

Chapter 7

OTHER STATUTORY CONSIDERATIONS

7.1 Introduction

This chapter presents discussions of irreversible impacts, significant and unavoidable impacts, growth-inducing impacts, and cumulative impacts as required by the State CEQA Guidelines.

7.2 Irreversible Impacts

State CEQA Guidelines Section 15126.2(c) requires that an EIR must identify any irreversible impacts, also referred to as irreversible environmental changes, which may be caused by a proposed project, including current or future commitments to using nonrenewable resources, and secondary, or growth-inducing, impacts that commit future generations to similar uses. Section 15126 of the State CEQA Guidelines states that significant irreversible environmental changes associated with a proposed project may include the following:

- uses of nonrenewable resources during the initial and continued phases of the project which may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely;
- primary impacts and, particularly, secondary impacts (such as highway improvement that provides access to a previously inaccessible area) that commit future generations to similar uses; and
- irreversible damage, which may result from environmental accidents associated with the project.

The establishment of marine protected areas (MPAs) would limit species take and activities in the affected areas and would not directly commit the Department or other agencies to future usage of fossil fuels or other types of nonrenewable resources. No specific development activities are proposed or authorized under the Proposed Project that would result in the irreversible commitment of resources.

Indirect impacts of the Proposed Project may include an increase in usage of fossil fuel, if increased transit of commercial and recreational fishing vessels were to occur as a result of being displaced out of (or into, in the case of nonconsumptive recreational boating) the proposed MPAs. However, this indirect use of fossil fuels is not expected to represent a significant commitment of nonrenewable resources.

The creation of MPAs would not have potential to directly result in irreversible environmental damage. Displacement of fishing efforts could result in slightly increased potential for boating accidents and vessel abandonment by individual fishermen that could

release hazardous chemicals into the water. However, the potential for such outcomes arising from the Proposed Project is considered exceedingly low. In the event they were to occur, accidental releases of hazardous chemicals would be addressed by spill response plans and cleanup measures employed by the Department, other agencies, and responsible parties.

7.3 Significant and Unavoidable Impacts

Section 15126.2(b) further requires an EIR to describe any significant impacts that cannot be mitigated to a level of insignificance. All the impacts associated with the Proposed Project would be less than significant; no significant and unavoidable impacts have been identified.

7.4 Growth Inducement

Section 15126.2(d) of the State CEQA Guidelines requires an EIR to include a detailed statement of a proposed project's anticipated growth-inducing impacts. The analysis of growth-inducing impacts must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing in the project area. The analysis must also address project-related actions that, either individually or cumulatively, would remove existing obstacles to population growth. A project would be considered growth inducing if it were to induce growth directly (through the construction of new housing or increasing population) or indirectly (increasing employment opportunities or eliminating existing constraints on development). Under CEQA, growth is not assumed to be either beneficial or detrimental.

The Proposed Project would not involve development activities that would foster economic or population growth. Similarly, the Proposed Project would not involve construction of housing or removal of an obstacle to growth. MPA designation could foster increased research or recreational activities (e.g., ecotourism), which in turn could generate economic activity and associated growth in communities adjacent to the North Coast Study Region (Study Region). The extent to which this might occur is unknown but generally thought to be low. In addition, the designation of the MPA network could have offsetting effects in reducing economic activity as a result of reductions in consumptive uses (e.g., commercial fishing), thus offsetting such effects (see Appendix B, "Characterization of Consumptive Uses and Associated Socioeconomic Considerations in the Region"). Finally, the protection of species and habitats resulting from the Proposed Project would not enable or encourage development elsewhere.

7.5 Cumulative Impacts

7.5.1 CEQA Analysis Requirements

A cumulative impact refers to the combined effect of "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (State CEQA Guidelines, Section 15355). As defined by the State of

California, cumulative impacts reflect “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines, Section 15355[b]).

