

**SOUTH COAST MARINE PROTECTED AREAS PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT**

**SECTION 9.0
CUMULATIVE IMPACTS**

This section analyzes the environmental effects of the proposed Integrated Preferred Alternative (IPA) in conjunction with past, present, and probable future projects causing related impacts; and examines feasible options for avoiding or lessening the Project's contribution to any significant cumulative impacts.

9.1 REGULATORY SETTING

The State California Environmental Quality Act (CEQA) Guidelines (section 15355) define "cumulative impacts" as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." An Environmental Impact Report (EIR) is required to discuss cumulative impacts of a project "when the project's incremental effect is cumulatively considerable," that is, when a project's incremental effects are significant in the context of the effects of past, present, and probable future projects (State CEQA Guidelines section 15065(a)(3)). The discussion of cumulative impacts must reflect the severity of the impacts and their likelihood of occurrence, but need not be as detailed as the discussion of the effects of the project alone (State CEQA Guidelines section 15130(b)). The cumulative impacts discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact (State CEQA Guidelines section 15130(b)). Further, the State CEQA Guidelines (Section 15151) state that the cumulative impacts analysis should be prepared in light of what is reasonably feasible.

9.2 STUDY METHODS

The State CEQA Guidelines (Sections 15130(a)(1)(A) and (B)) indicate that there are two acceptable methods for analyzing cumulative impacts in an EIR: the "list" method and the "summary of projections," or "plan" method. The "list" method involves considering a project's impacts in conjunction with a list of past, present, and probable future projects producing related impacts. The "summary of projections," or "plan" method, in contrast, involves considering a project's impacts in light of published projections from an adopted general plan, air quality plan, or other planning document. Where the "list" method is utilized, the contents of the list are dictated by the nature of the environmental resources being examined, as well as the location and type of project considered for inclusion in the list (see Section 15130(b)(2) of the State CEQA Guidelines).

Because the proposed Project IPA is a large-scale, regional project affecting an offshore area, there is no suitable general plan or other planning document that provides growth or other projections for the south coast study region (SCSR). The "plan" method is therefore not well

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suited for analysis of the proposed Project IPA. Accordingly, this Draft EIR utilizes the “list” method to analyze the proposed Project’s potential cumulative environmental impacts.

9.2.1 Geographic Scope of Analysis

The list of past, present, and probable projects considered in the analysis of cumulative impacts was geographically limited to those located within the Southern California bight (the bight). The bight represents a distinct oceanographic feature, dominated by a circulating oceanic gyre created from the interaction between southbound currents along the coast and northbound countercurrents slightly farther offshore. The northernmost extent of the bight, Point Conception, also marks the boundary between two biogeographic provinces, each with distinct biota and ecosystems: the Oregonian province to the north, and the San Diegan (or Californian) province to the south. For more information regarding the characteristics of the bight, please refer to Section 7.0 of this Draft EIR. Because the SCSR is fully encompassed within the bight, and because the bight is distinct from the surrounding waters from an oceanographic and biological perspective, the limits of the bight represent reasonable and logical study boundaries for the cumulative impacts analysis.

9.3 CUMULATIVE PROJECTS CONSIDERED

As described more fully in Sections 6.0 through 8.5 of this Draft EIR, the project-specific environmental impacts attributable to the proposed Project are limited, due to the preservation-oriented nature of the project. Because of this, and because of the very large geographic extent of the bight, the list of past, present, and probable future projects considered in this section is not exhaustive, but instead focuses on the most prominent projects in the bight. The physical environment within the bight has the potential to be affected by a variety of human activities, ranging from relatively low-impact, non-consumptive personal recreational uses to large-scale commercial and industrial operations.

9.3.1 Offshore Oil and Gas Development – Federal Waters

The federal Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE, formerly the Minerals Management Service) oversees offshore leases of federal offshore waters for oil and natural gas exploration and extraction. Currently, a portion of the federal offshore leases within the bight are undeveloped but are planned for development by the lease operators. However, some uncertainty exists due to pending litigation (see *Amber Resources et al. v. United States*, U.S. Court of Federal Claims Nos. 02-30C, 04-1822C, and 05-249C [consolidated]) and continuing objections to offshore drilling from the state of California. For the purposes of this analysis, it is assumed that these offshore leases would be developed as projected by the lease operators (see Minerals Management Service 2005). This conservative assumption is intended to portray the maximum probable extent of potential future lease development in the bight; lesser impacts would occur if some of the leases were to remain undeveloped.

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Generally, the planned developments can be classified into two categories: development of undeveloped leases from existing platforms or mobile drilling units, and development of undeveloped leases from new platforms. Other activities, such as decommissioning of existing facilities and abandonment of exploration wells, are also planned, but would involve impacts of limited duration and intensity. Ongoing operations within currently active leases are also projected to continue in the future, and could foreseeably intensify through the construction of additional wells on existing offshore oil platforms.

9.3.1.1 Proposed Development of Undeveloped Leases from Existing Platforms or Mobile Drilling Units

The majority of the probable future oil and gas development projects within the bight would be located offshore of Santa Barbara and Ventura Counties, in the Santa Barbara Channel. This area has substantial existing offshore infrastructure, including platforms, pipelines, and processing facilities, and many of the proposed developments would use these facilities where feasible. The development scenarios would generally involve installation of test wells to determine the optimal location for any extractive activities, followed by installation of development and service wells. The summary descriptions that follow are adapted from an Environmental Information Document released by the Minerals Management Service in 2005 describing potential development scenarios for undeveloped federal lease units offshore of San Luis Obispo, Santa Barbara, and Ventura counties.

