

**SECTION 8.0
SOCIAL RESOURCES**

8.1 CULTURAL RESOURCES

This section describes the setting and potential cultural resources impacts of the proposed Integrated Preferred Alternative (IPA). Specifically, it describes existing conditions related to cultural resources and summarizes the overall regulatory framework for cultural resources that would affect implementation of the proposed Project IPA. This section then analyzes the potential impacts of the proposed Project IPA on cultural resources and, where appropriate, identifies mitigation measures to address significant impacts.

Cultural resource is the term used to describe several different types of properties: prehistoric and historical archaeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans.

Historical resource is a California Environmental Quality Act (CEQA) term that includes buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance, and is eligible for listing or is listed in the California Register of Historical Resources (CRHR).

8.1.1 Regulatory Framework

8.1.1.1 Federal

The National Historic Preservation Act (NHPA) of 1966, as amended, is the primary statute governing projects under federal jurisdiction that may affect cultural resources. If improvements implemented as a part of the proposed Project were funded by the federal government or were part of a federal action, then this statute would apply. Section 106 of the National Historic Preservation Act (16 United States Code Section 470 (f)) requires that all federal agencies review and evaluate how their actions or undertakings may affect historic properties, including those already listed in national registers or that have not yet been reviewed and considered for such. The regulations implementing Section 106 are codified at 36 CFR Part 800 (2001). Because the proposed Project is not federally funded and does not involve a federal action, the NHPA is not applicable to the proposed Project IPA or its alternatives.

8.1.1.2 State/Local

CEQA provides extensive guidance on archaeological and historical resources management, as discussed below. In addition to CEQA, other state laws governing cultural resources and pertinent to the proposed Project IPA include Public Resources Code (PRC) Section 5097.9

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

et seq. (Native American heritage) and California Health and Human Safety Code Section 7050.5 et seq. (human remains).

Records about Native American graves, cemeteries, and sacred places, as well as information about the location of archaeological sites, are exempt from being disclosed to the public under the California Public Records Act (California Government Code Section 6254.10).

8.1.1.2.1 California Environmental Quality Act. CEQA is the primary regulatory requirement governing projects under state and local jurisdictions that may affect cultural resources. Under CEQA, both state and local agencies are required to consider potential significant environmental impacts to cultural resources as a result of projects. State CEQA Guidelines define three ways that a property may qualify as a *historical resource* for the purposes of CEQA review:

- The resource is listed in or determined eligible for listing in the CRHR.
- The resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey that meets the requirements of Section 5024.1(g) of the PRC, unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record.

A cultural resource is eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Is associated with the lives of persons important in our past
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Has yielded, or may be likely to yield, information important in prehistory or history

CEQA defines a *unique archaeological resource* as an archaeological artifact, object, or site that contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest of its type or the best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.1.1.2.2 Native American Heritage Statute. PRC 5097.9 states, among other things, that “No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine...”

8.1.1.2.3 Regulations on Human Remains. The disturbance of human remains without authority of law is considered a felony (Health and Safety Code Section 7052). If human remains are Native American in origin, they are within the jurisdiction of the Native American Heritage Commission (NAHC) (Health and Safety Code Section 7052.5c, PRC 5097.98).

According to state law (Health and Safety Code Section 7050.5, PRC 5097.98), if human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner has been informed and has determined that no investigation of the cause of death is required, and
- If the remains are of Native American origin:
 - The descendants from the deceased Native Americans have made a recommendation to the land owner or person responsible for the excavation work for means of treating or disposing of with appropriate dignity the human remains and any associated grave goods as provided in PRC 5097.98, or
 - NAHC was unable to identify a descendent or the descendent failed to make a recommendation within 24 hours after being notified.

According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052).

8.1.2 Environmental Setting

Cultural resources are those locations, structures, and objects that have importance to the identity of a certain people or place and/or that can educate others and connect them to the important events of the human past. Coastal California possesses a rich prehistory and history of human occupation—by some accounts dating back to 13,000 years before present (Moratto 2004). The prehistory of the south coast study region (SCSR) is represented by submerged archaeological sites and artifacts, and its history is represented by surviving documents, structures, and shipwrecks.