Under CEQA, an EIR must discuss the cumulative impacts of a proposed project when the project’s incremental contribution to the group effect is “cumulatively considerable.” An EIR does not need to discuss cumulative impacts that do not result in part from the project evaluated in the EIR. The State CEQA Guidelines (Section 15130[a]) require that an EIR address the cumulative impacts of a proposed project when:

- the cumulative impacts are expected to be significant; and
- the project’s contribution to the cumulative impact is expected to be cumulatively considerable, or significant in the context of the overall (cumulative) level of effect.

To meet the adequacy standard established by Section 15130 of the State CEQA Guidelines, an analysis of cumulative impacts must contain the following elements:

- A. an analysis of related future projects or planned development that would affect resources in the project area, similar to those affected by the proposed project;
- B. a summary of the environmental effects expected to result from those projects, with specific reference to additional information, stating where that information is available;
- C. a reasonable analysis of the combined (cumulative) impacts of the relevant projects; and
- D. an evaluation of a proposed project’s potential to contribute to the significant cumulative impacts identified, and a discussion of feasible options for mitigating or avoiding any contributions assessed as cumulatively considerable.

The discussion of cumulative impacts is not required to provide as much detail as the discussion of the effects attributable to the project alone. Rather, the level of detail needs to be guided by what is practical and reasonable. In addition, Section 15130(e) of the State CEQA Guidelines directs that if a cumulative impact is adequately addressed in a previous EIR for a general plan, and the proposed project is consistent with that general plan, the project EIR need not further analyze that cumulative impact.

Lead agencies may use a “list” approach to identify related projects, or may base the identification of cumulative impacts on a summary of projections in an adopted general plan or related planning document (State CEQA Guidelines, Section 15130[b]), the latter referred to as the “projection” approach. Because of the large number of planning documents located along the north coast, it was determined that forecasting of cumulative impacts using the projection approach would be unlikely to render accurate results. Therefore, this cumulative impacts analysis used the list approach, where related projects and regulations that may have impacts similar to the Proposed Project were evaluated. These projects and regulations are discussed below.

7.5.2 List of Cumulative Projects Considered

A wide variety of projects and regulations affecting marine resources exist along the California coast and into Oregon and Washington. In some cases, regulations or restrictions overlap, and others change from year to year. In general, existing regulations, designations, and restrictions have been considered as part of the baseline condition for the project analysis. The projects and regulations described below are considered for their potential to interact with the Proposed Project and result in cumulative impacts. The list of past, present and reasonably foreseeable related projects and regulations is shown in **Table 7-1**.

Table 7-1. Summary of Related Projects and Regulations

Related Activity	Scope of Activity	Activities that Could Potentially Affect Resources Similar to the Proposed Project
Depleted and Overfished Species	See discussion below.	See discussion below.
Fishery Closures and Protective Regulations	Additional take regulations for commercial and recreational fishing.	Protection of marine resources, research, recreation, and water quality. Potentially reduced fishing opportunities (potential socioeconomic and environmental justice impacts).
Other MPAs in California	Additional take regulations for commercial and recreational fishing.	Protection of marine resources, research, recreation, and water quality. Potentially reduced fishing opportunities (potential socioeconomic and environmental justice impacts).
MPAs in Oregon and Washington	Additional take regulations for commercial and recreational fishing.	Protection of marine resources, research, recreation, and water quality. Potentially reduced fishing opportunities (potential socioeconomic and environmental justice impacts).
Aquaculture Projects	Once the requirements stated in Senate Bill 201 are complete, finfish mariculture will be allowed in state waters.	No projects are proposed at this time, and so the types, locations, and impacts of future aquaculture activities are speculative. Future projects could be displaced by proposed MPAs, but would not be completely excluded from the region.
Hydrokinetic Power Projects	Various types of in-ocean power-generating operations. No active leases in the Study Region. One pending preliminary permit application at southern end of the Study Region.	No projects are proposed or are in the early planning stages at this time, and so the types, locations, and impacts of hydrokinetic power projects are speculative. Future projects could be displaced by proposed MPAs, but would not be completely excluded from the region.
Water and Utility Infrastructure Projects	Ocean intakes for water desalination plants or thermal cooling water systems. Outfalls of thermal cooling water, stormwater runoff, or treated wastewater. Underwater communication lines.	No such infrastructure is proposed at this time, and so the types, locations, and impacts of hydrokinetic power projects are speculative. Future projects could be displaced by proposed MPAs, but would not be completely excluded from the region.
Greenhouse Gas Emissions	Global.	Combustion of fossil fuels and release of other greenhouse gases.