9.3.1.1.1 Rocky Point (Plains Exploration and Production Company). The Plains Exploration and Production Company (PXP) operates the Rocky Point Unit, which is comprised of federal Leases OCS-P 0452 and 0453 offshore of Point Conception at the extreme northern boundary of the bight. Proposed development within this unit includes a total of 20 development wells (14 oil wells and 6 service wells), to be drilled from existing platforms Harvest (seven wells), Hermosa (seven wells), and Hidalgo (six wells). Four of these wells have already been installed. The proposed wells would feature horizontal reach of approximately 2.5 to 3.5 miles, and would require several months to install.

Oil would be dehydrated and stabilized on the platforms, then sent to the Gaviota facility via the existing subsea dry oil pipeline. At Gaviota, the oil would be metered, heated, stored temporarily, and then transported via the Plains All-American Pipeline (Plains AAPL) to various refining destinations.

Rocky Point gas would be sweetened on the platforms and 1) sent via pipeline for sales onshore; 2) used to generate electricity and heat for platform operations; 3) sent to shore to fuel the Gaviota co-generation units; and/or 4) injected into the Point Arguello Field, the Rocky Point Field, or both.

9.3.1.1.2 Bonito Unit (Plains Exploration and Production Company). PXP is the operator of the Bonito Unit, which includes Leases OCS-P 0499, 0500, 0443, 0445, 0446,

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0449, and a portion of 0450. The Bonito Unit is located approximately 6 to 15 miles west of Point Arguello in the Santa Maria Basin offshore Santa Barbara County. Proposed extended reach development wells would be drilled from Platform Hidalgo located on Lease OCS-P 0450. Oil would be dehydrated and stabilized on the platform, then sent to the existing Gaviota facility via the existing subsea dry oil pipeline. At the Gaviota facility, the oil would be metered, heated, stored temporarily, and then transported via pipeline to various refining destinations.

9.3.1.1.3 Sword Unit (Samedan Oil Company). Samedan Oil Company currently operates the Sword Unit, which includes Leases OCS-P 0319, 0320, 0322, and 0323A. A portion of Lease OCS-P 0323 was relinquished and the remaining lease was redesignated 0323A to reflect the change. Eleven development wells, including 10 oil wells and 1 service well, would be drilled from Platform Hermosa, located on Lease OCS-P 0316. The wells would be extended reach wells, with horizontal displacements of 3.5 to 4.5 miles. Oil would be dehydrated and stabilized on the platforms, then sent to the Gaviota facility via the existing subsea dry oil pipeline. At Gaviota, the oil would be metered, heated, stored temporarily, and then transported by pipeline to various refining destinations.

9.3.1.1.4 Cavern Point Unit (Venoco, Inc.). Venoco is the current operator of the Cavern Point Unit, which includes Leases OCS-P 0210 and 0527, located off the coast of Ventura County. Potential development of the Cavern Point Unit would occur from existing Platform Gail. Development could include extended reach drilling of 11 wells from Platform Gail, including 10 oil wells and 1 service well (MMS 2005). Produced oil and gas would be transported via Platform Gail's existing off- to onshore pipelines to Venoco's existing Carpinteria Oil and Gas Processing Facility, located in the City of Carpinteria.

9.3.1.2 Development of Other Undeveloped Offshore Leases from New Platforms

9.3.1.2.1 Gato Canyon Unit (Samedan Oil Company). Samedan Oil Company currently operates the Gato Canyon Unit, which is comprised of Leases OCS-P 0460 and 0464. The Gato Canyon Unit would be developed from a new platform proposed in Lease OCS-P 0460, offshore the El Capitan area of the Gaviota Coast. In total, the new platform could potentially include 28 well slots, 20 production wells, and 4 service wells. A new 14-inch wet oil pipeline, an 8-inch gas pipeline, an 8-inch produced water pipeline, and two power cables would connect the platform to the existing ExxonMobil Las Flores Canyon facility (MMS 2005). The pipelines and cable would run from the platform, traversing State Lease PRC 2991.1 to landfall, and then through the existing Santa Ynez Unit pipeline corridor to the Las Flores Canyon facility. Gas would be processed at the Las Flores Canyon Gas Plant and sold to The Gas Company (MMS 2005). Oil would be processed at the Las Flores Canyon facility using existing capacity, and then transported to other locations outside of Santa Barbara County via pipeline. Produced water would be treated at the existing Las Flores Canyon Water Treatment Plant, transported offshore by pipeline, and disposed of at the new platform.

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9.3.2 Offshore Oil and Gas Development – State Waters

In addition to the potential federal energy projects summarized above, several offshore energy projects located in state waters have also been proposed. Because the California Coastal Sanctuary Act of 1994 (codified at Sections 6240 through 6244 of the California Public Resources Code) prohibits the California State Lands Commission (SLC) from entering into new leases for the extraction of oil and gas from state tidelands under normal circumstances, probable future oil and gas projects would be limited to development within existing leases.

9.3.2.1 Redevelopment of Carpinteria Field (Carone Petroleum Corporation)

The Carone Petroleum Corporation has proposed redevelopment of the offshore Carpinteria Field (existing State Leases PRC-4000, PRC-7911, and PRC-3133). The proposed project includes the drilling of up to 25 new production or injection wells from existing Platform Hogan (located in federal waters in Lease OCS-P 0166). Oil and gas production from the leases would be commingled on Platform Hogan with existing production and sent via existing pipelines to the La Conchita facility. After processing, gas and oil would be sold to The Gas Company and other third parties at the La Conchita sales meters, and shipped via existing pipelines. Total production would increase from approximately 1,300 to 1,500 barrels of oil per day (bpd) to approximately 6,000 bpd through January 2020, at which time total production would decline.