The following setting was developed primarily based on a review of existing data, including in-house reports, online data, offshore marine cultural resources record searches conducted at

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

regional centers of the California Historical Resources Information System, and a Sacred Lands File Search conducted by the NAHC. In addition, URS contacted 60 Native American tribal representatives and other groups that the NAHC indicated may have knowledge of the religious and cultural significance of cultural resources within the area. The *Regional Profile of the MLPA South Coast Study Region (Point Conception to the California/Mexico border)* (California Department of Fish and Game [Department] 2009) was also reviewed.

8.1.2.1 Ethnographic/Prehistoric Setting

The SCSR encompasses the traditional home of (from north to south) the Chumash, Gabrieliño/Tongva, Juaneño/Acagchemem, Luiseño, and Kumeyaay (Ipai and Tipai) ethnographic divisions.

8.1.2.1.1 Chumash. The ethnohistoric Chumash are typically characterized as a linguistically-related series of chiefdom societies occupying sedentary or semi-sedentary villages. The Chumash peoples occupied the area ranging from Estero Bay in San Luis Obispo County (north of the study area) to Malibu in Los Angeles County, both coastal and interior valleys and plains, as well as the Channel Islands of San Miguel, Santa Rosa, Santa Cruz, and Anacapa. They had developed a maritime adaptation that was quite complex and efficient. Fishing within the channel waters provided a tremendous amount of meat, and was performed by use of the *Tomol* plank canoe (Glassow and Wilcoxon 1988). Shellfish and nearshore fish were available both in estuarine environments and along the sandy beaches, intertidal zones, and rocky outcrops on the ocean shore. In addition to marine foods, terrestrial foods in the form of terrestrial plants (most notably acorns) and terrestrial game (primarily rabbits and deer) were also available (Glassow 1996; Grenda and Altschul 2002; Glassow et al. 2007). Trade was facilitated by the existence of shell beads, primarily “cup” beads made from the *Olivella biplicata* shell (King 1990). The pre-European contact Chumash population was probably between 10,000 and 15,000 individuals.

8.1.2.1.2 Gabrieliño/Tongva. The Gabrieliño or Tongva territory is centered in the coastal, prairie, and mountain regions of western Los Angeles and Orange Counties, as well as the Channel Islands of Santa Barbara, San Nicolas, Santa Catalina, and San Clemente. The Gabrieliño/Tongva practiced a subsistence living very similar to the Chumash, in that they had a complex maritime adaptation, they employed plank canoes in the open ocean, and had a heavy reliance on marine resources such as fish, shellfish, and sea mammals (Bean and Smith 1978). Similarly, interior terrestrial food sources such as deer, waterfowl, piñon nuts, acorns, and yucca supplemented their diets. The Gabrieliño/Tongva are especially known for their steatite industry, used to make carvings, cooking pots and bowls, pipes, jewelery, and ritual objects (McCawley 1996; Glassow et al. 2007). Steatite was also heavily traded with their neighbors. Pre-European-contact populations probably numbered around 5,000 individuals.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.1.2.1.3 Juaneño/Acjachemem. The Juaneño or Acjachemem occupied territory that extended from Las Pulgas Creek in northern San Diego County to the San Joaquin Hills along Orange County's central coast. They were culturally and linguistically related to the Luiseño (Bean and Shipek 1978). Catholic priests called these indigenous people the Juaneño because they lived near Mission San Juan Capistrano. Today these groups call themselves the Juaneño Band of Mission Indians, Acjachemem Nation, and have been seeking federal recognition as a tribe.

Ethnographically and prehistorically, local populations concentrated in semi-permanent villages along major creeks and tributaries, particularly San Juan Creek and San Mateo Creek. The settlement and subsistence patterns of these groups involved annual movements from coastal areas to higher inland areas as different plant and animal species became seasonally available in different locations. Acorns, yucca, grasses, terrestrial game and shellfish, and marine fish all played dietary roles, with acorns serving as a primary staple (Kroeber 1925; Byrd and Raab 2007). Ethnographically, Juaneño society was hierarchically structured and included an elite ruling class, a middle class of established families, and a lower class (Sparkman 1908). Collectively, pre-European-contact Juaneño and Luiseño populations may have ranged from 4,000 to as many as 10,000 people (Bean and Shipek 1978).

