proposed) identified within the general vicinity of the Proposed Project that could contribute to cumulative impacts. The list was compiled from sources that include the Los Angeles Harbor Department (LAHD), the Port of Long Beach, the Los Angeles Department of Transportation (LADOT), the City of Los Angeles, and other local jurisdictions. The locations of most of those projects are shown in Figure 5-1 (some projects are located beyond the boundaries of Figure 5-1, others have no specific geographic location).

The list of related projects does not include numerous small and medium-sized residential and commercial developments in the general vicinity of the project site (i.e., San Pedro, Wilmington, Harbor City, Carson, and Long Beach). Those projects are assumed to be included in the population and activity projections produced by the Southern California Association of Governments (SCAG) and other planning entities and used in the South Coast Air Quality Management District (SCAQMD) and LADOT analyses on which this cumulative analysis is based and thus do not need to be considered separately.

As discussed in Section 5.1.1 and in the resource-specific sections below, analysis of some resource areas uses a projection approach encompassing a larger cumulative geographic scope and, for these resources, a larger set of past, present, and reasonably foreseeable future projects was included for analysis of cumulative impacts. For the purposes of this Draft EIR, the Project vicinity is defined as the area over which effects of the Proposed Project or an alternative could contribute to cumulative effects. The cumulative regions of influence for individual resources are documented further in each of the resource-specific subsections in Section 5.2.

Figure 5-1. Locations of Related and Cumulative Projects



Table 5-1. Related and Cumulative Projects

No. in Figure	Project Title and Location	Project Description	Project Status
Port of Los Angeles Projects			
1	Berth 163-164 (Nustar-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, mooring and berthing structures, and necessary utilities to comply with the Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS). The project also consists of a 30-year entitlement for the facility.	Initial Study (IS)/Mitigated Negative Declaration (MND) approved September 2021. Construction is anticipated in 2028.
2	Cabrillo Way Marina Project	The proposed project includes developing, operating, and maintaining a marina, hotels, boater and visitor-serving club and meeting facilities, restaurants, retail buildings, and commercial areas at 2293 Miner Street.	Evaluated in the West Channel/Cabrillo Marina Phase II Development Project (Cabrillo Way Marina) Final Supplemental Environmental Impact Report certified in December 2003. Environmental review in process.
3	Berths 191-194 (Ecocem) Low-Carbon Cement Processing Facility	Construction and operation of a dry bulk terminal for vessel unloading, raw material milling, and storage and loading onto trucks of low-carbon construction binder.	Project EIR approved April 2025. Construction pending.
4	Navy Way Seaside Interchange Project	Construction of roadway improvements at State Route (SR)-47/Navy Way to eliminate traffic signal and movement conflicts. The project would augment an existing partial interchange at SR 47/Seaside Avenue/Navy Way by removing the last traffic signal and at-grade intersection between I-710 and I-110, adding a new auxiliary lane and a new collector-distributor road, and implementing traffic channelization improvements.	IS/MND approved August 2025. Construction pending.
5	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 in 2013. Remedial action plan under development with Los Angeles Water Quality Control Board (LARWQCB).
6	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, including operation under a revised project to modify certain mitigation measures.	Construction completed in 2014. Final Supplemental EIR (FSEIR) completed in 2019. Final Revised SEIR certified by the Board of Harbor Commissioners (Board) in November 2025. Errata approved March 2026, along with adoption of the Finding of Fact, Statement of Overriding Considerations, and Final Revised Mitigation Monitoring and Reporting Program.
7	Wilmington Waterfront Master Plan (Avalon	Planned development intended to provide waterfront access and promote development specifically along Avalon Boulevard. Project elements include a	Waterfront Promenade completed in 2025. Construction on the Avalon

No. in Figure	Project Title and Location	Project Description	Project Status
	Boulevard Corridor Project)	promenade, waterfront park, pedestrian bridge, location for the Wilmington Youth Sailing and Aquatic Center, public pier, and other visitor serving uses.	Pedestrian Bridge and Promenade Gateway commenced in February 2026.
8	Berth 44 Boatyard Project	The proposed project includes remediation and redevelopment of the former San Pedro Boatworks site at 2945 Miner Street. Project components include demolition of existing structures and buildings on site; grading; dredging; paving; and constructing concrete pads, docks, gangways, slips, underground utilities, water treatment systems, storm drain, fencing, lighting, and buildings to support boatyard operations. The project also consists of a 42-year entitlement for the facility.	NOP/IS released in January 2024. EIR in preparation.
9	Berths 121-131 Container Terminal Improvements Project	Demolish existing wharf at Berths 126-129, construct a new wharf, install up to 10 new wharf cranes, reconstruct the shoreline, dredge and dispose of up to 310,000 cy of sediments to deepen the berth, expand the existing on-dock railyard and install electric-powered RMG cranes for railcar loading/unloading.	NOI/NOP released in 2014. Draft Environmental Impact Statement (EIS/EIR) released in March 2026. Project is in design.
10	Berths 148-151 (Phillips 66) Marine Oil Terminal Improvement Project **(Proposed Project)**	Various wharf and seismic ground improvements that are required in order to comply with MOTEMS and a new 20-year entitlement with two additional optional 10-year extensions.	NOP/IS released February 2023. Project is in design. **This is the Proposed Project.**
11	Terminal Island Maritime Support Facility	Development and operation of a maritime support facility on an approximately 80-acre LAXT loop site on Terminal Island. The Project would construct and install office trailers, maintenance and repair facilities, chassis stalls, and appurtenant water and electrical infrastructure. The existing vacant Eldridge Street office building (750 Eldridge Street) would also be refurbished to support operations.	FEIR was certified May 2026. Project is in design with construction anticipated from 2027 to 2029.
12	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.
13	Outer Harbor Cruise Terminal and Outer Harbor Park	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 certified in September 2009.	Draft Request for Proposal for future development released January 2023. Project is in design.
14	City Dock No. 1 Marine Research Project (AltaSea)	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.	Phase I development in progress since 2017.
15	West Harbor Modification Project (formerly 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	Construction of promenade, town square, floating docks, and landscape/hardscape improvements

No. in Figure	Project Title and Location	Project Description	Project Status
		industrial uses along Harbor Boulevard to commercial. This project also includes a waterfront promenade and 3 acres of open space. As revised by the EIR Addenda, the project includes development of a 108,000 square foot outdoor amphitheater, a 2.5 acre entertainment venue with a 100-foot diameter Ferris wheel and an approximately 150-foot tall by 50-foot-wide tower attraction tower, and other visitor-serving commercial uses.	completed. Construction of restaurant buildings to be completed by 2026. Draft Subsequent EIR certified in June 2025 for new phases of development. On September 2025, the City Council rejected an appeal and reaffirmed the Board's certification. Amphitheater and Ferris wheel construction anticipated completion by 2027.
16	SA Recycling Amendment to Permit No. 750 Project	The proposed project is located at 901 New Dock Street on Terminal Island, 90731. The proposed project seeks an amendment to Permit No. 750 to allow for an up to 10-year extension of existing operations, with up to 5 additional years for use of the site as a non-operational restoration period for any necessary closure and remediation activities to restore the property.	Final Subsequent Environmental Impact Report (FSEIR) approved by the BOHC in April 2024. Project is in operation.
17	SR-47/Vincent Thomas Bridge & Front St./Harbor Blvd. Interchange Reconfiguration	Reconfigure the existing interchange at State Route 47/Vincent Thomas Bridge and Harbor Boulevard/Front Street to improve safety and operation for vehicles exiting the highway. Improvements also include modifications of the eastbound entrance ramps and modification of Harbor Boulevard and Front Street approaching and between the ramp termini.	Construction ongoing from October 2025 to March 2027.
18	Port of Los Angeles Goods Movement Workforce Training Facility	The proposed project includes development of an approximately 20 acre site at 300 Ferry Street for a goods movement workforce training facility.	NOP/IS in preparation. Project is in design.
19	Al Larson Boat Shop Improvement Project	Modernization of existing boat yard and 30-year entitlement extension. This project was evaluated in a Final EIR approved in 2009.	Project on hold.
20	Berths 302–306 [APL now known as Fenix Marine] Container Terminal Project	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. Revised project includes continued operations with minor modifications to the terminal and a 15-year entitlement extension through 2043.	Evaluated in a Final EIR/EIS in 2012 and Addendum in 2016. Expansion project on hold, revised project ongoing.
21	Berths 238-239 [PBF Energy] Marine Oil Terminal Improvement Project	Demolition of the existing Berth 238 loading platform and construction of a new platform and associated mooring structures at Berth 238, and installation of landside improvements.	Approved project adopted June 2018. Construction began in 2025. Project scheduled for completion Spring 2027.
22	Star-Kist Cannery Facility	Demolition of 14-acre site for future use as cargo support or container chassis storage.	Mitigated Negative Declaration adopted February 2023. Construction began in 2026.

No. in Figure	Project Title and Location	Project Description	Project Status
23	Berths 167-169 [Shell] Marine Oil Terminal Wharf Improvements Project	Various wharf and seismic ground improvements that are required in order to comply with MOTEMS, as well as other landside elements and a new 30-year lease. This project was evaluated in a Final EIR approved in 2018.	Final EIR certified August 2018. Construction anticipated through 2026.
24	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.	Construction pending.
25	Berths 187-191 (Vopak) Liquid Bulk Terminal Wharf Improvements and Cement Terminal Project	Various wharf improvements that are required in order to comply with MOTEMS, improvements to an adjacent wharf to facilitate resumption of cement terminal operations on the site, and a new 30-year entitlement.	NOP/IS issued July 2022. EIR in preparation. Project is in design.
Port of Long Beach Projects			
26	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.	Project approved September 2000. Construction ongoing.
27	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 February 2018. Draft SEIR released in August of 2025. Construction underway through 2032.
28	Pier S Battery Energy Storage System Project	Construction and operation of a 70-megawatt (MW) battery energy storage system (BESS) on approximately 2.9 acres of the existing, privately-owned power generation site on Pier S.	Draft IS/MND released December 2024.
29	Southern California Edison Transmission Tower Replacement Project	Replace a series of transmission towers across the Cerritos Channel.	FEIR certified in 2017. Construction completed in August 2021. Demolition of old towers underway.
30	Toyota Facility Improvements Project	Construction of a new consolidated Vehicle Processing and Distribution Center, Hydrogen Call and Generator Facility, and Fueling Station. Demolition of some existing facilities.	Project construction completed and in operation.
31	World Oil Tank Installation Project	Installation and operation of two 25,000-barrel petroleum storage tanks.	FEIR certified September 2024. Construction pending.
32	Pier Wind Terminal Development Project	Development of a 400-acre terminal at the Port of Long Beach to construct and assemble large offshore floating wind turbines and a 30-acre transport corridor to transport turbines for offshore wind projects in Northern and Central California coastal waters. The project will construct new land at the port and dredge approximately 50	NOP/IS issued January 2024. Draft EIS/EIR in preparation.