9.3.2.2 Ellwood Full Field Development (Venoco, Inc.)

In 2006, Venoco, Inc. applied to the SLC and City of Goleta to fully develop the offshore Ellwood Field. The proposed project includes an adjustment to the State Lease PRC-3242.1 boundary eastward to allow development of the South Ellwood Field from Platform Holly, the drilling of up to 40 new wells, construction of a new 10-mile onshore pipeline from Venoco's Ellwood Onshore Facility to the existing pipeline system at Las Flores Canyon, decommissioning and abandonment of the Ellwood Marine Terminal and offshore loading facility, safety and environmental upgrades of the Ellwood Onshore Facility, and a new power generating plant. If approved, the proposed project is anticipated to have a peak oil production rate of 12,600 bpd, and peak gas production rate of 20 million standard cubic feet per day (mmscfd) after 5 years (County of Santa Barbara 2010a).

9.3.2.3 Resumption of State Lease PRC-421 Development (Venoco, Inc.)

In May 2004, Venoco, Inc. proposed to bring two idle oil production wells within State Lease PRC-421 back into production. The wells are located in the City of Goleta on two adjacent piers. Pier 421-1 supports an idled water and gas injection well, and Pier 421-2 supports an idled oil production well. Venoco proposes to install new production equipment and reactivate the oil well on Pier 421-2, and reactivate the former injection well on Pier 421-1

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for disposal of wastewater and natural gas (County of Santa Barbara 2010b). Based on current projections, the estimated life of the proposed project would be twelve years of oil production; production would be expected to be no more than an average of 700 bpd in the first year, tapering off to approximately 100 bpd by year 12 (SLC 2007).

9.3.2.4 Ellwood Marine Terminal Lease Renewal (Venoco, Inc.)

Venoco, Inc. is currently seeking approval from the SLC for a new State Lease (PRC-3904.1) through February 28, 2013. This would allow Venoco to continue operating the existing Ellwood Marine Terminal located offshore the City of Goleta and lands under the ownership of the University of California, Santa Barbara (SLC 2009). The proposed project does not include construction of any new facilities or modifications to any existing facilities, but would include the potential for increasing crude oil throughput and transportation from current levels to permitted levels (SLC 2009).

9.3.3 Major Port Projects

9.3.3.1 Projects at the Port of Los Angeles

9.3.3.1.1 San Pedro Waterfront Project. The San Pedro Waterfront Project has been proposed by the Port of Los Angeles (PoLA) in an effort to increase public access to the waterfront, allow additional visitor-serving commercial development within the port, accommodate increased demand in the cruise industry, and enhance transportation within and around the port (U.S. Army Corps of Engineers and PoLA 2006). The project would include construction of three new harbors, a network of promenades and publicly accessible open spaces, and expansion of existing commercial and restaurant areas. In addition, a new cruise ship terminal would be constructed, an existing berth would be upgraded to accommodate cruise vessels, and a second cruise ship berth would be installed (construction of the proposed new harbors would eliminate the one existing cruise ship berth). The project would also include various parking and transportation improvements associated with the proposed and expanded port facilities.

The draft National Environmental Policy Act (NEPA)/CEQA environmental document for the project (U.S. Army Corps of Engineers and PoLA 2008) indicates that if approved as proposed, the project would result in significant and unavoidable impacts in the areas of aesthetics, air quality, biological resources (disruption of biological communities), geologic hazards, noise, recreational resources, automobile traffic and circulation (vessel traffic impacts were determined to be less than significant), and water quality. All other impacts were either determined to be less than significant, or would be reduced to a less-than-significant level by proposed mitigation measures.

9.3.3.1.2 Wilmington Waterfront Development Project. The PoLA proposed the Wilmington Waterfront Development Project to enhance the livability and economic viability

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of the Los Angeles Harbor area, the Wilmington community, and the surrounding region. The project is intended to draw visitors to the Wilmington Waterfront, and includes a waterfront park, promenade, and dock, as well as other publicly-oriented improvements to enhance the connection of the Wilmington community with the waterfront. The project also includes constructing approximately 150,000 square feet of light industrial development, approximately 50,000 square feet of commercial retail space, and a one-acre park. One existing roadway would be vacated and another would be realigned, and various streetscape improvements would improve aesthetics and pedestrian connectivity. The project would be constructed in two phases, with completion scheduled in 2020.

According to the CEQA Findings for the project (PoLA 2009a), the Wilmington Waterfront Development Project would result in significant impacts with respect to air quality, greenhouse gas emissions, geology, and noise after incorporation of mitigation measures. All other impacts of the project were either found to be less than significant, or would be mitigated to a less-than-significant level.

9.3.3.1.3 Port of Los Angeles Channel Deepening Project. The PoLA has proposed the Channel Deepening Project to deepen existing navigation channels and berthing areas within the port to a new depth of -53 feet at mean lower low water. In total, the proposal would generate approximately 3 million cubic yards of dredged material, which would be disposed of at undersea locations. Where existing sediments are contaminated and unsuitable for open water disposal, a confined disposal facility would be constructed and utilized to ensure safety. A portion of the dredged material generated by the project would be used to construct a landfill in an existing slip, which would allow safer and more efficient truck and equipment operations. In addition, more than half of the dredged material generated would be used to create approximately 50 acres of shallow water habitat in areas that are currently deeper; this acreage would be placed into the PoLA's mitigation bank. Excess uncontaminated dredge material that would not be used for habitat creation or landfill would be deposited at an existing ocean disposal site operated by the U.S. Environmental Protection Agency (EPA).