8.1.2.1.4 Luiseño. The ethnographic Luiseño, also known as the *Payomkowishum*, consisted of a collection of sedentary and autonomous villages occupying a territory centered on the coastal and interior regions from Aliso Creek in Orange County to Agua Hedionda Creek in central San Diego County. The Luiseño relied primarily on terrestrial food sources, such as deer, upland fowl, antelope, and small mammals. Coastal marine foods such as fish and shellfish were also collected (Bean and Shipek 1978; Byrd and Raab 2007). Acorns proved to be the primary staple of the Luiseño, and technology such as winnowing baskets and bedrock mortars were utilized in the process of utilizing this food source (Sparkman 1908). The Luiseño are one of the few California prehistoric groups known to manufacture pottery. Ethnographically, the Luiseño had a rigid social structure much like the Juaneño that including defined social statuses, ruling families, and elaborate and structured ritualistic behaviors (Sparkman 1908; White 1963; Bean and Shipek 1978). Pre-European-contact populations may have been as high as 10,000 individuals (White 1963).

8.1.2.1.5 Kumeyaay (Ipai and Tipai). The Kumeyaay, formerly known as the Diegueño, include the Ipai and Tipai, two closely related groups that inhabited an area from Agua Hedionda Creek in northern San Diego County south into Baja California. The Ipai occupied the territory from San Diego Bay northward, and the Tipai from San Diego Bay south into Mexico. Their territory encompassed a number of environments, including coastal, mountain, and desert regions. The Ipai and Tipai migrated seasonally and villages were often simple and ephemeral (Kroeber 1925; Luomala 1978). Seasonal movement was often vertical, and followed the ripening of major plants from canyon floors to mountain slopes, including

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

coastal and slough bands. Acorns were the major food staple, although mesquite pods and various seed plants were also important. Deer was hunted, but the majority of meat protein was derived from small game such as rabbits and rodents (Byrd and Raab 2007). Trade was more often with each other than with foreign tribes, and both gourd and pottery vessels were produced to hold water. Pre-European-contact populations are estimated to be between 3,000 and 6,000 individuals (Luomala 1978).

8.1.2.2 Historical Setting

8.1.2.2.1 European Exploration. The first recorded European encounter of the California coast was Juan Rodriguez Cabrillo's Spanish voyage in 1542, which landed in San Diego (Kelsey 1986). Far fewer voyages were made to the northern region of Spanish Alta California after this time, but the area was occasionally explored. Sir Francis Drake—an Englishman who, like Cabrillo, was searching for the fabled Northwest Passage to Asia across North America—sailed into what is now Drake's Bay north of San Francisco in 1579.

The first recorded European contact with the people of the Santa Barbara area (in the northern portion of the SCSR) was in 1542 when Cabrillo sailed through the Santa Barbara Channel and made landfall near what is now Goleta (Kelsey 1986; Kennett 1987). Subsequent official, recorded visits continued throughout the next 200 years, as, most likely, did unrecorded visits. These visits resulted in the introduction of European goods into the Chumash economy, the recording of ethnographic information, and the formation of Native opinions, both positive and negative, about the Spanish.

The first recorded European contact with the Gabrieliño was by Juan Rodriguez Cabrillo in October of 1542. However, it was not until 1769 that Portola made the first Spanish overland expedition through present-day Los Angeles County (Crespi 2001). Prior to that time, the Spanish were focused on the immediate coast and Channel Islands. Hence, the interior Gabrieliño probably had little European contact prior to Portola's journey. While *en route* from San Diego to Monterey Bay, Portola stopped at an interior Gabrieliño village called Yang'na, situated on the western bank of the Los Angeles River, near what is now downtown Los Angeles (Crespi 2001). From there, Portola and his crew traveled northwest, through the Sepulveda Pass (now the 405 freeway), and into the San Fernando Valley from the west.

The Spanish continued to explore the northern and southern American continents throughout the 16th and 17th centuries, claiming lands for the Spanish crown and in constant search for gold. Throughout this period, Spanish ships frequented the California coast following a trans-Pacific trade route via Manila that was opened in 1565, although their efforts were more concentrated in South America, present-day Mexico, and the present-day eastern United States (Rawls 1988).