Note: MPA = marine protected area, Study Region = North Coast Study Region
Source: Data compiled by Horizon Water and Environment in 2011

Depleted and Overfished Species

When describing depleted and overfished species that occur within the Study Region, several definitions of “depleted” and “overfished” may be considered. The MLPA refers to the term “depleted” in reference to marine life populations under “Program Goals” in the California Fish and Game Code (FGC), Section 2853(b)(2). However, additional definitions of this term exist. The federal Marine Mammal Protection Act has defined “depleted” as when “...a species or population stock is below its optimum sustainable population; ... or a species or population stock is listed as an endangered species or a threatened species under the federal Endangered Species Act (ESA)” (16 U.S. Code 1362[1]). The equivalent term “depressed” is found in the Marine Life Management Act (FGC, Section 90-99.5), which includes the following definition of a “depressed” fishery: “...the condition of a marine fishery that exhibits declining fish population abundance levels below those consistent with maximum sustainable yield” (FGC, Section 90.7). Similarly, the Pacific Fishery Management Council (PFMC) defines “overfished” as “Any stock or stock complex whose size is sufficiently small that a change in management practices is required to achieve an appropriate level and rate of rebuilding.” Species within the Study Region considered “depleted or overfished” under the definitions provided above are: groundfish (rockfish, flatfishes, etc.), salmon, and abalone. However, there are many other marine species that are considered threatened or endangered in the Study Region. Further information on these species is provided in Chapter 4, “Biological Resources.”

Many species of rockfish take years to reach reproductive maturity. The rebuilding process for most “overfished” rockfish species to reach healthy population levels is expected to require many years or even decades (CDFG 2001). Depth-based Rockfish Conservation Areas were implemented in 2003, to protect rockfish by closing the primary depth range of the overfished species. The Rockfish Conservation Area closures are expected to remain in place until “overfished” stocks are rebuilt or a new management approach is adopted. The commercial fishery for these species is generally regulated by a combination of allowable fishing depths, trip limits, and gear restrictions. The recreational fishery for these species is regulated using bag limits, seasons, area closures, and depth restrictions. The commercial and recreational fishery regulations can be adjusted in-season to prevent catches from exceeding harvest levels.

The majority of salmon caught off the coast of California are Central Valley Chinook (fall and late fall runs). There are also small numbers of Sacramento River winter Chinook (endangered), Central Valley spring Chinook (threatened), California coastal Chinook (threatened), Klamath Basin Chinook (fall and spring run), and northern Chinook stocks from Oregon and Washington caught in California’s fisheries. Generally, the closer the fishery is to the mouth of the Klamath River, the higher the contact rate (the fraction of the population brought to the boat) with Klamath Basin stocks. Contact with Oregon and Washington salmon stocks generally increases the farther north the location. Since Sacramento River fall Chinook salmon significantly contribute (generally 80–90%) to California’s ocean sport and commercial fisheries, as well as to Oregon’s fisheries south of Cape Falcon (60–80%), the PFMC, NOAA Fisheries, and the Commission have severely constrained ocean salmon fisheries in California and much of Oregon to protect Sacramento River fall Chinook. These agencies collaborate annually to establish fishing areas, seasons, quotas, legal gear, recreational fishing days and catch limits, possession and landing restrictions, and minimum lengths for salmon take.

Seven species of abalone (*Haliotis* spp.) are found in California: red, white, black, green, pink, pinto, and flat. While black abalone are rare in the Study Region, they have been documented as far north as Mendocino County (CDFG 2001a). Black abalone is the only abalone species in the region that is depleted and was recently listed as an endangered species. The Commission adopted the Abalone Recovery and Management Plan (ARMP) in December 2005. The ARMP outlines restoration strategies for depleted abalone stocks in central and southern California and describes the management approach to be used for northern California red abalone and eventually for other recovered abalone stocks.