No. in Figure	Project Title and Location	Project Description	Project Status
		million cubic yards for wharf construction, sinking basin, wet storage areas, and concrete piers adjacent to the transportation corridor.	
Army Corps of Engineers			
33	Deep Draft Navigation and Main Channel Deepening Project	Dredge up to 10 million cubic yards of material to deepen channels, basins, and standby areas to improve waterborne transportation efficiencies and navigational safety for vessel operations at Port of Long Beach. A new dredge substation may be constructed to provide electricity to dredge equipment.	FEIR/EIS approved September 2022. CEQA EIR certified by POLB September 2022. Construction estimated to commence in 2027.
Alameda Corridor Transportation Authority and Caltrans Projects			
34	SR-47 Vincent Thomas Bridge Deck Replacement Project	Bridge repairs include replacement of bridge deck, median concrete barrier and guardrails, and upgrading of seismic sensors.	Final EIR approved October 2024. Construction anticipated in 2026-2028.
Community of San Pedro Projects			
35	John S. Gibson Truck and Chassis Parking Lot Project	Develop the 1599 John S. Gibson Boulevard 18.63-acre site with a short-term truck and chassis parking facility and related site improvements. The site is anticipated to be utilized for short-term parking, as chassis with or without containers are not anticipated to be parked onsite over 24 hours. It includes paving of the site and striping of approximately 393 truck and chassis stalls. The Project would be implemented in one development phase and would require a Port Master Plan Amendment.	IS/NOP was released in October 2023. DEIR released November 2024.
36	Pacific Corridors Redevelopment Project, San Pedro	Development of commercial/retail, manufacturing, and residential components. Construction underway of four housing developments and Welcome Park.	Project underway. Estimated 2032 completion year according to City of Los Angeles Planning Department.
37	Five Points Union Project	The project proposes the redevelopment of the 444-acre Project Site through the Five Points Union Specific Plan (Specific Plan), comprised of a commercial and recreational development (Town Center) on the northern portion of the site, and an industrial development (Industrial Center) on the southern portion of the site.	IS/NOP was released in August 2025.

1

5.2 Cumulative Impact Analysis

The following sections analyze the cumulative impacts identified for each resource area relative to the Proposed Project and the list of related projects identified in Table 5-1. The discussion of impacts of past, present, and reasonably foreseeable future projects refers to the list of projects and reference numbers as shown in Table 5-1. The alternatives listed below are analyzed under CEQA relative to the related projects.

- Alternative 1 – No Project Alternative; and
- Alternative 2 – Reduced Project Alternative.

The cumulative impact analysis considers the resource issues that are analyzed in Chapter 3 of this Draft EIR. The NOP/IS determined that construction and operation of the Proposed Project could make substantial contributions to cumulatively considerable impacts related to air quality, biology, energy, greenhouse gases (GHGs), and hazards. The resource areas that the NOP/IS eliminated from further analysis in the EIR on the basis that impacts in one or more of the CEQA Appendix G issues would be less than significant are considered in Section 5.2.5 of this cumulative impacts analysis.

5.2.1 Air Quality and Meteorology

5.2.1.1 Scope of Analysis

The region of analysis for cumulative effects of air emissions (Cumulative Impacts AQ-1 and AQ-3) is the South Coast Air Basin (SCAB). For evaluating localized effects of air quality through ambient pollutant concentrations (Cumulative Impacts AQ-2 and AQ-4), the SCAQMD typically assesses cumulative projects within one mile of a project site since impacts of project emissions decrease rapidly with distance from the project fenceline. For health effects (Cumulative Impact AQ-5), 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.

5.2.1.2 Significance Criteria

Criteria Pollutants

As described in Section 3.1, air quality within the SCAB has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly due to lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by SCAQMD. This trend towards cleaner air has occurred despite continued population growth. However, stationary industrial and mobile emission sources and topographical/meteorological conditions that inhibit atmospheric dispersion combine to create adverse pollution effects in the SCAB. In regard to the National Ambient Air Quality Standards (NAAQS), the U.S. Environmental Protection Agency (USEPA) currently classifies the SCAB as being in "extreme" nonattainment for ozone (8-hour standard) and in "serious" nonattainment for fine particulate matter ($PM_{2.5}$) (24-hour standard). The SCAB is in attainment of the NAAQS for PM_{10}, carbon monoxide (CO), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). In regard to the California Ambient Air Quality Standards (CAAQS), as of 2022, the California Air Resources Board (CARB) classifies the SCAB as being in nonattainment for ozone, PM_{10}, and $PM_{2.5}$. The SCAB is in attainment of the CAAQS for NO_2, SO_2, CO, lead, and sulfates and is unclassified for hydrogen sulfide and visibility-

reducing particles (CARB 2022). The 2022 Air Quality Management Plan (AQMP) predicts that the SCAB will reach attainment of the 2015 ozone 8-hour standard by 2037, but only if substantial reductions in emissions of nitrogen oxides (NO_X), especially from federally regulated sources such as heavy-duty trucks, trains, and oceangoing vessels, can be achieved (SCAQMD 2022).

The contributions of the Proposed Project and alternatives to cumulative impacts were 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 2003). Significance thresholds are presented in Section 3.1.4.6. Because SCAQMD guidance does not distinguish between attainment and nonattainment pollutants, this analysis assumes that for Cumulative Impacts AQ-1 and AQ-2, exceedances of significance thresholds do not represent cumulatively considerable contributions because of their temporary nature. For AQ-3, and AQ-4, as described in Section 5.2.1.3 below, exceedance of any project-level threshold would constitute a cumulatively considerable impact. Cumulative Impact AQ-5, which relates to health risk from toxic air contaminants, is discussed below. Cumulative Impact AQ-6 is addressed qualitatively, in accordance with SCAQMD's qualitative threshold.

Toxic Air Contaminants (TACs)

According to SCAQMD's MATES V study, the cancer risk in 2018 from inhalation of toxic air contaminants in the communities in the vicinity of the San Pedro Bay ports was estimated at approximately 504 in a million (SCAQMD 2021). Although the MATES V results showed a 40% decrease in cancer risk from the MATES IV study in 2013 (SCAQMD 2015), and a basin-wide 84% decrease since the MATES II study in 1998 (SCAQMD 2000), health risk from air toxics in the port area remains elevated above the risks in communities elsewhere in the SCAB.

To reduce port-related cancer risks in adjacent communities, the Ports of Los Angeles and Long Beach approved port-wide air pollution control measures through implementation of the Clean Air Action Plan (CAAP), designed with the goal of reducing diesel particulate matter (DPM) emissions by 77 percent by 2023, compared to a 2005 baseline (POLA and POLB 2010, 2017). In developing the San Pedro Bay Standards, the Port recognized the importance of ensuring that new projects are designed to be consistent with the CAAP as well as with other applicable regulations allowing the Port to meet long-term health risk and emission reduction goals.

Given the existing elevated cancer risk in communities surrounding the Port, this analysis assumes that any increase in health impacts (individual cancer risk, chronic hazard index, acute hazard index, population cancer burden) above significance thresholds would be cumulatively considerable.

5.2.1.3 Impact Analysis

Cumulative Impact AQ-1: Would the Proposed Project or alternatives result in construction-related emissions that would make a cumulatively considerable contribution to a significant cumulative impact from exceedance of the SCAQMD threshold of significance in Table 3.1-4?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

The Proposed Project would be constructed over approximately six years, assumed for analytical purposes to be 2024-2029. (As described in Section 2.5.1, the assumed dates are for analytical purposes only and mean that the analysis is conservative, as a later start date would result in cleaner construction and operational equipment being used.) Several large or moderate-sized construction projects could occur concurrently at the Port and surrounding areas (see Table 5-1), including the Berths 191-194 (Ecocem) Low-Carbon Cement Processing Facility (#3 on Figure 5-1), Berths 121-131 Container Terminal Improvements Project (#9), Outer Harbor Cruise Terminal and Outer Harbor Park (#13), West Harbor Modification Project (#15), SR-47/Vincent Thomas Bridge & Front St./Harbor Blvd. Interchange Reconfiguration (#17), Berths 302–306 [APL] Container Terminal Project (#20), Berths 238-239 [PBF Energy] Marine Oil Terminal Improvement Project (#21), Berths 187-191 (Vopak) Marine Terminal Improvements Project (#25), Piers G & J Terminal Redevelopment Project (#26), and Pier B Rail Yard Expansion (#27). A number of smaller projects, including residential and commercial projects in Carson and the San Pedro and Wilmington communities, would also contribute to construction-related air emissions.

The construction impacts of the related projects would be cumulatively significant if their combined construction emissions would exceed the SCAQMD daily emission thresholds for construction. Because this would almost certainly be the case for the majority of analyzed criteria pollutants and precursors (PM_{10}, $PM_{2.5}$, NO_X, SO_2, CO, and volatile organic compounds [VOCs]), the related projects would result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, NO_X, SO_X, CO and VOC.

Contribution of the Proposed Project

Proposed Project construction emissions would not exceed SCAQMD regional significance thresholds for criteria pollutants in any construction year (Table 3.1-10). As a result, the Proposed Project construction emissions would not make a cumulatively considerable contribution to an existing significant cumulative impact for criteria pollutant emissions.

Contribution of the Alternatives

The No Project Alternative (Alternative 1) would involve no construction activities and would therefore not make a cumulatively considerable contribution to a significant cumulative impact related to construction emissions.

Emissions from construction of the Reduced Project Alternative (Alternative 2) would be less than those of the Proposed Project (see Section 3.1.4.1 for more detail on construction impacts) and therefore would not exceed SCAQMD regional significance thresholds for criteria pollutants in any construction year. As a result, construction emissions of the Reduced Project Alternative (Alternative 2) would not make a

cumulatively considerable contribution to a significant cumulative impact for criteria pollutant emissions.