As stated in the CEQA Findings for this project (PoLA 2009b), the PoLA Channel Deepening Project would result in significant and unavoidable impacts to air quality because the project would contribute to existing violations of air quality standards in the South Coast Air Basin. All other impacts of the project were either found to be less than significant, or would be reduced to a less-than-significant level through incorporation of mitigation measures.

9.3.3.1.4 Berth 97-109 (China Shipping) Container Terminal Project. The China Shipping Container Terminal Project would increase the PoLA's cargo handling capacity by constructing a new container shipping terminal, and is intended to accommodate projected future increases in containerized cargo volumes passing through the port. Various supporting land and waterway improvements would also be needed, to ensure adequate connectivity to

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land-based rail and truck infrastructure. Supporting land uses near the terminal to allow loading and unloading containers from ships and for storing and transporting containers would also be implemented. The China Shipping Container Terminal Project has been the subject of previously settled litigation, and the first phase of the project has been completed and is currently operational, consistent with the terms of the settlements. If approved, completion of the remaining project phases is estimated to occur in 2012.

The PoLA's evaluation of this project under CEQA included all phases of the project, including both the portion that has already been completed and is currently operational, as well as the unbuilt portion. The PoLA's CEQA Findings for this project (PoLA 2008a) indicate that the China Shipping Container Terminal Project would result in significant impacts related to aesthetics, air quality, biological resources, geology, ground transportation, noise, and "water quality, sediments, and oceanography." All other impacts of the project were either found to be less than significant, or would be reduced to a less-than-significant level through incorporation of mitigation measures.

9.3.3.1.5 Pacific L.A. Marine Terminal LLC Crude Oil Terminal. This project would include construction and operation of a new deep-draft crude oil marine terminal within the port, allowing the port to accept deliveries of crude oil (including partially-refined crude oil) and occasionally marine gas oil. This project would not require dredging, because the proposed location at the PoLA currently features a berth with sufficient water depth to accommodate Very Large Crude Carrier vessels, the largest vessels expected to call at the terminal. The project also includes constructing new tank farm facilities with a total of 4.0 million barrels of capacity, to be located on piers near the terminal. A new 42-inch diameter, high-volume pipeline would convey crude oil from vessels calling at the terminal to the new tank farm facilities. New and existing underground pipelines would connect the new crude oil marine terminal and tank farms to existing onshore refineries in the vicinity of the port.

In the CEQA Findings for this project (PoLA 2008b), the PoLA determined that the Pacific L.A. Marine Terminal LLC Crude Oil Terminal project would result in significant and unavoidable impacts to air quality, biological resources, geology, noise, recreation (diminished recreational experience due to pile driving noise during construction), risk of upset/hazardous materials, and water quality. All other impacts of the project were either found to be less than significant, or would be reduced to a less-than-significant level through incorporation of mitigation measures.

9.3.3.1.6 TraPac Container Terminal Project. The TraPac Container Terminal project would expand and modernize existing container terminal facilities at the PoLA in an effort to accommodate foreseeable increases in containerized cargo volumes passing through the port. Specifically, the project would include an expanded container terminal, deeper berths, longer and improved wharves, replacement of existing cranes, new terminal buildings and facilities, and a new on-dock intermodal rail yard promoting direct transfer of cargo between ship and

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rail. The existing contained terminal would be expanded by approximately 67 acres, and approximately 1,105 linear feet of new wharves would be constructed. Proposed filling operations would create 10 acres of new land, which would partly accommodate the proposed facilities. A vegetated buffer area would also be installed in an effort to provide physical separation between port operations and adjacent residential uses. The project would be implemented in two phases, and would be completed in 2025.

The CEQA Findings for this project prepared by the PoLA (2007), indicate that the TraPac Container Terminal project would result in significant and unavoidable impacts to air quality, biological resources, geology, noise, ground transportation/circulation, and water quality. All other impacts of the project were either found to be less than significant, or would be reduced to a less-than-significant level through incorporation of mitigation measures.

9.3.3.2 Projects at the Port of Long Beach

9.3.3.2.1 Middle Harbor Redevelopment Project. The Port of Long Beach (PoLB) proposed the Middle Harbor Redevelopment Project in an effort to accommodate projected future increases in the volume of containerized cargo passing through the port. Common operations and wharves of two existing terminals would be consolidated into a single terminal, which would be substantially rehabilitated, modernized, and expanded. Proposed filling operations would generate approximately 55 acres of new land, which would be used to accommodate the proposed terminal expansion. Existing ship berths would be lengthened, widened, and deepened to allow access by larger and more modern cargo vessels, and existing, obsolete gantry cranes would be replaced with newer-generation units capable of reaching across these larger vessels. An electrical substation would also be constructed, supplying power to the Middle Harbor container terminal as well as other PoLB facilities.

In its CEQA Findings for the project (PoLB 2009), the PoLB determined that the Middle Harbor Redevelopment Project would result in impacts related to air quality, biological resources, ground transportation, and noise that would remain significant after incorporation of all feasible mitigation measures. All other impacts of the project were either found to be less than significant, or would be reduced to a less-than-significant level through incorporation of mitigation measures.

9.3.3.3 Projects at the Port of San Diego

9.3.3.3.1 North Embarcadero Port Master Plan Amendment. The San Diego Unified Port District is currently in the process of updating the portion of the existing Port Master Plan dealing with the Centre City Embarcadero (Planning District 3). The proposed amendment would adjust the Port Master Plan boundary to incorporate the Navy Pier, and would assign future land uses to the pier. A portion of the port currently designated for commercial recreation would be redesignated as a marine terminal, and an existing parcel would be prepared for development through assigning development designs and standards. A

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new youth hostel and a bayfront shuttle route would be incorporated. The Master Plan Amendment would also update the descriptions of planned land uses within the port, removing references to elements that were included in the 1980 plan but that have not been built and are no longer envisioned. Generally speaking, the proposed amendment would not substantially alter the geographic extent or vessel capacity of the port.