Fishery Closures and Regulations Within and Adjacent to the Study Region

To address depleted species, two main types of fishery closures have been established within and adjacent to the Study Region. Rockfish conservation areas (RCAs) have been established along large portions of the west coast to minimize the incidental take of overfished rockfish that are likely to co-occur with healthy stocks of groundfish. Essential Fish Habitat (EFH) areas have also been established in areas along the west coast to prevent habitat damage by fishing gear in areas of important groundfish habitat. A third closure, the Klamath River Salmon Conservation Zone, prohibits the take of Pacific whiting in an area reaching approximately 6 nautical miles (nm) north and south of the Klamath River mouth and extending approximately 12 nm from shore. This area was established to protect spawning runs of salmon as they congregate near the Klamath River mouth.

The Commission sets regulations on ocean sport fishing and commercial ocean fishing within the Marine Region, which extends along the entire California coastline to approximately 3 nm out to sea. The Department maintains an updated list of the regulations for both ocean sport fishing and commercial ocean fishing. The Commission's regulations provide a list of fisheries by species that are opened, partially closed, and closed. For open fisheries, the minimum and maximum size limits, the daily bag limits, and the dates when the fishery is open are listed by species, as applicable. Partially closed fisheries contain the same information, but generally include additional restrictions on fishing modes (e.g., diver, boat-based, shore-based). Closed fisheries are listed by species and include information on when the fishery will reopen, as it is available (CDFG 2011a).

Regulations established by the Department list the size, bag limits, and season by species, as well as fishing mode and the districts in which fishing is allowed for each species. Commercial fishing regulations for the Study Region are listed in the *Digest of California Commercial Fishing Laws & License Requirements* (CDFG 2011b). The current restrictions on commercial and recreational take are discussed in other sections of this document, including Appendix B, "Characterization of Consumptive Uses and Associated Socioeconomic Considerations in the Region," and Chapter 4, "Biological Resources."

These regulations are subject to change by the Commission or the Department from year to year. As such, the analysis of cumulative impacts is considered from the standpoint of the general effects of such restrictions, rather than their specific locations.

Future Regulations

It is possible that future federal and state regulations would result in new listings of endangered species; modification of the extent or management approaches of RCAs or EFH designations; amendments to fishery management plans; or in other designations, such as marine sanctuaries. Because the requirements under future regulations are not known at this time, they are considered speculative and are not included in this cumulative impact analysis. Further, future regulations would be expected to provide additional protection for depleted or overfished species; future regulations would be anticipated to cumulatively provide greater protections for these species.

Other Marine Protected Areas in California

The Proposed Project is part of a larger effort initiated by the 1999 MLPA (FGC, Chapter 10.5, Sections 2850–2863) to redesign California’s system of MPAs to function as a network. As an initial step in this effort, the 1,100-statute-mile (mi) California coastline was divided into five study regions: the North Coast (the Proposed Project), the North Central Coast, the San Francisco Bay, the Central Coast and the South Coast.

The North Central Coast Study Region covers state waters from Alder Creek near Point Arena south to Pigeon Point. A redesigned network of 25 MPAs and seven special closures covering about 152 square statute miles (mi²), or 20% of state waters, has been in place since May 2010.

The Central Coast Study Region covers state waters from Pigeon Point south to Point Conception. A redesigned network of 29 MPAs covering about 204 mi², or 18% of state waters, has been in place since September 2007.

The South Coast Study Region covers state waters from Point Conception south to the California/Mexico border, including state waters around the Channel Islands. A redesigned network of 50 MPAs and two special closures covers about 15% of state waters and has been in place since January 2012. This includes 13 MPAs and two special closures in the Northern Channel Islands that were developed through a separate planning process (i.e., prior to the MLPA Initiative). While these MPAs have been in place since 2003, they were retained without modification in the South Coast Study Region by the Commission and are now integrated into the network (see below for more information regarding the Northern Channel Islands MPAs).