Cumulative Impact AQ-2: Would construction of the Proposed Project or alternatives result in off-site ambient air pollutant concentrations that would make a cumulatively considerable contribution to a significant cumulative impact from exceedance of a SCAQMD threshold of significance in Table 3.1-6?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

As described in Cumulative Impact AQ-1, above, several large or moderate-sized construction projects (Table 5-1) and a number of small projects in the Port and surrounding areas could occur concurrently with construction of the Proposed Project. 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 occur for any pollutant without performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for PM_{10}, $PM_{2.5}$, and NO_2 and are unlikely to exceed the thresholds for CO because the entire SCAB is in attainment for CO, and Project-level evaluations for other large Port projects have estimated modeled CO levels below the CO threshold, even at congested intersections. Consequently, construction of the related projects is assumed to result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, and NO_2.

Contribution of the Proposed Project (Prior to Mitigation)

Construction of the Proposed Project would result in maximum off-site concentrations of PM_{10} that would exceed SCAQMD federal and state thresholds in 2026, 2027, and 2028 (Table 3.1-12). (As described in Section 2.5.1, the assumed dates are for analytical purposes only and mean that the analysis is conservative, as a later start date would result in cleaner construction and operational equipment being used.) However, construction would be temporary and would be partially mitigated by the application of measure MM AQ-3 (Port of Los Angeles Sustainable Construction Guidelines). Emissions from the construction of the related projects would also be at least partially mitigated. As a result, impacts from Proposed Project construction would not make a cumulatively considerable contribution to an existing significant cumulative impact related to off-site ambient concentrations of PM_{10}. Calculated construction emissions of other pollutants are below applicable SCAQMD thresholds (Table 3.1-10, Table 3.1-11) and therefore would not result in cumulatively considerable impacts per SCAQMD guidance.

Contribution of the Alternatives

The No Project Alternative (Alternative 1) would have no construction activities. Therefore, it would not make a considerable contribution to an existing significant cumulative impact.

Construction of the Reduced Project Alternative (Alternative 2) would produce similar, although somewhat less, construction emissions as the Proposed Project (see Section 3.1.4.1 for more detail) and would therefore result in maximum off-site PM_{10} concentrations that would exceed SCAQMD thresholds. However, as with the Proposed

Project, construction would be temporary and partially mitigated by the application of measures MM AQ-1 through MM AQ-6, and emissions from the construction of the related projects would also be at least partially mitigated. Accordingly, impacts from construction of the Reduced Project Alternative (Alternative 2) would not make a cumulatively considerable contribution to an existing significant cumulative impact related to off-site ambient PM_{10} concentrations during construction.

Mitigation Measures and Residual Cumulative Impacts

Project construction activities would comply with the following mitigation measures:

MM AQ-1: On-Road Trucks Used During Construction.

1. Trucks hauling materials such as debris or fill shall be fully covered while operating off Port property.

2. Idling shall be restricted to a maximum of 5 minutes when not in use.

3. Tier Specifications:

- Until December 31, 2026: All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 19,500 pounds or greater used on site or to transport materials to and from the site shall comply with 2012 emission standards, or newer, where available.
- Post January 1, 2027: All on-road heavy duty diesel trucks used on site or to transport materials to and from the site shall comply with 2015 emission standards, or newer, where available.

A copy of each unit's certified USEPA rating, Best Available Control Technology (BACT) documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

MM AQ-2: Off-Road Construction Equipment.

1. Construction equipment shall incorporate, where feasible, emissions savings technology such as hybrid drives and specific fuel economy standards.

2. Idling shall be restricted to a maximum of 5 minutes when not in use.

3. Tier Specifications:

- All offroad diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

The construction equipment measures shall be met, unless one of the following circumstances exists and the contractor is able to provide proof that any of these circumstances exists:

- A piece of specialized equipment is unavailable in a controlled form within the State of California, including through a leasing agreement.
- A contractor has applied for necessary incentive funds to put controls on a piece of uncontrolled equipment planned for use on the project, but the application process is not yet approved, or the application has been approved, but funds are not yet available.
- A contractor has ordered a control device for a piece of equipment planned for use on the project, or the contractor has ordered a new piece of controlled equipment to replace the uncontrolled equipment, but that order has not been completed by the manufacturer or dealer. In addition, for this exemption to apply, the contractor must attempt to lease controlled equipment to avoid using uncontrolled equipment, but no dealer within 200 miles of the project has the controlled equipment available for lease.

MM AQ-3: **Port of Los Angeles Sustainable Construction Guidelines.** The project shall implement and comply with all measures as required by the Los Angeles Harbor Department's Sustainable Construction Guidelines adopted in February 2008 and updated in November 2009 during Project construction activities. These requirements shall be stipulated in the construction contracts and bid documents.

MM AQ-4: **General Construction Mitigation Measure.** For MM AQ-1 through MM AQ-3, if a CARB-certified technology becomes available that is as good as or better than the existing measure in terms of emissions performance, the technology could replace the existing technology if approved by LAHD.

MM AQ-5: Renewable Diesel Fuel for Construction Equipment and On-Road Trucks. The Tenant shall fuel diesel-powered construction equipment and on-road trucks with renewable diesel fuel during construction. The renewable diesel product that is used shall comply with American Society for Testing and Materials (ATSM) fuel standards.

In the event of renewable diesel supply challenges or disruptions, ultra-low sulfur diesel (ULSD) shall be used as a secondary fuel provided the contractor can demonstrate to the LAHD substantial evidence of a supply disruption or event in a timely manner.

MM AQ-3 (Port of Los Angeles Sustainable Construction Guidelines [LAHD 2009]) imposes requirements of meeting the latest cleanest emission standards (or model year requirements) on construction equipment, and heavy-duty vehicles. The guidelines also describe Best Management Practices (BMPs) based on CARB-verified BACT, designed to reduce air emissions from construction sources, for all construction projects on Port property.

Table B1-1 of Appendix B1 (Air Quality Regulations/Methodology and Air Quality and GHG Emissions/Energy) discusses in detail the specific regulations and agreements assumed as part of the construction emissions analysis which includes measures and BMPs that reduce air emissions from harbor craft, off-road equipment, and delivery trucks involved in Proposed Project construction, such as by requiring the cleanest available equipment and vehicles be used and limiting idling time. In addition, MM AQ-3 (Port of Los Angeles Sustainable Construction Guidelines) describe certain BMPs for fugitive dust control including watering three times per day, that were quantified in the

analysis of construction emissions. Additional measures to control air emissions and fugitive dust from construction equipment and vehicles are not feasible at this time.

Therefore, construction of the Proposed Project and the Reduced Project Alternative (Alternative 2) would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for PM_{10}.

Cumulative Impact AQ-3: Would operation of the Proposed Project or alternatives result in operational emissions that would make a cumulatively considerable contribution to a significant cumulative impact from exceedance of a SCAQMD threshold of significance in Table 3.1-6?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Operation of most of the past, present, and reasonably foreseeable projects in Table 5-1 would contribute to cumulatively considerable impacts by emitting criteria pollutants. The operational impacts of related projects would be cumulatively significant if their combined operational emissions would exceed the SCAQMD daily emission thresholds for operations. Because this almost certainly would be the case for most or all analyzed criteria pollutants and precursors, the related projects are assumed to result in a significant cumulative air quality criteria pollutant impact.

Contribution of the Proposed Project (Prior to Mitigation)

Proposed Project operational emissions would exceed SCAQMD significance thresholds for NO_X in both of the analyzed years (2027 and 2057; see Table 3.1-13). These impacts would combine with impacts from related projects; as a result, without mitigation, the Proposed Project's operational emissions would make a cumulatively considerable contribution to an existing significant cumulative impact for NO_X.

Contribution of the Alternatives

The No Project Alternative (Alternative 1) would not result in operational emissions. Accordingly, the No Project Alternative (Alternative 1) would not make a cumulatively considerable contribution to an existing significant cumulative air quality impact.

The Reduced Project Alternative's (Alternative 2) operational emissions would be the same as for the Proposed Project (see Section 3.1.4.1 for more detail on operational impacts under AQ-3) and therefore would exceed SCAQMD significance thresholds for NO_X in both analysis years. These impacts would combine with impacts from other cumulative projects, which would already result in a significant cumulative impact. As a result, without mitigation, the Reduced Project Alternative (Alternative 2) would make a cumulatively considerable contribution to a significant cumulative impact for NO_X.

Mitigation Measures and Residual Cumulative Impacts

Vessel transiting emissions would be reduced under the Proposed Project by Mitigation Measure MM AQ-6 (Vessel Speed Reduction Program [VSRP]).

> **MM AQ-6: Vessel Speed Reduction Program (VSRP).** 100 percent of vessels calling at the Phillips 66 MOT will be required to comply with the expanded VSRP at 12 knots between 40 nautical miles (nm) from Point Fermin and the

Precautionary Area. Vessels experiencing a maritime emergency[1] that prevents compliance with the expanded VSRP may be exempt from this measure.

Vessel transiting records maintained by the Port show that 96.9 percent of vessels calling at the Phillips 66 MOT in 2021 complied with the VSRP 12 knot speed guidance inside the 20 nm zone and 94.1 percent complied inside the 40 nm zone. For purposes of the air quality impact analysis described in Section 3.1 (Air Quality and Meteorology), vessel transits to the MOT during Project operation were assumed to have the same level of compliance with the VSRP requirements as was recorded for the 2021 Baseline. Therefore, the emission reductions resulting from implementation of MM AQ-6 (Vessel Speed Reduction Program) have been approximately accounted for in this air quality impact analysis.

Emissions from the Proposed Project would potentially be further reduced as a result of the application of Lease Measure LM AQ-1:

> **LM AQ-1: Periodic Review of New Technology.** The Tenant will conduct a periodic review of any Port-identified or other new emissions-reducing technology and report to the LAHD on the feasibility of any new technology advancements that may reduce emissions not less frequently than once every five years following the effective date of the entitlement. The technology review would be subject to approval by LAHD and would involve consultation with appropriate resources (e.g., consultants, engineers, regulators) to validate the findings. If the review demonstrates the new technology would be effective in reducing emissions and is determined by the LAHD to be feasible, including but not limited to, financial, technical and operational considerations, the Tenant will implement the new air quality technological advancements, subject to mutual agreement, the implementation which shall not be unreasonably withheld by the Tenant.