8.1.2.2.2 The Mission System. Despite these occasional expeditions, European occupation of California did not begin in earnest until 1769, with the establishment of the mission

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

system. Spanish padres of the Franciscan order constructed a series of missions, reporting to the Catholic Church in Spain, and exploiting converted Native Americans (called neophytes) as labor (Cook 1976). Six missions were established near the coast in the SCSR (listed north to south): Santa Barbara, San Buenaventura, San Gabriel Arcángel, San Juan Capistrano, San Luis Rey de Francia, and San Diego de Alcalá (Shipek 1978). After the overthrow of Spanish rule and the founding of the state of Mexico in 1821, control of Alta California passed from Spanish to Mexican hands. The missions were secularized in 1834 by order of Mexican governor José Figueroa; the surviving Indians dispersed or were driven off, and mission lands passed into private hands (Johnson 1989).

California briefly existed as the northwestern edge of Mexico between the years of Mexico's independence from the Spanish crown in 1821 and the signing of the Treaty of Guadalupe Hidalgo in 1848, which ended the Mexican-American War and ceded California and other territories to the United States (Chapman 1921). Americans gradually settled the state and continued to develop the agricultural and trade-based economy inherited from the Mexican period. The Gold Rush of 1849 drastically increased trade ship traffic along the California coast, bringing about a significant increase in the population of Americans of European ancestry; California was admitted as a state in 1850, further spurring the numbers of American immigrants. Trade transport remained primarily maritime until the completion of the first trans-continental railroad in 1869 and the proliferation of the rail web throughout the west. Maritime trade focused on the San Francisco Bay, due to its proximity to the state's gold reserves and the subsequent population and economic boom in the surrounding area, although smaller ports such as Monterey also became economic and residential hubs and served as major destinations along the route.

8.1.2.3 Physical Setting

Because underwater development has not occurred and due to the difficulties of working underwater, extensive archaeological investigation of underwater cultural resources has not taken place. The inaccessibility of underwater sites and the difficulties posed by their investigation and recording have also meant that California's underwater archaeological record is not as extensive and complete as its land-based record. However, the state's rich maritime and coastal history (and prehistory) has left behind a variety of sites and artifacts.

8.1.2.3.1 Prehistoric Resources. Much of the SCSR consists of steep, actively eroding coastal bluffs and small pocket beaches. An important factor in understanding coastal California's paleoenvironmental history is the evolution of the estuary systems along the coast. Many early archaeological sites would have been present along estuary boundaries, in areas that are now completely submerged. Because of the rise in sea level during the middle and early Holocene (15,000 to 10,000 years ago), formerly land-based archaeological sites pertaining to the coastal activities of native inhabitants would now be deeply submerged if they survived inundation, wave-related erosion, and other natural processes (Moratto 2004).

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Such prehistoric sites could include the full range of site types, including habitation sites identified by stone and shell tools, shell middens, shell mounds, and rock milling features that indicate food processing sites or larger inhabitation sites. Owing to technological, logistical, and funding difficulties, little or no intensive, systematic survey for submerged prehistoric sites off California's coast has been conducted and the number and locations of such sites are unknown. Most submerged prehistoric resources recorded along the coast were found in nearshore waters by divers and include isolated artifacts such as net weights, bowls, and other items lost during maritime activities.

To augment this information, a site record search has been initiated to determine whether select MPAs contain recorded archaeological sites or artifacts (see Appendix F). MPAs selected for the record search include those that would be deleted by the proposed Project IPA. The rationale for focusing on these MPAs is that deleting them could result in the removal of existing regulations that may incidentally provide some protection for any cultural resources present, and determining whether such MPAs contain recorded cultural resources was deemed relevant to the impact analysis, although it is important to note that designation as an SMR or an SMCA does not automatically result in decreased recreational use of an area.

Existing MPAs that will be deleted under the proposed Project IPA include Refugio SMCA, Big Sycamore SMR, Pt. Fermin SMP, Doheny Beach SMCA, Doheny SMCA, Agua Hedionda Lagoon SMR, and San Dieguito Lagoon SMP. Heisler Park SMR is a no take MPA and technically it also will be deleted, but it will be incorporated into another proposed no take MPA (Laguna Beach SMCA); thus, there is essentially no change in protection due to the proposed Project IPA so no site record search was conducted for this location.

The site records searches indicate that the selected MPAs have not been subject to previous underwater archaeological investigations and no submerged archaeological resources have been recorded within the MPA boundaries, although many prehistoric archaeological sites occur on lands adjacent to some MPAs.