The San Francisco Bay Study Region covers waters within San Francisco Bay, from the Golden Gate Bridge to the Carquinez Bridge. There are eight existing MPAs in San Francisco Bay, covering 9.3 mi², or nearly 2% of the study region waters. To date, a planning process has not been established for this study region. In October 2011, a report that provides options for a planning process design in this study region was provided by the MLPA Initiative to the Secretary for Natural Resources and Director of the Department for their consideration. Generally, the combined effects of the past, presently proposed, and possible future MPA designations would create a comprehensive, statewide network of protected areas that would protect marine resources in the long term.

In total, approximately 848 mi², or 16% of state waters, will be in MPAs statewide if the Proposed Project is adopted (CDFG 2011c).

In 2008, a 5-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 5-year review (CDFG 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 (CDFG 2008).

Marine Protected Areas in Oregon

Although the Study Region is bounded on the north by the political border between California and Oregon, neighboring MPAs in southern Oregon could potentially provide protected habitat for species frequenting the waters of both states, and could supply larvae and juveniles to MPAs established in the Study Region. There are four existing MPAs in Oregon state waters, from the state border to the Cape Arago area. All four are smaller than the minimum size guidelines established for California's MPAs, and three of them only provide protection within the intertidal zone.

The State of Oregon House Bill 3013 was passed in 2009 to support the formation of marine reserves and MPAs along the Oregon coastline. The state government, Oregon Sea Grant, and the Oregon Ocean Policy Advisory Council are coordinating with members of the public to develop MPA proposals. To date, two pilot marine reserves have been established, one near Redfish Rocks near Port Orford and a second at Otter Rock, north of Newport. Redfish Rocks Pilot Marine Reserve encompasses approximately 2.6 mi² of nearshore waters. Otter Rock Pilot Marine Reserve encompasses approximately 1.3 mi² of nearshore waters. The pilot marine reserves are restricted from all extractive activities, including the take or disturbance of living and nonliving marine resources, except as needed for monitoring or research, similar to the state marine reserve (SMR) designations in the Proposed Project. Four additional sites are being studied and evaluated for establishment of marine reserves near Cape Falcon, Cascade Head, Cape Perpetua, and Cape Arago-Seven Devils (Oregon Ocean Information 2011).

Marine Protected Areas in Washington

Over the past 30 years, the State of Washington's Department of Fish and Wildlife has established 127 MPAs that are jointly managed by a total of 11 federal, state, and local agencies. These MPAs cover over 1,100 miles of shoreline and an area of 1,006 mi². The first of their MPAs was established in 1970, when the local recreational diving community asked the state to establish regulations to protect marine resources within the Edmunds Underwater Park. The greater San Juan Island area hosts the most MPAs in Washington. The northern Washington coast has the fewest MPAs in number, but has the state's single largest MPA, Olympic Coast National Marine Sanctuary. Most all the MPAs restrict take or

other impacts on marine resources. There are three levels of protection established within the MPAs: conservation areas where no take is allowed, marine reserves that allow limited take, and species-specific exclusion zones for sea cucumber and sea urchin (Washington Department of Fish and Wildlife 2011).

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 United States 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. 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. An 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 (FERC 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. Applicants can apply for short-term pilot permit licenses to test technologies or preliminary permits that would eventually be developed into full 30–50 year project licenses.

FERC has issued two preliminary permits for hydrokinetic projects in California. These projects are not located within the Study Region; they are located offshore from San Onofre (Orange County) and in San Francisco Bay. There are two pending preliminary permits for projects located offshore from Mendocino County (near Point Cabrillo) and near San Luis Obispo in southern California. The hydrokinetic project proposed near Point Cabrillo is located within the Study Region, but would not overlap with the proposed Point Cabrillo SMR. So far, none of these projects have been implemented and are still in the process of gathering funding or coordinating with regulatory agencies. FERC has also issued preliminary permits for two projects offshore from Oregon. (FERC 2011)

Aquaculture Projects

Federal and state agencies are in the process of establishing regulations to allow sustainable domestic aquaculture within federal and state waters to contribute to the U.S. seafood supply, support coastal communities and important commercial and recreational fisheries, and restore species and habitat. As described in Section 3.1, "Agricultural Resources," there are opportunities for nearshore and intertidal shellfish aquaculture within the Study Region. Future projects involving open ocean or additional nearshore or intertidal aquaculture projects within or adjacent to the Study Region are speculative. As such, the degree to which future projects could contribute to degradation of marine resources or overfished species is not considered in this analysis.