Due to uncertainties in the timing and availability of emission reduction technologies, it is not possible to quantify any potential emission reductions resulting from LM AQ-1 (Periodic Review of New Technology) at this time. Nevertheless, it is expected that these measures would further reduce future air quality emissions and serve to comply with the Port's air quality goals.

NO_X emissions from operation of the Proposed Project are dominated by emissions from OGVs that are not under the direct control of the Port, the state, or local air pollution control authorities. Accordingly, no additional feasible mitigations of Project NO_X impacts are available.

Therefore, after mitigation, the Proposed Project and the Reduced Project Alternative (Alternative 2) would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NO_X.

[1] Maritime emergencies may include, but are not limited to, suspicious activity, drone/plane activity, security breaches or attempts, United States Coast Guard safety/security/protection zone violations, crimes on land and water, navigation rule violations, vessels in distress, rescues, and fires and emergencies, as defined by the Port of Los Angeles Mariners Guide.

Cumulative Impact AQ-4: Would operation of the Proposed Project or alternatives make a cumulatively considerable contribution to a significant cumulative impact related to offsite ambient air pollutant concentrations exceeding a SCAQMD threshold of significance in Table 3.1-9?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Operation of most of the related projects in Table 5-1 would contribute to a cumulative air quality impact. The operational impacts of related projects would be cumulatively significant if their combined off-site ambient pollutant concentrations would exceed the ambient concentration thresholds for operations. Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without performing dispersion modeling of the other projects, cumulative air quality impacts are likely to exceed the thresholds for PM_{10}, $PM_{2.5}$, and NO_2, and, as explained under Cumulative Impact AQ-2, are unlikely to exceed the thresholds for CO. Consequently, operation of the related projects is assumed to result in a significant cumulative air quality impact for PM_{10}, $PM_{2.5}$, and NO_2.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.1.5.1, Impact AQ-4, operation of the Proposed Project would not produce maximum off-site concentrations of CO, NO_X, or PM that would exceed significance thresholds. However, combined construction and operation would produce maximum off-site concentrations of NO_2 that would exceed the federal 1-hour and state annual NO_2 thresholds (Table 3.1-15) and off-site ambient concentrations of PM_{10} that would exceed the 24-hour PM_{10} threshold (Table 3.1-16). These impacts would combine with impacts from concurrent related projects. As a result, without mitigation, Proposed Project operations and overlapping construction activities would make a cumulatively considerable contribution to an existing significant cumulative impact related to ambient concentrations of NO_2 and PM_{10}.

Once construction is completed, operation of the Proposed Project in the 2057 analysis year would not result in any off-site concentrations of NO_2 or PM exceeding SCAQMD ambient concentration thresholds (Tables 3.1-15 and 3.1-17). Accordingly, operation of the Proposed Project after construction activities are completed would not make a cumulatively considerable contribution to an existing cumulatively significant impact.

Contribution of the Alternatives

The No Project Alternative (Alternative 1) would not result in operational emissions. Accordingly, operation of the No Project Alternative (Alternative 1) would not make a cumulatively considerable contribution to an existing significant cumulative air quality impact.

Emissions from operation of the Reduced Project Alternative (Alternative 2) would be identical to those of the Proposed Project (see Section 3.1.4.1 for more detail on operational impacts under AQ-4) while construction emissions would be only slightly lower. Accordingly, the Reduced Project Alternative (Alternative 2) would make a cumulatively considerable contribution to a significant cumulative impact with respect to ambient concentrations of NO_2 and PM_{10} during overlapping Project construction and operation but not once construction is completed.

Mitigation Measures and Residual Cumulative Impacts

As discussed under Cumulative Impact AQ-3 above, Project operational emissions would be reduced by compliance with MM AQ-6 (Vessel Speed Reduction Program) and LM AQ-1 (Period Review of New Technology). As described above, no additional feasible mitigations of PM_{10} or NO_X emissions from Project operation are available. Therefore, after mitigation, the Proposed Project and Reduced Project Alternative (Alternative 2) would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for NO_2 and PM_{10} during overlapping construction and operation.

Cumulative Impact AQ-5: Would the Proposed Project or alternatives make a cumulatively considerable contribution to a significant cumulative impact from exposure of receptors to significant levels of toxic air contaminants?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Although the SCAQMD MATES studies have documented substantial decreases in cancer risk to Port-area populations over the past 20 years, health risk from air toxics in the port area remains elevated above the risks in communities elsewhere in the SCAB. In addition, CARB's Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach estimated that there are elevated levels of cancer risks due to operational emissions from port-area sources within and near the Ports (CARB 2006). Based on this information, cancer risk from TAC emissions within the Proposed Project region, including the past, present, and reasonably foreseeable future projects and the Proposed Project, is considered a significant cumulative impact. Non-cancer impacts associated with past, present, and reasonably foreseeable projects in the Proposed Project area are also assumed to have significant cumulative impacts.

The Port has approved port-wide air pollution control measures through the CAAP (POLA and POLB 2010, 2017). Implementation of those measures would reduce the health risk impacts from the Proposed Project and future projects at the Port. Currently adopted regulations and future rules proposed by CARB and USEPA as described in Section 3.1.3 and Appendix B-1 would also further reduce air emissions and associated cumulative health impacts from Port operations. However, because future proposed measures (other than CAAP measures) and rules have not been adopted, they are not accounted for in the emission calculations or health risk assessment for the Proposed Project. Therefore, it is unknown at this time how these future measures would reduce cumulative health risk impacts within the Project area; accordingly, airborne cancer and non-cancer impacts within the Project region must be considered to be cumulatively significant.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.1.4.5, a health risk assessment (HRA) was conducted to evaluate the Proposed Project's contribution to four different types of health impacts: individual cancer risk, acute non-cancer hazard, chronic non-cancer hazard, and population cancer burden. Results of the HRA indicated that the maximum incremental cancer risk and acute and chronic hazard index impacts for residential, occupational, and sensitive receptors, and population cancer burden associated with construction and operation of the Proposed Project was less than significant at the Project level (Table 3.1-18).

Because the Proposed Project construction and operational emissions would not increase any health risk at residential, occupational and sensitive receptors or cancer burden above the Project-level thresholds of significance, the Proposed Project would not make a cumulatively considerable contribution to an existing significant cumulative impact for health and cancer risk at residential, occupational and sensitive receptors and population cancer burden.

Contribution of the Alternatives

The No Project Alternative (Alternative 1) would not result in TAC emissions. Accordingly, the No Project Alternative (Alternative 1) would not make a cumulatively considerable contribution to an existing significant cumulative air quality impact.

Impacts of TAC emissions from construction and operation of the Reduced Project Alternative (Alternative 2) would be similar to those of the Proposed Project as operational emissions would be the same as the Proposed Project and construction emissions would be slightly reduced (see Section 3.1.4.1 for more detail on health risk impacts under AQ-5). Accordingly, the Reduced Project Alternative (Alternative 2), like the Proposed Project, would not make a cumulatively considerable contribution to an existing significant cumulative impact for cancer risk, population cancer burden, and chronic and acute hazard indices.

Mitigation Measures and Residual Cumulative Impacts

Although mitigation is not required for the Proposed Project and the Reduced Project (Alternative 2), Project construction and operational emissions would be reduced by compliance with MM AQ-1 through MM AQ-6 and LM AQ-1, as discussed under Cumulative Impacts AQ-2 and AQ-4 above. No other feasible mitigations are available. After mitigation, the Proposed Project and Reduced Project Alternative (Alternative 2) would not make a cumulatively considerable and unavoidable contribution to a significant cumulative impact for individual cancer risk, population cancer burden, and chronic and acute non-cancer hazard indices.

Cumulative Impact AQ-6: Would the Proposed Project or alternatives make a cumulatively considerable contribution to a significant cumulative impact related to conflicts with or obstruction of the implementation of an applicable AQMP?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Past, present, or reasonably foreseeable future related projects at the Port and surrounding areas (see Table 5-1) would have significant cumulative impacts if they result in population growth or operational emissions that exceed the assumptions in the 2022 AQMP (SCAQMD 2022). 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 2022 AQMP accounts for population projections that were developed by SCAG and accounts for planned land use and transportation infrastructure growth, the related projects would be consistent with the AQMP. Therefore, the related projects would not result in significant cumulative impacts related to conflicts with or obstruction of the AQMP.

Contribution of the Proposed Project

The Proposed Project would produce emissions of nonattainment pollutants, particularly NO_X (as an ozone precursor). As discussed in Section 3.1.3, the 2016 and 2022 AQMP propose mobile source control measures and clean fuel programs that are designed to bring the SCAB into attainment with the state and national ambient air quality standards. Many of the 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 must comply with all applicable SCAQMD rules and regulations; therefore, the Proposed Project would not conflict with or obstruct implementation of the AQMP.

LAHD regularly provides SCAG with its Port-wide cargo forecasts for development of the AQMPs. Therefore, the attainment demonstrations included in the 2016 and 2022 AQMPs account for the emissions generated by projected future growth at the Port. Furthermore, LAHD implements the 2017 CAAP Update, which sets goals and implementation strategies that reduce air emissions from Port operations. In some cases, CAAP measures have produced emission reductions that are greater than those forecasted in the AQMP (LAHD 2020). Because the Proposed Project would incorporate CAAP control measures and would comply with the applicable AQMP control measures for Port activities, it would not conflict with or obstruct implementation of the AQMP. 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.

Contribution of the Alternatives

The No Project Alternative (Alternative 1) would not result in additional emissions that would conflict with the AQMP or other regional or local air quality plan. The Reduced Project Alternative (Alternative 2) would have the same operational emissions and only slightly reduced construction emissions as the Proposed Project (see Section 3.1.4.1 for more detail on air quality impacts) and, for the reasons described above for 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 and alternatives would not make a cumulatively considerable contribution to a significant cumulative impact related to conflicts with or obstruction of the implementation of an applicable AQMP.

5.2.2 Biological Resources

5.2.2.1 Scope of Analysis

The geographic region of analysis for biological resources differs by organism groups such as birds, fish, marine mammals, plankton, and benthic invertebrates. The mobility of species in these groups, their population distributions, and the normal movement range for individuals living in an area varies so that effects on biotic communities in one area can affect those communities in other nearby areas. The significance criteria used for the cumulative analysis are the same as those used for the Proposed Project in Section 3.2.4.2. As discussed in Section 3.2.4.2, the NOP/IS for the Proposed Project concluded that impacts related to CEQA Guidelines Appendix G checklist issues IV a) would be considered in this Draft EIR; accordingly, this cumulative impact analysis considers checklist issue IV a), i.e., Impact BIO-1. Cumulative impacts of other checklist issues

identified as "less than significant" and dismissed in the IS are discussed in Section 5.2.5 (Other Resource Areas) below.