The San Diego Unified Port District has initiated the CEQA review process for the proposed plan amendment, and an EIR for the project is currently in preparation (a Notice of Preparation was issued on October 6, 2009, see San Diego Unified Port District 2009). Because a Draft EIR for the project has not yet been released, no published information regarding the probable environmental effects of the proposed amendment exists. However, the Notice of Preparation indicates that the Draft EIR will evaluate impacts related to land use and planning, traffic, parking, climate change, air quality, hydrology and water quality, public services, and recreation. Thus, it is possible that the project could result in impacts upon these resources. The significance of any impacts, and the feasibility of reducing impacts to a less-than-significant level through adoption of mitigation measures or alternatives, remains unknown at this time.

9.3.4 Water and Wastewater Treatment Projects

9.3.4.1 Seawater Desalination Project at Huntington Beach

Poseidon Resources, a private firm, proposes to construct a 13-acre seawater desalination facility at a coastal location within the city of Huntington Beach in Orange County. The project is intended to help meet the city's potable water demands in the face of growing costs and increasing uncertainty over imported water supplies. The proposed facility would be located adjacent to the existing Huntington Beach Generating Station, an 880-megawatt natural gas-fired electrical generating station, and seawater would be routed to pass through the existing once-through cooling system of the generating station into the desalination facility. Thus, the project would not involve constructing any intake structures, as seawater would enter the plant through the existing intake associated with the generating station. In addition to the desalination facility, the project includes construction of appurtenant features such as an administration building, on-site and off-site pump stations, water distribution lines, and a 66-kilovolt electrical substation. Three existing fuel oil storage tanks currently occupying the project site would be demolished.

The project has not yet been approved, and the City of Huntington Beach released a Draft Subsequent EIR for the project for public review and comment in May 2010 (portions of the document were later revised and recirculated for additional public review in June 2010). According to the Draft Subsequent EIR, the project would result in impacts related to growth inducement and air quality that would remain significant after incorporation of all feasible mitigation measures. All other impacts of the project were either found to be less than

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significant, or would be reduced to a less-than-significant level by incorporating mitigation measures.

9.3.4.2 South Orange Coastal Ocean Desalination Project

The Municipal Water District of Orange County (MWDOC) is currently exploring the feasibility of constructing a seawater desalination facility north of Doheny State Beach in Dana Point, on the inland side of the Pacific Coast Highway. As currently envisioned, the facility would produce approximately 15 million gallons of fresh water per day and more than 15.2 billion gallons of water per year. The project is intended to improve local water reliability and potentially provide up to 25 percent of the potable water demand. Feasibility testing for the proposed project is currently underway, with extended pumping and pilot plant testing scheduled to continue until 2012 (MWDOC 2010). If results are favorable, the MWDOC would initiate efforts to move forward with development of a full-scale project description and EIR.

Because the project is in the preliminary phases and has not been formally proposed, environmental impacts of the project are uncertain. Specific details regarding the location, footprint, technology, and operating procedures for the facility would have bearing on the project's impacts, but these details are unknown as the project has not yet entered the design phase. Thus, attempting to evaluate the environmental impacts of the MWDOC's envisioned facility at Dana Point would be speculative.

9.3.5 Hydrokinetic Power Projects

Hydrokinetic power projects generate energy from the motion of waves or the unimpounded flow of tides, ocean currents, or inland waterways. Although few hydrokinetic power projects have been built or permitted within the U.S. to date, the Federal Energy Regulatory Commission (FERC), which issues licenses for construction, operation, and maintenance of hydropower projects under the authority of the Federal Power Act, has indicated a commitment to support the advancement of these innovative technologies (FERC 2008). To that end, FERC has entered into Memoranda of Understanding (MOUs) with various state agencies in an attempt to coordinate and streamline the regulatory process for hydrokinetic projects. A MOU between FERC and the California Natural Resources Agency, the California Environmental Protection Agency, and the California Public Utilities Commission was executed on May 18, 2010. However, because hydrokinetic power technologies are emerging, it is likely that smaller-scale, pilot projects will be proposed to test these technologies prior to full-scale commercial development.

Two federal preliminary permits have been issued by FERC for hydrokinetic pilot projects off the coast of Southern California, within or near the SCSR. These projects include the South Coast WaveConnect Project proposed by the Pacific Gas and Electric Co., proposed in state waters offshore of Santa Barbara County; and a project proposed by Green Wave

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Energy Corporation off the coast of Santa Catalina Island (FERC 2010). Although these two pilot projects have received preliminary permits, and their construction and operation is probable, FERC criteria for pilot projects stipulate that they must be small-scale, easily removed, and located in non-environmentally sensitive areas. Thus, the likely environmental effects of these pilot projects would be minimal. Full-scale, commercial hydrokinetic energy projects and associated transmission infrastructure would undoubtedly result in greater impacts; however, due to the emerging nature of the technologies involved and the lack of full-scale proposals or siting plans, insufficient information is currently available to consider such potential proposals as “probable future projects” for purposes of CEQA. Additionally, attempting to discern the cumulative environmental impacts of these possibilities would require speculation.