Greenhouse Gas Emissions and Global Climate Change

Global climate change is caused by combined worldwide greenhouse gas emissions, and mitigating global climate change will require worldwide solutions. Greenhouse gases (GHGs) play a critical role in Earth's radiation budget by trapping infrared radiation emitted from the earth's surface, which could have otherwise escaped into space. Prominent GHGs contributing to this process include water vapor, carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), ozone, and certain hydrocarbons and fluorocarbons. This phenomenon, known as the "greenhouse effect," keeps the earth's atmosphere near the surface warmer than it would otherwise be and allows for successful habitation by humans and other forms of life. Increases in these gases lead to more absorption of radiation and further warm the lower atmosphere, thereby increasing evaporation rates and temperatures near the surface. Emissions of GHGs in excess of natural ambient concentrations are thought to be responsible for the enhancement of the greenhouse effect and to contribute to what is termed "global warming," a trend of unnatural warming of the earth's natural climate. Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants (such as ozone precursors) and toxic air contaminants (TACs), which are pollutants of regional and local concern.

7.5.3 Cumulative Impacts

Detailed analysis of a project's contribution to cumulative impacts is required when (1) a cumulative impact is expected to be significant, and (2) the proposed project's contribution to the cumulative impact is expected to be cumulatively considerable or significant in the context of the overall (cumulative) level of effect. **Table 7-2** summarizes cumulatively significant impacts and identifies the Proposed Project's contribution. Additional analysis is provided below the table for those impacts of the Proposed Project that would contribute to already existing significant impacts.

Table 7-2. Summary of Cumulative Significant Impacts and Proposed Project's Contribution

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
Consumptive Uses and Socioeconomic Considerations	Socioeconomic effects are not required to be analyzed under CEQA. The Proposed Project's potential for contributions to cumulative physical impacts resulting from social and economic effects are discussed under the relevant topics below.	
<i>Physical Resources</i>		
Agricultural Resources	None identified	No analysis required
Air Quality	The North Coast Unified Air Quality Management District and the Mendocino County Air Quality Management District are in nonattainment under both federal and state standards for ozone precursors (ROG and NO _x); and particulate matter (PM ₁₀ and PM _{2.5}) are also designated as in nonattainment under state standards. These impacts would be considered cumulatively significant.	Displacement of vessels as a result of the Proposed Project, leading to longer vessel trips, would result in emissions of criteria air pollutants. However, because such emissions would be below Bay Area Air Quality Management District (BAAQMD) operational significance thresholds, the Proposed Project would not

Table 7-2. Summary of Cumulative Significant Impacts and Proposed Project's Contribution

Resource Topic	Cumulatively Significant Impacts	Proposed Project's Contribution
		make a considerable contribution to cumulative impacts related to air quality. <i>Further analysis provided below.</i>
Global Climate Change and Greenhouse Gas Emissions	Anthropogenic emissions of GHGs are widely accepted in the scientific community as contributing to global warming. This impact is considered cumulatively significant.	Displacement of vessels as a result of the Proposed Project, leading to longer vessel trips, would result in emissions of GHGs. However, because such emissions would be below BAAQMD operational significance thresholds the Proposed Project would not make a considerable contribution to cumulative impacts related to GHG emissions. <i>Further analysis provided below.</i>
Water Quality	None identified.	No analysis required.
Biological Resources	Degraded condition of marine species and habitats, as described above. This impact is considered cumulatively significant.	The Proposed Project would not contribute to cumulative adverse impacts on fisheries and other marine species and habitats. <i>Further discussion provided below.</i>
Cultural Resources	None identified	No analysis required
<i>Social Resources</i>		
Land Use and Utilities	None identified	No analysis required
Public Services	None identified	No analysis required
Recreation	None identified	No analysis required
Research and Education	None identified	No analysis required
Vessel Traffic	None identified	No analysis required
Notes: BAAQMD = Bay Area Air Quality Management District, GHGs = greenhouse gases, NOx = nitrogen oxide, PM2.5 = particulate matter with a diameter of 2.5 microns or less, PM10 = particulate matter with a diameter of 10 microns or less, ROG = reactive organic gas		
Source: Data compiled by Horizon Water and Environment in 2011		