For terrestrial biological resources (excluding water-associated birds), the geographic region of analysis is limited to those land areas at the Project site and extends throughout the Port Complex, as this is where the majority of biological resources in the vicinity are located. The resources present are common species that are abundant throughout the region and are adapted to industrial areas in the Harbor. For marine biological resources, excluding marine mammals, the geographical region of analysis for benthic communities, water column communities (plankton and fish), and water-associated birds are the water areas of the Los Angeles/Long Beach Harbor (inner and outer Harbor areas) because the basins, slips, channels, and open waters are hydrologically and ecologically connected. For marine mammals, the analysis area includes the Los Angeles-Long Beach Harbor as well as the Pacific Ocean from near Angels Gate out to Catalina Island in order to cover vessel traffic effects.

Special-status species have differing population sizes and dynamics, distributional ranges, breeding locations, and life history characteristics. Because many of the bird species are not year-round residents but migrate to other areas where stresses unrelated to the Proposed Project and other projects in the Harbor area can occur, the area for cumulative analysis is limited to the Harbor. Sea turtles are not expected to occur in the Harbor and their presence in the near-shore areas where vessel traffic could affect them is unlikely and unpredictable; consequently, these animals are not considered in the cumulative analysis.

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

Cumulative Impact BIO-1: Would the Proposed Project or alternatives contribute to a cumulative substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction of past fill projects in the Harbor has reduced the amount of marine surface water present, and thus reduced foraging and resting areas for special-status bird species, but these projects have also added more land and structures that can be used for perching near the water. In 1973, LAHD began monitoring the nesting activity of the California Least Tern, and in 1979 created a dedicated nesting habitat on Pier 300; the nesting site is now on the southern tip of Pier 400. Extensive shallow-water areas that provide foraging

habitat for the California least tern and other bird species have been constructed in the Harbor as mitigation for loss of such habitat from past projects. As described in Section 3.2, biological surveys have shown that marine biological resources in the Harbor continue to flourish and that the quality of the marine habitat continues to improve. Accordingly, impacts to special-status species as a result of marine habitat loss are not cumulatively significant.

Periodic maintenance dredging (#12), and other future projects in the Port that could involve extensive dredging or other in-water work, such as the other marine oil terminal improvement projects (#1, #21, #23, and #25), the Berths 121-131 Terminal project (#9), and the Berths 191-194 (Orcem) Low-Carbon Cement Processing Facility (#3), have the potential to adversely affect California least tern foraging during construction activities. The effects of these activities would be localized, temporary, and minimized by the control measures required by the United States Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) permits. Projects that are not near the nesting colony would not be expected to have adverse effects on the California least tern. For these reasons, impacts to the California least tern would not be cumulatively significant. With respect to other special-status bird species (Table 3.2-1), it is not expected that any nesting or foraging habitat or individuals would be lost as a result of development of the related projects.

Eelgrass beds are considered "special aquatic sites" under the CWA (40 CFR 230.43) and are protected by the state and federal resource agencies. Surveys in the Port Complex in 2023 (Merkel & Associates 2024) documented a maximum of 164 acres of eelgrass (*Zostera marina*) in the Port of Los Angeles, over 95 percent of it in extensive beds along Inner Cabrillo Beach and in the Pier 300 Shallow Water Habitat/Seaplane Lagoon area. Regionally, eelgrass occurs in numerous other shallow coastal bays and lagoons in Southern California, including extensive stands in the wetlands at Seal Beach and Newport Beach. The Southern California eelgrass beds have persisted and, in the case of Los Angeles Harbor, expanded over the years. Accordingly, there is not a significant cumulative impact with respect to the eelgrass special habitat.

Past, present, and future related projects have involved and will continue to involve vessel traffic, although the number of vessels calling the Port each year has not increased with the increase in cargo volumes; instead, vessels have become larger, rather than more numerous. Ship strikes involving marine mammals and sea turtles, although uncommon, have been documented for a number of listed species in the eastern North Pacific (Section 3.2.2.2). In Southern California, potential strikes to blue whales are of the most concern due to the migration patterns of blue whales and the established shipping channels. Blue whales normally pass through the Santa Barbara Channel en route from breeding grounds in Mexico to feeding grounds farther north. Incidental ship strikes and fisheries interactions are listed by the National Marine Fisheries Service (NMFS) as the primary threats to the California population.

Historical data on whale strikes suggest that vessel-speed reduction would substantially reduce the potential for whale strikes because 80 percent of recorded strikes occurred with ships traveling faster than 12 knots. The Port has a VSRP in place, which lowers vessel speeds to 12 knots from Point Fermin out to 40 nautical miles from the Port. Port records from the past three years (2020 – 2022) show more than 90 percent participation in the VSRP, thereby reducing potential for present and future increases in whale strikes due to vessels entering the Harbor. In addition, the International Maritime Organization (IMO) recently narrowed the Traffic Separation Scheme in the Santa Barbara Channel, which is expected to reduce co-occurrence of whales and vessels. Operation of many of

the related projects have in the past and will in the future include vessel traffic to and from the Harbor, and continued whale mortalities from vessel strikes is considered to be a significant cumulative impact.

The related projects that have involved vessel traffic can be assumed to have increased ambient underwater noise in the Harbor and in the ocean from the vessel traffic lanes to Angels Gate and Queens Gate. This increase is assumed on the basis of the increased size of vessels, as the annual number of vessels calling at the Port has been declining by an average of 52 visits per year since at least 2001 (LAHD 2024). Marine terminal upgrade and expansion projects (i.e., Berths 121-131 Container Terminal [#9], Outer Harbor Cruise Terminal [#13], Berths 302–306 [Fenix] Container Terminal Project (#20), and Piers G & J Terminal Redevelopment (#26) could continue to increase ambient underwater noise. That increase could cause some individual marine mammals to avoid the vessels as they move into, through, and out of the Harbor. However, the increase is not expected to result in a significant cumulative impact because a substantial change in underwater noise would require a substantial increase in vessel activity, which is not expected. Therefore, no significant cumulative in-water noise impacts would be expected to occur that could affect sensitive species.

In-water construction activities, and particularly pile driving, would also generate underwater sound pressure waves that could affect marine mammals in the area. Any seals or sea lions present in the vicinity of Port construction projects would likely avoid the disturbance areas and thus would not be injured. In-water construction of related projects in the general vicinity of the Proposed Project (e.g., #s 1, 3, 9, and 23) could occur concurrently, but those activities are unlikely to have an adverse cumulative effect on the marine mammals because ample area exists for any marine mammals that happen to be in the area to move in order to avoid disturbance and their construction would include mitigation for underwater noise (i.e., MM BIO-1, Protect Marine Mammals). As a consequence, construction of the related projects would not be expected to result in significant cumulative impacts to marine mammals.

Contribution of the Proposed Project (Prior to Mitigation)

As discussed in Section 3.2.4.3 (Biological Resources: Impacts and Mitigation Measures: Impact Determination), construction of the Proposed Project is not likely to result in the loss of individuals or the reduction of existing critical habitat of a state or federally listed endangered, threatened, rare, protected, candidate, or sensitive species or a Species of Special Concern. No designated or proposed critical habitat is present in or adjacent to the Proposed Project area. In-water construction would cause localized activity, noise, and turbidity that could affect birds and marine mammals. However, these impacts would be temporary and limited to the waters in the vicinity of construction activities. Implementation of required water quality monitoring during clean-up dredging according to the requirements of the RWQCB, and implementation of standard dredging BMPs via adaptive management of the maintenance dredging to clean-up the slope after construction activities (see Section 3.2.4.1 [Biological Resources: Impacts and Mitigation Measures: Methodology]), would minimize these impacts. Therefore, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from construction activities.

Noise from impact pile driving could exceed National Oceanic and Atmospheric Administration (NOAA) Fisheries' behavioral harassment threshold for marine mammals, which could result in auditory injury to California sea lions if project-specific peak sound pressure level or 24-hour cumulative sound exposure level criteria are exceeded (as discussed in Section 3.2, marine mammals other than sea lions are not

expected to occur in the project area and would therefore not be adversely affected). Accordingly, impacts of noise associated with pile driving are considered potentially significant, and implementation of MM BIO-1 is required:

> **MM BIO-1: Protect Marine Mammals.** Although it is expected that marine mammals will voluntarily move away from the area at the commencement of the "soft start" of pile-driving activities, site-specific safety and monitoring zones shall be established, by a qualified marine mammal professional. The zones shall be developed using the most recent version of NOAA Fisheries' Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing, applicable NOAA behavioral harassment thresholds, and project-specific pile-driving assumptions. The area surrounding the pile-driving activities (including the safety zones) shall be monitored by a qualified marine mammal observer[2]. The pile driving site will move with each new pile; therefore, the safety and monitoring zones will move accordingly.

Because this measure would ensure that pile driving would be suspended whenever marine mammals are present in the area and because noise levels would not exceed established thresholds for fish, (see Section 3.2.4.3, Impact BIO-1) no injury to marine mammals or fish from pile-driving sounds would be expected. Accordingly, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to pile driving.

As described in Section 3.2, a small stand of eelgrass has developed near the Project site, at the junction of Berths 147 and 148, approximately 1,000 feet northwest of the Project site. Two other nearby patches are 800 feet east at Berth 170-171 and approximately one-half-mile northeast at Berths 162-164. Accordingly, in-water construction activities for the Proposed Project have the potential to affect those stands by turbidity effects. That potential impact would be avoided by the implementation of MM BIO-2:

> **MM BIO-2. Protect Eelgrass.** The Proposed Project shall comply with the California Eelgrass Mitigation Policy. Pursuant to the Policy, the following activities shall be performed:
>
> - A pre-construction eelgrass survey to map the location and extent of eelgrass that could potentially be affected by wharf demolition and construction;
> - Use of minimization measures or Best Management Practices. such as silt curtains to reduce potential effects to eelgrass during Project construction (if present);
> - A post-construction eelgrass survey to map the location and extent of eelgrass after completion of wharf demolition and construction;
> - If eelgrass is lost due to Project construction. eelgrass shall be mitigated at a ratio determined by the U.S. Army Corps of Engineers in consultation with the U.S. Fish and Wildlife Service.