The NAHC also was contacted to conduct a search of their Sacred Lands File and to provide contact information for Native Americans who may be able to provide additional information on submerged Native American cultural resources within the south coast region (see Appendix F). The NAHC identified over 60 Native American contacts for the south coast region and indicated that, although sacred lands are present on land adjacent to a number of MPAs within the region, no submerged sacred lands are present within the boundaries of the selected MPAs (D. Singleton, personal communication).

On July 6, 2010, letters were sent by certified mail to the 60 Native American contacts requesting any additional information they may have regarding cultural resources in the Project area. The letters also requested that the recipients provide any comments, questions

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

or concerns they had regarding the Project. Approximately 10 days after sending the letters, follow-up calls were made to each individual or group that had not yet provided a response. These contacts included representatives of the Chumash, Fernandeno, Tatviam, Kitanernuk, Gabrielino, Tongva, Juaneno, Luiseno, Digueno, and Kumeyaay. The majority of those contacted either did not respond or stated that had not reviewed the material sufficiently to comment at this time. For those who provided comments, most expressed concerns that focused on the potential loss of traditional hunting-gathering areas, a lack of language in the MPA MLPA regarding Native American interests or their role as stakeholders, and a feeling that Native Americans had little or no involvement in the MLPA Initiative planning process, although the Department implemented an extensive tribal outreach program (see below). Many individuals stated they will provide a more formal response following planned meetings with tribal elders, tribal councils, legal counsels, and inter-tribal organizations. Potential Project-related impacts to archaeological sites protected under CEQA did not seem to be a concern and a few stated they had no concerns regarding the Project due to the lack of ground disturbing activity associated with it. Appendix F of this EIR includes, among other information, documentation from the NAHC, a list of the 60 Native American representatives contacted during preparation of this EIR, and results of the contacts.

The MLPA Initiative staff implemented an outreach program to the five Native American tribal nations within the SCSR that included four separate meetings attended by approximately 75 federally and non-federally recognized California Natives and a two-day Tribal Forum held on February 27 and 28, 2009. Interested Native Americans were provided opportunities to become familiar with the MLPA and to engage the Department in discussions about their concerns and recommendations. Perhaps in recognition that the Project involves no ground disturbance, the final summary report on the Tribal Forum (see Appendix F) does not indicate there were concerns about potential Project-related impacts to Native American archaeological resources protected under CEQA.

8.1.2.3.2 Historic Resources. Shipwrecks are the most prominent known historical artifacts that lie beneath the waters off California. California's first recorded shipwreck is that of the San Augustin, which was driven ashore in 1595 at Drake's Bay, near Point Reyes north of the SCSR. Since then, hundreds of vessels have wrecked off California's rocky coast but offshore locations of most shipwrecks were poorly documented owing to the emergency nature of accidents at sea. The remains of many of these ships have yet to be discovered.

The State Lands Commission shipwreck database lists 360 shipwrecks off the coasts of Santa Barbara, Ventura, Los Angeles, Orange, and San Diego counties. Chinese junks, Russian and Mexican sailing ships, American coastal traders, Gold Rush-era steamships, and U.S. Navy ships from the 1920s to the 1950s have all sunk in these waters but the final resting places for most are unknown. Moreover, many shipwrecks may no longer exist even though we know where they were reported as lost. As a result of these factors, shipwrecks identified in

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

databases are for the most part merely the last reported sighting of a foundering ship rather than a verified location of a shipwreck.

These limitations notwithstanding, shipwreck databases can be used as an indication of an area’s sensitivity for shipwrecks. For example, the Department Marine Map database of shipwreck information indicates that 40 shipwreck locations have been reported within 1 mile of those MPAs (Table 8.1-1). Although only 2 of the 40 locations fall within the boundaries of the existing MPAs, the data indicate that some existing MPAs have a fairly high sensitivity for shipwreck locations. Nonetheless, it is important to note that MPAs were not established to explicitly protect shipwrecks and in many cases Department regulations designed to protect marine life still allow boating and diving that can result in anchoring impacts to the ocean bottom and, if present, submerged cultural resources. No take SMRs provide the greatest protection.