9.3.6 Restoration Projects and Programs

9.3.6.1 Other Marine Protected Area Designations in California

As described in Section 2.0 of this Draft EIR, the California Fish and Game Commission (Commission) is currently working to design and implement revised marine protected area (MPA) networks, consistent with the goals and objectives of the Marine Life Protection Act (MLPA), for the remainder of the California coast and offshore islands. Regulatory revisions have already been adopted for some California waters, including the northern Channel Islands, as well as in the north coast and north central coast MLPA study regions. It is anticipated that MPA networks will be proposed for the central coast and San Francisco Bay study regions, and that the characteristics of these MPA networks would be similar to those of the MPAs currently proposed under the IPA. Therefore, it is reasonable to believe that impacts of these proposals would be similar to those of the proposed Project IPA, although they would occur in different locations. Generally, the combined effects of the past, presently proposed, and probable future MPA designations would create a comprehensive, statewide network of protected areas that would benefit marine resources in the long term.

In 2008, a five-year review of the MPA network on the five northernmost Channel Islands (San Miguel, Santa Rosa, Santa Cruz, Anacapa, and Santa Barbara Islands, where MPAs were designated in 2003) was conducted to determine whether the program had yielded discernible effects within that time. The five-year review (Department et al. 2008) was based on field monitoring efforts, and addressed biological and habitat monitoring, as well as socioeconomic monitoring. With respect to habitat, the review indicated positive results; areas within MPAs experienced increased growth of kelp forests, greater density and biomass of fish and invertebrate species commonly targeted by fishing efforts, larger proportion of large individuals in lobster populations, and a greater proportion of piscivores in the fish community.

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Socioeconomic monitoring results indicated a slight decline in the number of commercial fishing vessels at the islands, and mixed responses in commercial fisheries at the islands. In terms of value, compared to the rest of southern California, the rock crab and sea urchin fisheries at the islands increased more; lobster and squid fisheries increased less; the sea cucumber fishery declined less; and sheephead and rockfish fisheries declined more. Numbers of recreational fishing visits and non-consumptive uses were not substantially affected (Department et al. 2008).

9.3.6.2 Montrose Settlements Restoration Program

The Montrose Settlements Restoration Program is an effort by several federal and state resource trustee agencies, including the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service, the National Park Service, the California Department of Fish and Game (Department), the California Department of Parks and Recreation, and the SLC, to repair the substantial ecological damage that the bight has sustained due to decades of contamination by DDTs and PCBs from point-source discharges associated with industrial waste disposal. The resource trustee agencies were able to secure funding for the restoration effort by litigating against the entities responsible for the contamination, as allowed under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The Montrose Settlements Restoration Program was developed in accordance with the CERCLA requirements, which stipulate that monetary damages must be spent by the resource trustee agencies to restore, replace, rehabilitate, or acquire the equivalent of the natural resources that have been injured. The environmental effects of DDTs and PCBs are well documented, and have included catastrophic declines of several avian species as well as human health effects.

The Montrose Settlements Restoration Program, as approved by the resource trustees, calls for implementation of a number of different projects, each of which would benefit specific geographic areas or target species. To restore lost fishing services, the program seeks to create artificial reefs and fishing access improvements, to provide public information, and to augment funds for implementing California's network of MPAs. Funding is specifically allocated to recover and monitor populations of bald eagles and peregrine falcons, two raptor species that were listed as Endangered due to the effects of DDT. In addition, the program contains measures intended to recover Southern California's seabird populations, including restoration of seabird populations on several major offshore islands and rocks, and restoration of alcid (auk) populations on Santa Barbara Island.

In 2005 the resource trustee agencies identified above prepared a joint programmatic Environmental Impact Statement (EIS)/EIR for the proposed restoration effort. In 2006, the Department issued a Notice of Determination stating that the restoration program would not have a significant impact on the environment, and approving the project (Department 2006).

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9.3.6.3 Santa Monica Bay Restoration Plan Update

In 2008, the Santa Monica Bay Restoration Commission updated the Bay Restoration Plan (Santa Monica Bay Restoration Commission 2008), originally adopted in 1995. The program is part of a National Estuary Program administered by the EPA. Santa Monica Bay lies adjacent to a substantial human population in the Los Angeles area, and has been impacted through water quality impairments, resource harvesting, and encroachment. Goals of the Bay Restoration Plan are diverse, and include improving water quality, restoring coastal and marine habitats, protecting public health, and improving public coastal access. During the 13-year period between adoption of the original Bay Restoration Plan and incorporation of the update, the Santa Monica Bay Restoration Commission completed or made substantial progress towards 47 of the 90 major action categories identified in the plan. Ongoing implementation of the plan's policies and objectives is anticipated to continue in the future. Because the plan is a general, planning-level document, and is non-regulatory in nature, and because the primary purpose of the plan is to achieve environmental benefits in the Santa Monica Bay and its watershed, no adverse environmental impacts are anticipated.

9.3.6.4 The Nature Conservancy Trawler Buy-out Program

In June 2006, The Nature Conservancy purchased federal trawling permits and trawling vessels from commercial fishermen in Morro Bay, in the first effort by a private organization to buy out Pacific fishing vessels and permits for conservation purposes. The Nature Conservancy buy-out program is a collaborative effort between government and fishermen that seeks to protect 3.8 million acres of the marine environment. This program is intended to reduce the impacts on seafloor communities from fishing activities, and to recover groundfish populations. Because buyouts eliminate the potential for increased fishing pressure in new locations, this program is not anticipated to result in adverse environmental impacts.

9.4 CUMULATIVE IMPACTS OF THE PROPOSED IPA

Impacts of the proposed Project IPA in conjunction with the other past, present, and probable future projects identified in Section 9.3, above, are presented below. Discussions of consumptive uses and environmental justice provided in sections 5.0 and 8.6, respectively, have been provided for informational purposes only, as social and economic consequences not linked to concomitant changes in the physical environment are not considered to be significant impacts under CEQA (see Section 15131(a) of the State CEQA Guidelines). Thus, these topics have not been included in the discussion of cumulative impacts.