[2] Marine mammal professional qualifications shall be identified based on criteria established by the Los Angeles Harbor Department (LAHD) during the construction bid specification process. Upon selection as part of the construction award winning team, the qualified marine mammal professional shall develop site specific pile-driving safety zone requirements, which shall follow the most recent National Oceanic and Atmospheric Administration (NOAA) Fisheries Technical Guidance Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing in consultation with the Acoustic Threshold White Paper prepared for this purpose by LAHD (LAHD 2017). Final pile-driving safety zone requirements developed by the selected marine mammal professional shall be submitted to LAHD Construction and Environmental Management Divisions prior to commencement of pile-driving.

Timing of eelgrass surveys, including the frequency of post-mitigation surveys (if applicable) shall comply with provisions in the USACE permit, Section 401 of the Clean Water Act (CWA) Water Quality Certification, and the California Eelgrass Mitigation Policy.

With implementation of MM BIO-2, and because a significant cumulative impact does not exist, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to eelgrass.

Vessel activity from the Proposed Project would result in underwater noise. However, the relatively small number of ocean-going vessels calling at Berth 150-151 (a maximum of 75 calls per year at full operation) relative to the total number of vessels calling in the Port of Los Angeles (1,863 in 2021) would not be expected to result in a measurable change in overall underwater noise. Therefore, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species from underwater noise.

The small increase in vessel traffic associated with the Proposed Project would not substantially increase the likelihood of a vessel collision with a marine mammal or sea turtle. The additional annual vessel calls associated with the Proposed Project would be a minor increase in overall vessel calls to the Port, and as described in Section 3.2.4.3, recent data suggest that increases in ship strikes likely result from higher abundance of whales in nearshore waters and higher vessel speeds, rather than more vessels. Compliance with the Port's Vessel Speed Reduction Program (MM AQ-6) would reduce the potential for vessel collision with marine mammals and sea turtles. Accordingly, the Proposed Project would have a low probability of vessel strikes, and operation of the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact to marine mammals (e.g., whale mortality) from vessel strikes.

5.2.2.2 Contribution of the Alternatives

The No Project Alternative (Alternative 1) would not include any in-water construction and would not increase operational activity above baseline conditions. Accordingly, the No Project Alternative (Alternative 1) would not contribute to cumulative impacts related to water quality, vessel activity, or construction-related underwater noise.

The Reduced Project Alternative (Alternative 2) would result in additional operational vessel activity compared to the baseline, but for the reasons described for the Proposed Project in the section above, impacts related to underwater noise and vessel strikes on marine mammals would not be significant (see Section 3.2.4.3 for more detail on biological impacts). Accordingly, the Reduced Project Alternative (Alternative 2) would not make a cumulatively considerable contribution to a significant cumulative impact related to special-status species.

5.2.2.3 Mitigation Measures and Residual Cumulative Impacts

Implementation of mitigation measure MM BIO-1 (Protect Marine Mammals), which requires the establishment of a safety zone and monitoring for marine mammals within the general area of construction, and MM BIO-2 (Protect Eelgrass), which specifies measures to avoid adverse effects on nearby eelgrass, would reduce potential cumulative effects from pile driving on marine mammals and ensure that the Proposed Project and the Reduced Project Alternative (Alternative 2) would not make a cumulatively

considerable contribution to a significant cumulative impact related to pile driving/removal and dredging.

Neither the No Project Alternative (Alternative 1) nor the Reduced Project Alternative (Alternative 2) would make a cumulatively considerable contribution to a significant cumulative impact related to any other biological issue and therefore do not require mitigation.

5.2.3 Energy Conservation

5.2.3.1 Scope of Analysis

The scope of the analysis of cumulative effects related to energy conservation includes the overall port complex (the ports of Los Angeles and Long Beach) and the immediate surrounding region. The analysis recognizes that energy is required for virtually every activity undertaken by citizens and businesses every day, including domestic uses, transportation, manufacturing, construction, and goods movement and distribution. Energy is supplied by a variety of sources, fossil fuels currently being the major source. Given the finite nature of fossil fuel supplies and the need to reduce fossil fuel use due to its documented relationship to climate change, the efficiency of energy use and the extent to which energy can be conserved are important issues. The significance criteria used for the cumulative analysis are the same as those used for analysis in Section 3.3.4 (Energy: Impacts and Mitigation Measures).

Cumulative Impact EN-1: Would the Proposed Project make a cumulatively considerable contribution to a significant cumulative impact related to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Construction and operation of past, present, and reasonably foreseeable future projects have consumed and will continue to consume energy in the form of electricity, petroleum fuels, and natural gas. These demands are currently accommodated by existing facilities as provided by local refineries (for petroleum fuels), the Los Angeles Department of Water and Power (LADWP) (for electricity), and the Southern California Gas Company (for natural gas). Many of the projects identified in Table 5-1, both inside the ports and in adjacent communities, involve new or expanded uses that have resulted or will result in additional demands on fuel, electricity, and natural gas.

LADWP has a total generating capacity of about 8,000 MW to serve a peak Los Angeles-area demand of about 6,500 MW (LADWP 2022). The *Power Strategic Long-Term Resource Plan* (STLRP; LADWP 2017) predicts that LADWP's overall system capacity is adequate to meet forecasted consumption, even though annual demand for electricity is forecasted to increase by nearly 50 percent through the current SLTRP planning horizon of 2040. Through implementation of strategies identified in the Power Integrated Resource Plan (IRP), electricity resources and reserves at LADWP will adequately provide electricity for the study region.

As described in Section 3.3.2, in 2021 California consumed approximately 13.8 billion gallons of gasoline and approximately 3 billion gallons of diesel fuel (CBE 2022a, b).

Demand for gasoline is predicted to decline somewhat over the next 10 years and demand for diesel fuel will remain stable or increase slightly. Future related projects would be expected to reduce vehicular fuel use by encouraging the use of alternative modes of transportation and other project features. Because fuel use is not predicted to increase substantially, Southern California will have adequate fuel supplies to accommodate the related projects.

As described above, adequate energy supplies exist to meet the demands of the related projects. Furthermore, the high cost of energy represents an incentive for construction and operational activities to use energy as efficiently as is consistent with project goals and fiscal responsibility. Accordingly, there is no basis for concluding that the related projects represent wasteful, inefficient, or unnecessary consumption of energy resources. Therefore, past, present, and reasonably foreseeable future projects would not result in a cumulatively significant impact related to energy use and conservation.

Contribution of the Proposed Project

As described in Section 3.3.4, construction of the Proposed Project would not result in unnecessary use of energy because construction is necessary to achieve the overall objectives of the Proposed Project and the amount of energy used would be limited to that required to complete construction activities. Because construction would be consistent with MM AQ-3 (Port of Los Angeles Sustainable Construction Guidelines), which include a provision to limit idling and thereby reduce energy consumption by construction vehicles and equipment, it would not result in wasteful consumption of energy.

Operation of the Proposed Project would consume more energy than under baseline conditions, but, as described in Section 3.3.4, that energy would be used efficiently. Several operational elements of the Proposed Project, including pumps and motors, would be electrically powered, which would reduce the use of fossil fuels. Furthermore, the Proposed Project would be subject to a number of city, state, and federal sustainability and energy conservation goals and standards as listed in Section 3.3.3 (Energy).

Accordingly, operation of the Proposed Project would represent a more efficient use of energy than baseline operations, and the Proposed Project would not result in a cumulatively considerable contribution to a significant cumulative impact related to energy demand or the efficient use of energy resources under CEQA.

Contribution of the Alternatives

Under No Project Alternative (Alternative 1), none of the proposed construction activities would occur, either in water or in backland areas. The existing Berths 148-151 MOT backlands area would permanently close, and the site is assumed to remain idle for the foreseeable future. Accordingly, impacts related to energy use and conservation would be less than significant. As a result, the No Project Alternative (Alternative 1) would not make a cumulatively considerable contribution to an existing significant cumulative impact related to energy conservation.

Reduced Project Alternative (Alternative 2) would involve similar construction and operational activities as the Proposed Project (see Section 3.3.4.2 for more detail on impacts related to energy). Accordingly, the Reduced Project Alternative (Alternative 2) would not make a cumulatively considerable contribution to an existing significant cumulative impact related to energy conservation.

Mitigation Measures and Residual Cumulative Impacts

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

Cumulative Impact EN-2: Would the Proposed Project make a cumulatively considerable contribution to a significant cumulative impact related to conflict with or obstruction of a state or local plan for renewable energy or energy efficiency?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

In general, construction and operation of past, present, and reasonably foreseeable future projects have consumed and will continue to consume energy in the form of electricity, petroleum fuels, and natural gas. As a result of federal, state, and local regulations and initiatives (see Section 3.3.3 for descriptions of those programs), increasing amounts of that energy will come from renewable sources and energy efficiency is expected to improve.

As described above, adequate energy supplies exist to meet the demands of the related projects. Furthermore, the high cost of energy represents an incentive for construction and operational activities to use energy as efficiently as is consistent with project goals and fiscal responsibility. In addition, state and local initiatives related to zero emissions and renewable fuels will increase reliance on renewable energy sources. Accordingly, there is no basis for concluding that the related projects would conflict with plans and programs related to renewable energy and energy efficiency. Therefore, past, present, and reasonably foreseeable future projects would not result in a cumulatively significant impact related to renewable energy and energy efficiency.

Contribution of the Proposed Project

As described in Section 3.3.4.2, the Proposed Project would comply with state and local energy initiatives such as the Port's Sustainable Construction Guidelines, the City's Sustainable City pLAn, and the various energy-saving programs in the Clean Air Action Plan. Furthermore, the Proposed Project would likely handle increasing amounts of renewable fuels and feedstocks for use in the region.

Accordingly, construction and operation of the Proposed Project would not result in a cumulatively considerable contribution to a significant cumulative impact related to renewable energy or energy efficiency.

Contribution of the Alternatives

Under No Project Alternative (Alternative 1), none of the proposed construction activities would occur, either in water or in backland areas. The tenant (Phillips 66) would cease operations at the MOT and termination clauses associated with existing entitlement would be carried out. No subsequent use of the site has been proposed or is being considered at this time. Accordingly, impacts related to energy would be less than significant. As a result, the No Project Alternative (Alternative 1) would not make a cumulatively considerable contribution to an existing significant cumulative impact related to renewable energy or energy efficiency.