Cumulative Impacts

The following sections provide a detailed analysis of the Proposed Project's contribution to existing significant cumulative impacts. As identified in Table 7-2, the following resource issues are discussed: air quality, global climate change and GHGs, and biological resources.

Cumulative Impact CUM-1: Emissions of Criteria Air Pollutants

Vessel displacement resulting from the Proposed Project would result in daily and annual emissions of criteria air pollutants. As discussed in Section 3.2, "Air Quality," average daily and maximum annual emissions of reactive organic gases (ROGs), nitrogen oxide (NO_x), PM₁₀ (particulate matter with a diameter of 10 microns or less), and PM_{2.5} (particulate matter with a diameter of 2.5 microns or less) would occur at levels well below Bay Area Air Quality Management District (BAAQMD) operational significance thresholds. The BAAQMD operational significance thresholds utilized also represent cumulative thresholds. Therefore, the Proposed Project would not make a considerable contribution to cumulative impacts related to air quality. The impact would be less than significant.

Level of Significance: *Less than Significant*

Cumulative Impact CUM-2: Greenhouse Gas Emissions

Vessel displacement resulting from with the Proposed Project would result in annual emissions of GHGs. As discussed in Section 3.3, "Global Climate Change and Greenhouse Gas Emissions," annual emissions of GHGs would occur at levels well below BAAQMD operational significant thresholds. The BAAQMD thresholds utilized also represent cumulative thresholds. Therefore, the Proposed Project would not make a considerable contribution to cumulative impacts related to GHGs. The impact would be less than significant.

Level of Significance: *Less than Significant*

Cumulative Impact CUM-3: Biological Resources

The purpose of the Proposed Project is to address existing degradation to marine resources and would generally protect these resources. While displaced fishing effort could result in adverse effects, the protections provided by the Proposed Project are expected to outweigh any such effects. As a result, the Proposed Project is not expected to contribute to any cumulative adverse effects. The Proposed Project would help to protect degraded marine resources – groundfish, salmon, and abalone in particular. Therefore, the Proposed Project would not contribute to a significant adverse cumulative impact on biological resources. There would be no impact.

Level of Significance: *No Impact*

7.6 Mandatory Findings of Significance

According to the CEQA Guidelines Section 15065, a lead agency is required to find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:

- (1) The project has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or

restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.

- (2) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- (3) The project has possible environmental effects that are individually limited but cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
- (4) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

The Proposed Project has been evaluated in light of the above issues, and the Department has concluded that there is no substantial evidence, in light of the whole record, that any of the above conditions may occur as a result of the Proposed Project. Specifically:

- No significant impacts would result from the Proposed Project, and as such, the Proposed Project would not substantially degrade the quality of the environment or cause substantial adverse effects on human beings, either directly or indirectly.
- Chapter 4, "Biological Resources," describes the potential for the Proposed Project to substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species.
- Chapter 5, "Cultural Resources," describes the potential for the Proposed Project to eliminate important examples of the major periods of California history or prehistory.
- As a long-term program for management of marine resources, the Proposed Project would not prioritize short-term environmental goals to the disadvantage of long-term environmental goals.
- Section 7.5, "Cumulative Impacts," describes the potential for the Proposed Project to have possible environmental effects that are individually limited but cumulatively considerable.