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9.4.1 Air Quality

9.4.1.1 Summary of Project-specific Impacts to Air Quality

The proposed Project IPA would not introduce any new major sources of pollution that would affect sensitive receptors or exceed applicable ambient air quality standards. However, the proposed regulatory changes could potentially cause commercial and recreational fishing vessels to travel longer distances to reach open fishing grounds, resulting in increased combustion emissions from the vessel engines. Project-specific air quality impacts would be less than significant, and are described in greater detail in Section 6.1 of this Draft EIR.

9.4.1.2 Cumulative Impacts to Air Quality

As described in Section 9.3 above, many of the currently proposed and probable future projects within the bight would result in significant air quality impacts despite adoption of all feasible mitigation measures. Existing failures to attain national ambient air quality standards, particularly in the South Coast Air Basin, suggest that past activities have also had a significant impact on air quality. Although the proposed Project IPA would result in an increase in air pollutant emissions, the increase would be very slight, even in relation to the most stringent standards applicable in the bight (the proposed Project IPA would generate less than one-third of the threshold value for daily NO_x emissions in Ventura County Air Pollution Control District's [VCAPCD's] jurisdiction, and a substantially lesser percentage for other pollutants and jurisdictions). In addition, the Project's impacts would occur offshore, where emission sources are not concentrated, sensitive receptors are distant, and topographically-defined air basins are absent. The absence of confined basins would decrease the likelihood that Project-related emissions would become trapped and accumulate. Also, increased pollutant emissions associated with the proposed Project would be spatially distributed throughout the SCSR, which spans several hundred miles, and it is therefore highly unlikely that the entire pollutant load would affect the same receptor or air basin. For these reasons, the proposed Project would not contribute considerably to existing and projected cumulative air quality impacts.

9.4.2 Greenhouse Gases

9.4.2.1 Summary of Project-specific Impacts Related to Greenhouse Gases

The proposed Project IPA would result in slightly increased greenhouse gas (GHG) emissions relative to current levels due to the increased travel distances required for fishing vessels to reach open fishing grounds. This increase would be substantially below the threshold of significance used in the analysis (approximately one percent of the threshold value). For more information, please refer to Section 6.2 of this Draft EIR.

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9.4.2.2 Cumulative Impacts Related to Greenhouse Gases

According to available environmental documentation, none of the currently proposed or reasonably foreseeable projects in the bight would result in significant impacts related to climate change or GHG emissions. Increasing concern and recent legislative actions by the state of California to reduce greenhouse gas emissions suggest that past human activities have resulted in significant impacts with respect to greenhouse gases. Because human-induced climate change is a global phenomenon, attempting to evaluate the significance of GHG emissions based on geographic boundaries or other emission sources that may be proximate is not practical. Because the proposed Project's impacts related to GHG emissions would not be significant in the localized context of California, the increased emissions would be truly insubstantial when considered in a global context. The proposed Project would not contribute considerably to a significant impact related to GHG emissions.

9.4.3 Water Quality

9.4.3.1 Summary of Project-specific Impacts to Water Quality

The proposed Project IPA would have the potential to cause limited, localized water quality impacts by changing the human use patterns (particularly motorized vessels, which could potentially release contaminants into the water) within the SCSR's marine environment; these impacts would be less than significant. The proposed Project IPA would not conflict with existing water quality standards, and would have no effect on any activities permitted by other federal or state agencies. For more information, please refer to Section 6.3 of this Draft EIR.

9.4.3.2 Cumulative Impacts to Water Quality

Based on a review of available environmental documentation, a small number of the proposed and probable future projects within the bight would result in significant impacts to water quality despite the application of feasible mitigation measures. However, due to the very large geographic extent of the SCSR, changes in use patterns would not result in vessels entering or leaving the SCSR in the vast majority of cases. Because the proposed Project would not result in a net increase in motorized vessels operating in the SCSR, the Project would not contribute considerably to any cumulative water quality impacts.

9.4.4 Mineral Resources

9.4.4.1 Summary of Project-specific Impacts to Mineral Resources

No known mineral resources are located within areas proposed for designation as MPAs, and the proposed regulatory changes would not affect existing operations permitted by other federal or state agencies. The proposed Project IPA would not result in any significant

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impacts on mineral resources; please refer to Section 6.4 of this Draft EIR for further information.

9.4.4.2 Cumulative Impacts to Mineral Resources

Based on a review of available environmental documentation, none of the proposed and probable future projects in the bight would result in significant impacts on mineral resources. The proposed Project IPA would not impact these resources, and would therefore not contribute considerably to any cumulative impact on mineral resources.

9.4.5 Biological Resources

9.4.5.1 Summary of Project-specific Impacts to Biological Resources

The proposed Project IPA would have the potential to result in localized, adverse impacts to biological resources within areas where existing MPAs would be removed. Additional fishing effort would affect target species, but would also result in additional incidental take of non-target marine resources. Species with protections beyond those afforded through the Commission's MPA regulations, such as those regulated under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), would retain those additional levels of protection; however, incidental take during otherwise lawful fishing would not be avoidable. These adverse impacts would be compensated for by the long-term conservation benefits provided by the proposed network of MPAs. For further information, please refer to Section 7.1.3 of this Draft EIR.