The Reduced Project Alternative (Alternative 2) would involve similar construction and operational activities as the Proposed Project (see Section 3.3.4.2 for more detail on impacts related to energy). Accordingly, the Reduced Project Alternative (Alternative 2)

would not make a cumulatively considerable contribution to an existing significant cumulative impact related to renewable energy or energy efficiency.

Mitigation Measures and Residual Cumulative Impacts

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

5.2.4 Greenhouse Gas Emissions

Scientific evidence indicates a trend of warming global surface temperatures over the past century due largely to the generation of GHG emissions from anthropogenic sources, as further discussed in Section 3.4, Greenhouse Gas Emissions. 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.

Cumulative Impact GHG-1: Would the Proposed Project or alternatives generate GHG emissions, either directly or indirectly, that would make a cumulatively considerable contribution to a significant cumulative impact?

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. Current and future projects will incorporate a variety of GHG reduction measures in response to federal, state, and local mandates and initiatives, and these measures are expected to reduce GHG emissions from future projects. However, because of the long-lived nature of GHGs in the atmosphere and the global nature of GHG emissions impacts, it is assumed that any GHG emissions related to past, present, and reasonably foreseeable future projects represent a significant cumulative impact.

Contribution of the Proposed Project (Prior to Mitigation)

The challenge in assessing the significance of an individual project's contribution to global GHG emissions and associated global climate change impacts is to determine whether a project's GHG emissions, which are at a micro-scale relative to global emissions, make a cumulatively considerable incremental contribution to a macro-scale impact. SCAQMD developed a project-level significance threshold for GHGs. For the purposes of this cumulative discussion, it is conservatively assumed that an exceedance of the Project-level threshold would result in a cumulatively considerable contribution to the overall GHG burden.

As shown in Table 3.4-2 of Section 3.4 (Greenhouse Gas Emissions), annual GHG emissions of the Proposed Project without mitigation would exceed the SCAQMD significance threshold (10,000 $MTCO_2e$) and would therefore be significant in both analysis years (2027 and 2057). For the purposes of this cumulative discussion, it is conservatively assumed that an exceedance of the project-level threshold would result in a cumulatively considerable contribution to the overall GHG burden. Accordingly, without mitigation, impacts from construction and operation of the Proposed Project

would make a cumulatively considerable contribution to an existing significant cumulative impact related to GHG emissions and global climate change.

Contribution of the Alternatives

The No Project Alternative (Alternative 1) would not result in an increase in GHG emissions and would therefore not make a cumulatively considerable contribution to a significant cumulative impact. The Reduced Project Alternative (Alternative 2) would have GHG emissions similar to those of the Proposed Project (see Section 3.4.6.1 for more details related to GHG impacts). Accordingly, before mitigation the Reduced Project Alternative (Alternative 2) would make a cumulatively considerable contribution to a significant cumulative impact related to GHG and global climate change.

Mitigation Measures and Residual Cumulative Impacts

Impacts of GHG emissions from the Proposed Project would be offset by mitigation measures MM GHG-1 and MM GHG-2.

> **MM GHG-1: GHG Reduction Offsets.** The Tenant shall be required to purchase and retire carbon offsets related to activities that reduce, avoid, destroy, or sequester an amount of GHG emissions in an off-site location to offset the equivalent amount of GHG emissions generated by the Project in excess of LAHD's significance threshold of 10,000 metric tons of CO_2 equivalent ($MTCO_2e$) per year. From the first year of the Permit through the end of the term of the Permit, the Tenant shall purchase and retire carbon offsets each year in an amount that would be the equivalent of the Project's estimated residual GHG emissions. The estimated residual emissions for each calendar year shall be based upon the calculations in Appendix C prepared for the Project except as adjusted in accordance with paragraph (a) or (b), below.
>
> The LAHD is in the process of developing a Greenhouse Gas Program. The Program shall be used for GHG-reducing projects and programs approved by the LAHD. If that Program is established during the term of the Permit, the Tenant shall have the option to offset the required amount of GHG emissions through a funding contribution to the Greenhouse Gas Program rather than towards purchasing carbon offsets from a CARB-recognized registry.
>
> While the LAHD Greenhouse Gas Program is currently under development, the Tenant shall purchase and retire carbon offsets from a CARB-recognized offset registry as follows:
>
> **Carbon offsets**: The Tenant shall purchase and retire carbon offsets from a CARB-recognized registry to ensure that offsets will result in real, permanent, additional, quantifiable, verifiable, and enforceable reductions.
>
> The carbon offsets shall be verifiable and enforceable in accordance with the registry's applicable standards, practices, or protocols.
>
> The order of priority for purchasing (any one or more) carbon offsets shall be considered as follows:
>
> i. Originating within the local area;
> ii. Originating within the South Coast Air Basin;
> iii. Originating within the state of California; or

iv. If sufficient local and in-state offsets are not available, the Project shall purchase conforming national offsets registered with a CARB-recognized registry.

Adjustment of Project's Required Offsets through Other Verified GHG Emission Reductions: The Tenant may pursue the following modifications to the Project's total estimated GHG emissions identified in this measure. These modifications may be pursued in conjunction with or independent of each other on an up to annual basis.

a) Adjustment in GHG Emissions

In the event of changes in activities, efficiency, reduced operations, or for any other purpose, an adjustment of the required carbon offsets may be requested based on an evaluation of actual GHG emissions rather than future projected GHG emission calculations in this EIR. If the actual annual GHG emissions, minus the CEQA Baseline, do not exceed the significance threshold of 10,000 $MTCO_2e$ per year, no carbon offsets will be required. To adjust the required number of carbon offsets for purchase by the Tenant, the Tenant shall make a request in writing to the LAHD for review and approval for the calendar year under consideration and shall submit a report within 60 days that quantifies the actual greenhouse gas emissions by an expert or an independent, qualified third-party. The evaluation of actual greenhouse gas emissions must be performed using acceptable industry standards and protocols for all sources that were included in the Project's GHG emissions calculations under Impact GHG-1. LAHD review shall occur within 30 days of receipt of the submitted report. Any expenses incurred by LAHD in processing the Tenant's request, including retaining an independent third-party verifier to peer review the report, shall be borne by the Tenant. Alternatively, LAHD may implement a review for its own purpose, subject to the same quantification process described above, to adjust GHG emissions at any time during the life of the Project.

or

b) Implementation of Additional GHG Reduction Methods

In addition, the Tenant may request a reevaluation of required carbon offsets to be purchased according to this paragraph. The Tenant may implement different and additional GHG reduction methods if new technology and/or other feasible measures become available during the term of the Permit. To adjust the required number of carbon offsets for purchase, the Tenant shall identify such additional GHG reduction actions and must quantify the GHG emission reductions from these GHG reduction actions by an independent, qualified third-party verifier. Once the GHG reduction actions are found to be feasible and are reviewed and approved by LAHD staff, the Tenant may request that LAHD reduce its required purchase of carbon offsets by the equivalent amount of demonstrated reduction. Any expenses incurred by LAHD in processing the Tenant's request, including retaining a third-party verifier, shall be borne by the Tenant.

MM GHG-2: LED Lighting. All lighting within the interior of buildings on the premises and outdoor high mast terminal lighting will be replaced with LED lighting or a technology with similar energy-saving capabilities by the first year after completion of construction for the Proposed Project or alternative.

The largest source of operational GHG emissions under the Proposed Project would be vessel transiting (see Table 3.4-2). Vessel transiting GHG emissions would be reduced by

Mitigation Measure MM AQ-6 (Vessel Speed Reduction Program, see Cumulative Impact AQ-3, above). By reducing vessel speeds while transiting to and from the Port in compliance with the VSRP, vessel main engine power loads are reduced, thus reducing fuel consumption and resulting GHG emissions. As described in Section 3.4 (Greenhouse Gas Emissions), GHG emission reductions resulting from implementation of MM AQ-6 (Vessel Speed Reduction Program) have been accounted for in the GHG emissions impact analysis.

The mitigation measures applied to the Proposed Project would also be applied to the Reduced Project Alternative (Alternative 2).

After mitigation, the Proposed Project and Reduced Project Alternative (Alternative 2) would not make a cumulatively considerable and unavoidable contribution to a significant cumulative impact relative to greenhouse gas emissions.

5.2.5 Hazards and Hazardous Materials

As described in Section 3.5.1, the Initial Study published in 2023 concluded that the Project site was not on any of the databases comprising the Cortese List. However, LAHD subsequently determined that the site is now on the Cortese List and is subject to a Cleanup and Abatement Order from the Los Angeles Water Quality Control Board. Accordingly, this section evaluates the potential for significant cumulative impacts associated with that issue. The cumulative impacts of the other CEQA issue areas that were identified in the Initial Study as having less than significant impacts are considered in Section 5.2.6.

Cumulative Impact HAZ-1: Would the Proposed Project or alternatives be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impacts of Past, Present, and Reasonably Foreseeable Future Projects

Some of the past, present, and reasonably foreseeable projects in Table 5-1 are likely located on sites included on the Cortese List, and one is located in the general vicinity of the Proposed Project. Specifically, project #23 (Berths 167-169 [Shell] Marine Oil Terminal Wharf Improvements Project, Geotracker listing #SLT4229A1784) is located on a site included on the Cortese List. That site involves subsurface soil and groundwater contamination by petroleum products and/or chlorinated hydrocarbons and is undergoing site remediation. Several other sites listed on Geotracker but not on Table 5-1 (because there is no development project associated with them) are located in the Port. These include remedial actions at a former tank farm at Berths 118-120, and soil and groundwater remediation at Berths 171-173.

All sites are located in industrial areas of the Port and none are closer to sensitive receptors than approximately a quarter of a mile. The health risk assessments that have been conducted (assessments are not available for all sites) did not identify risks to sensitive receptors exceeding regulatory thresholds. Site management at all sites includes precautions aimed at preventing or minimizing exposure to hazardous substances. Accordingly, LAHD concludes that the related projects do not represent a significant cumulative impact.

Contribution of the Proposed Project (Prior to Mitigation)

As described in Section 3.5.4.2, impacts related to the presence of contaminated soils at a site listed under Government Code §65962.5 would be less than significant. Proposed Project construction would be conducted in accordance with the plans and restrictions associated with the site's future remedial action plan and existing site protocols. The health risk assessment conducted pursuant to RWQCB Cleanup and Abatement Order (CAO R4-2022-0139) identified significant risks only to construction workers, who would be protected by the measures described in Section 3.5.2. Accordingly, The Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Contribution of the Alternatives

The No Project Alternative (Alternative 1) would not result in an increase in hazards to the public because no construction would take place, and therefore no possible release of contamination would occur. The No Project Alternative (Alternative 1) would therefore not make a cumulatively considerable contribution to a significant cumulative impact.

The Reduced Project Alternative (Alternative 2) would have less construction in upland areas of the Project site than the Proposed Project (see Section 3.5.4.2 for details on impacts related to hazards and hazardous materials). Accordingly, the Reduced Project Alternative would not make a cumulatively considerable contribution to a significant cumulative impact.

Mitigation Measures and Residual Cumulative Impacts

No mitigation is necessary and impacts would be less than significant.

5.2.6 Other Resource Areas

The Initial Study for the Proposed Project published in February 2023 (Appendix A), determined that impacts in a number of issues in the CEQA Appendix G checklist would be less than significant or that the Proposed Project would have no impact, and would therefore not be addressed in the Draft EIR. Accordingly, those issues are not included in Chapter 3 of this Draft EIR. However, consistent with CEQA §15355, this Draft EIR considers the potential for the Proposed Project to have cumulative impacts related to issues for which impacts were determined to be less than significant on the grounds that a project's incremental effects, even if not significant at the project level, may, when considered in the context of related projects, make a contribution that is cumulatively considerable. Cumulative impacts related to these issues are discussed below (each potential impact is identified as listed in the Initial Study). Impact areas determined in the NOP/IS to have no impact, are not discussed in this section. These included Cultural Resources, Land Use and Planning, Population and Housing, Tribal Cultural Resources, and Wildfire.

Aesthetics:

a) Would the project have a substantial adverse effect on a scenic vista?
b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
c) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

As described in Section 4.1 of the Initial Study, the visual characteristics of the Proposed Project's setting is of a working, industrial port. The Proposed Project would not introduce a new visual element, damage scenic resources, or create a new source of substantial light or glare. The visual characteristics of the completed, operational project would continue to be consistent with the existing setting and would not substantially alter scenic resources visible to the public. Accordingly, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Air Quality:

a) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

As described in Section 4.3 of the Initial Study, the existing industrial setting of the Proposed Project represents a complex odor environment. That environment is influenced by the nearby ocean and shoreline, industrial and vehicle emissions, vegetation, and other odors generated by human activities. Odors from construction and operation of the Proposed Project would be similar to odors produced from existing marine oil terminal operations and related activity. Furthermore, the small scale of the Proposed Project's odor-producing activities relative to the Port as a whole and their distance from sensitive receptors means that the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Biology:

a) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

b) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

As described in Section 4.4 of the Initial Study, there is no riparian habitat in the vicinity and the only sensitive natural community adjacent to the Project site is a small stand of eelgrass. As described in Section 3.2 (Biological Resources) of the Draft EIR, these habitats have been flourishing and expanding in recent years, and while invasive species are present elsewhere in the harbor, the diversity and general health of the biological community have not been compromised. Accordingly, a significant cumulative impact does not exist. The small scale of construction and operational activities of the Proposed Project relative to the Port as a whole, their distance from sensitive habitats, and the implementation of MM BIO-2 (Protect Eelgrass) means that the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Geology and Soils:

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

   ii. Strong Seismic Ground Shaking

   iii. Seismic-related ground failure, including liquefaction

b) Would the project be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
c) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

As described in the Initial Study (Section 4.7), a fundamental purpose of the Proposed Project is to improve the seismic resistance of the marine terminal facilities. Furthermore, the new facilities would be built to adhere to the seismic requirements specified in the MOTEMS regulations. Accordingly, the Proposed Project would reduce the potential for impacts from fault rupture, ground shaking, liquefaction, and expansive or otherwise unstable soils, and would therefore not make a cumulatively considerable contribution to a significant cumulative impact.

Hazards and Hazardous Materials:

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As described in the Initial Study (Section 4.9), the Proposed Project would increase the safety of hazardous materials handling at the marine terminal by reducing the chances of spills and leakages during product transfer and storage and improving spill response and containment facilities. Because the site is an existing marine oil terminal and is included in existing emergency response plans, the hazard to the public or the environment would not be increased above baseline conditions. Accordingly, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Hydrology and Water Quality:

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    i. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
    ii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
d) Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

As described in the Initial Study (Section 4.10), the Proposed Project would continue to adhere to applicable water quality standards, waste discharge requirements, and other regulatory requirements. Construction and operation of the Proposed Project would not substantially alter the existing setting with regard to groundwater conditions, storm

drainage, or flooding and tsunamis, and thus of releases of pollutants from those events. Because the Proposed Project would reduce the risk of releases of product, it would reduce the risk of releases of water pollutants. Accordingly, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Noise:

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

As described in the Initial Study (Section 4.13), the Proposed Project would not contribute substantially to the existing noise environment or generate substantial additional groundborne vibration, as construction would be temporary and operations would generate similar noise as under baseline conditions. Furthermore, no sensitive receptors are located within the Los Angeles Municipal Code threshold of 500 feet from the site. Accordingly, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Public Services:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
    i. Fire protection?
    ii. Police Protection?
    iii. Other Public Facilities?

As described in the Initial Study (Section 4.15), the Proposed Project would improve safety at the marine terminal. Furthermore, because the Proposed Project's operations would be similar in scope to existing conditions, it would not result in increased demand on fire protection and police services and on the services that support navigational safety. Accordingly, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

Transportation:

a) Would the project result in inadequate emergency access?
b) Would the project result in a change in marine vessel traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

As described in the Initial Study (Section 4.17), the Proposed Project would not increase or materially alter the configuration of the marine terminal at Berths 148-151 or the volume of vessel traffic in the Port. Accordingly, the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact related to emergency access and maritime safety.

Utilities:

a) Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

As described in the Initial Study (Section 4.19), construction of the Proposed Project would generate relatively small amounts of waste requiring disposal in a landfill and operation would not increase solid waste above baseline amounts. Accordingly, the contribution of the Proposed Project to regional demand for landfill capacity would be insubstantial, and the Proposed Project would not make a cumulatively considerable contribution to a significant cumulative impact.

5.3 Summary of Cumulatively Considerable Impacts

General summaries of the resource areas in which the alternatives would make a cumulatively considerable and unavoidable contribution to a significant cumulative impact after mitigation are provided below and are based on the discussions in Section 5.2 above.

5.3.1 Proposed Project

The Proposed Project would make cumulatively considerable and unavoidable contributions to significant cumulative impact after mitigation (when applicable) in the following resource area:

- Air Quality and Meteorology

Emissions from operations would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_X emissions and for offsite concentrations of NO_2 and PM_{10} during operational year 2027 with overlapping construction.

5.3.2 Alternative 1 – No Project Alternative

Because there would not be any Project construction or operations at the Project site, the No Project Alternative (Alternative 1) would make no cumulatively considerable and unavoidable contributions to significant cumulative impacts in any resource area.

5.3.3 Alternative 2 – Reduced Project Alternative

As in the case of the Proposed Project, the Reduced Project Alternative (Alternative 2) would make cumulatively considerable and unavoidable contributions to significant cumulative impacts after mitigation in the following resource areas:

- Air Quality and Meteorology

Emissions from operations under the Reduced Project Alternative (Alternative 2) would make a cumulatively considerable and unavoidable contribution to an existing significant cumulative impact for NO_X emissions and for offsite concentrations of NO_2 and 24-hour PM_{10} during operational year 2027 with overlapping construction.

The Reduced Project Alternative (Alternative 2)'s contributions to cumulative impacts would be slightly less than those of the Proposed Project due to its slightly reduced construction impacts.

References

CARB (California Air Resources Board). 2006. Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach. https://ww2.arb.ca.gov/sites/default/files/barcu/regact/marine2005/portstudy0406.pdf.

_____. 2022. Maps of State and Federal Area Designations. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

CBE (California State Board of Equalization). 2022a. Fuel Taxes Statistics & Reports. January 2022 – Motor Vehicle Fuel 10 Year Reports. Fuel Taxes Statistics & Reports. Taxable Diesel Gallons 10-Year Report.

_____. 2022b. Fuel Taxes Statistics & Reports. Taxable Diesel Gallons 10-Year Report Fuel Taxes Statistics & Reports. Taxable Diesel Gallons 10-Year Report .

Los Angeles Department of Water and Power (LADWP). 2017. Power Strategic Long-Term Resource Plan. December. 2017. Power Strategic Long-Term Resource Plan.

_____. 2022. Power Facts and Figures. 2022. Power Facts and Figures.

LAHD (Los Angeles Harbor Department). 2009. Sustainable Construction Guidelines for Reducing Air Emissions.

_____. 2017. Acoustic Threshold Calculation For Marine Mammal Hearing Groups Pertaining To Pile Driving Activities. Prepared for the Port of Los Angeles Environmental Management Division by Pi Environmental LLC

_____. 2020. 2020 Air Quality Report Card. https://kentico.portoflosangeles.org/getmedia/a593a605-9d29-4dd4-a7d9-37f58c658f5339/2020_Air_Quality_Report_Card.

POLA and POLB (Port of Los Angeles and Port of Long Beach). 2010. San Pedro Bay Ports Clean Air Action Plan (CAAP) 2010 Update. https://kentico.portoflosangeles.org/getmedia/68ad1b1f-2241-4edb-8bf2-d9621af288b2/2010_caap_update_final.

_____. 2017. San Pedro Bay Ports Clean Air Action Plan (CAAP) 2017 Update. https://kentico.portoflosangeles.org/getmedia/9d371f7b-9812-4c75-bcfd-23e83a191435/CAAP_2017_Draft_Document-Final.

SCAQMD (South Coast Air Quality Management District). 2000. Multiple Air Toxics Exposure Studies (MATES-II). Final Report. http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-ii.

_____. 2003. Appendix D. Cumulative Impacts Requirements Pursuant to the California Environmental Quality Act. http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf.

_____. 2015. MATES IV: Multiple Air Toxics Exposure Studies. http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv.

_____. 2021. MATES V: Multiple Air Toxics Exposure Studies. 2021. MATES V: Multiple Air Toxics Exposure Studies..

_____. 2022. 2022 Air Quality Management Plan. December. 2022 Air Quality Management Plan.

Personal Communication:
LAHD (Los Angeles Harbor Department). 2024. Annual Vessel Arrival Data (2021 – 2023). Personal communication, S. Palacios, 25 June.