9.4.5.2 Cumulative Impacts to Biological Resources

Based on a review of available environmental documentation, some of the proposed and probable future projects in the bight would result in significant impacts to biological resources. In most cases, these impacts would be associated with disruption of benthic biological communities. Because the proposed Project IPA's adverse impacts on biological resources would be localized, and would be outweighed by long-term conservation benefits, the proposed Project would not contribute considerably to cumulative impacts on biological resources.

9.4.6 Cultural Resources

9.4.6.1 Summary of Project-specific Impacts to Cultural Resources

The proposed Project IPA would not adversely impact historical resources or archaeological resources. For further information, please refer to Section 8.1 of this Draft EIR.

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9.4.6.2 Cumulative Impacts to Cultural Resources

None of the proposed and probable future projects identified in the bight would result in significant impacts on historic or pre-historic archaeological resources. The proposed Project IPA would not impact these resources, and therefore would not contribute considerably to any cumulative impact on cultural resources.

9.4.7 Public Services and Utilities

9.4.7.1 Summary of Project-specific Impacts Related to Public Services and Utilities

The proposed regulatory changes would not impact any existing utilities, wastewater treatment facilities, storm drainage outfalls, or other existing facilities operating under federal or state permits. The proposed Project IPA would not create the need for new or expanded public services within the SCSR. Consequently, the proposed Project IPA would have no impacts to public services and utilities. For further information, please refer to Section 8.2 of this Draft EIR.

9.4.7.2 Cumulative Impacts Related to Public Services and Utilities

Based on a review of environmental documentation, none of the proposed and probable future projects identified in the bight would result in significant impacts on public services or utilities. The proposed Project IPA also would not result in impacts of this nature, and therefore would not contribute considerably to any cumulative impact on public services or utilities.

9.4.8 Land Use and Recreation

9.4.8.1 Summary of Project-specific Impacts Related to Land Use and Recreation

The proposed Project IPA would have the potential to result in minor shifts in recreational use patterns along the coast of the SCSR, due to consumptive users being displaced from MPAs and selecting new, open fishing grounds. Movement in the opposite direction is foreseeable as well, however, as non-consumptive users such as kayakers, divers, swimmers, and wildlife viewers could find the protected areas desirable. The proposed Project IPA is not anticipated to result in any substantial net change in the beach use patterns of recreational users.

9.4.8.2 Cumulative Impacts Related to Land Use and Recreation

Based on a review of available environmental documentation, none of the proposed and probable future projects within the bight would result in significant land use impacts, and only one project would significantly affect recreation. Because the identified impacts would be site-specific (excessive noise from pile-driving operations diminishing the recreational

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experience along a specific section of coastline near the Port of Los Angeles), and the proposed Project IPA's impacts would not occur at this location, impacts of the Project would not have the potential to combine with the effects of other projects. Therefore, the proposed Project IPA would not contribute considerably to cumulative land use and recreation impacts.

9.4.9 Vessel Traffic

9.4.9.1 Summary of Project-specific Impacts Related to Vessel Traffic

Both within and outside of the proposed MPAs, the proposed Project IPA could potentially result in a minor increase in concentration of vessel traffic attributed to different user groups, which could conceivably create a hazard from having more boats operating in a smaller area. However, captains and operators of each individual vessel would still be subject to international navigation and maritime safety rules, which would not be affected by the proposed regulatory changes. While commercial and recreational fishing vessels may be required to travel slightly longer distances to fish beyond MPA boundaries, non-consumptive marine navigation would not be disrupted by the proposed Project IPA. Impacts of the proposed Project IPA on vessel traffic would be less than significant. For further information, please refer to Section 8.4 of this Draft EIR.

9.4.9.2 Cumulative Impacts Related to Vessel Traffic

Based on available environmental documentation, several of the proposed and probable future projects in the bight would expand the capacity of ports in the region, and would be expected to result in increases in container vessel traffic through the SCSR. However, vessel traffic patterns would remain confined to the existing designated shipping lanes, and would continue to be subject to applicable maritime safety regulations. Because the proposed MPA network would not generate substantial vessel traffic, the Project would not contribute considerably to cumulative vessel traffic impacts.

9.4.10 Hazards and Hazardous Materials

9.4.10.1 Summary of Project-specific Impacts Related to Hazards and Hazardous Materials

The proposed regulatory changes would not require or result in the use of hazardous materials, and would not create potential for any reasonably foreseeable upset or accident condition involving the release of hazardous materials into the environment. Sites containing contaminated sediments were deliberately excluded from proposed MPA boundaries during the IPA development process. However, because marine waters in certain portions of the SCSR are contaminated to the extent where consuming particular fish or shellfish species may be unhealthful, it is possible that commercial or recreational fishing efforts could be

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displaced from areas of acceptable water quality into such contaminated waters. This effect would be less than significant due to the presence of widely published safe consumption advisories informing the public about the risks posed by contaminated seafood, and because the amount of fishing effort likely to be displaced to an area of substantially different water quality would be small. For further information, please refer to Section 8.5 of this Draft EIR.

9.4.10.2 Cumulative Impacts Related to Hazards and Hazardous Materials

Based on a review of available environmental documentation, only one of the proposed and probable future projects within the bight, the Pacific L.A. Marine Terminal LLC Crude Oil Terminal Project, would result in significant impacts relative to hazards and hazardous materials. All offshore projects involving the routine extraction, storage, and transport of oil and natural gas involve certain risks associated with upset/accident conditions. However, the proposed Project IPA would not involve hazardous materials, and therefore would not contribute to this impact. None of the projects identified are anticipated to result in increased risks of exposure to contaminated sources of fish or shellfish.

9.5 CUMULATIVE IMPACTS CONCLUSION

As described above, the proposed Project IPA would not contribute considerably to any cumulatively significant environmental impacts. No mitigation is required.