**TABLE 8.1-1
SHIPWRECK LOCATIONS NEAR EXISTING MPAs**

MPA Name	Number of Shipwreck Locations Reported within 1 Mile of the MPAs	Number of Shipwreck Locations Reported within the MPAs
Abalone Cove SMP	1	0
Cardiff-San Elijo SMCA	1	1
Crystal Cove SMCA	1	0
Heisler Park SMR	6	0
Laguna Beach SMCA	7	0
Lover’s Cove SMCA	1	0
Mia J Tegner SMCA	3	0
Point Fermin SMP	16	0
Robert E Badham SMCA	1	0
San Elijo Lagoon SMP	1	0
South Laguna Beach SMCA	1	0
South Point SMR	1	1
Total	40	2

Source: Marine Map 2010.

The proposed Project IPA can be characterized in a similar fashion. As Table 8.1-2 illustrates, a total of 45 shipwreck locations are located within 1 mile of the proposed Project IPA boundaries (note: proposed MPAs not listed in this table have no shipwreck locations within a 1-mile radius). Of these 45 locations, 25 are reported within the proposed boundaries of IPA MPAs. MPAs with the most potential to protect shipwrecks include Laguna Beach SMCA, which would subsume the Heisler Park SMR and the existing Laguna Beach SMCA into a new no take zone, the Point Dume SMR, the Point Dume SMCA, and the Point

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

**TABLE 8.1-2
SHIPWRECK LOCATIONS NEAR PROPOSED IPA MPAS**

Proposed IPA MPA Name	Number of Shipwreck Locations Reported within 1 Mile of the MPA	Number of Shipwreck Locations Reported within the MPA
Abalone Cove SMCA	8	0
Cabrillo SMR	1	1
Casino Point SMR	1	0
Crystal Cove SMCA	2	0
Dana Point SMCA	2	1
Farnsworth Offshore SMCA	1	0
Farnsworth Onshore SMCA	1	1
Laguna Beach SMCA/SMR	8	6
Lover's Cove SMCA	1	0
Point Dume SMCA	1	0
Point Dume SMR	6	6
Point Vicente SMCA	10	10
San Elijo Lagoon SMR	1	0
South La Jolla SMR	1	0
Swami's SMCA	1	0
Total	45	25

Vicente SMCA. These zones could offer incidental protection to any shipwrecks within their boundaries by eliminating anchoring from fishing boats, although designation as an SMR or SMCA could also attract greater recreational use by divers. Regardless, twenty-two shipwreck locations have been reported within the boundaries of these four proposed MPAs and another three shipwreck locations are reported within 1 mile.

8.1.2.3.3 Paleontological Resources or Unique Geological Features. The SCSR includes fossiliferous geologic strata and unique geologic features, such as rocky intertidal zones, the intertidal portion of beaches of varying grain sizes (gravel to fine-grained), rocky reefs, and underwater pinnacles. The proposed Project IPA is not expected to affect geological resources and, as a result, such resources are not analyzed further in this Draft Environmental Impact Report (EIR) (see Section 4.3).

8.1.3 Impact Analysis

8.1.3.1 Methodology

Due to the proposed Project IPA's scope and defined geographical boundaries, environmental analysis is limited to those resources that may be present within the water or

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

buried beneath the sea floor; terrestrial cultural resources are not included in the analysis because the proposed Project will only affect offshore areas. Marine cultural resource surveys were not performed for the proposed Project IPA because of its limited potential to adversely affect any resources that may be present in the area. Instead, this generalized discussion relies on results of offshore archaeological site record searches conducted at regional information centers and an examination of the Marine Map shipwreck database. These sources were used to identify the numbers of submerged cultural resources recorded within or near existing MPAs and MPAs that would be created or deleted by the proposed Project IPA and alternatives (Project alternatives are addressed in Section 10.0).

8.1.3.2 Criteria for Determining Significance

Significance thresholds for assessment of cultural resources-related impacts for the proposed Project are based on the criteria presented in Appendix G of the State CEQA Guidelines. The proposed Project IPA would result in significant impacts to cultural resources if it:

- Causes a substantial adverse change in the significance of a historic resource as defined in Section 150654.5 of the State CEQA Guidelines
- Causes a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5 of the State CEQA Guidelines
- Destroys directly or indirectly a unique paleontological resource or site or unique geologic feature

8.1.3.3 Environmental Impacts

Impact CR-1: Substantial Adverse Effects on Historical Resources

Current regulations prohibit all unauthorized salvage and extraction of artifacts from shipwrecks in state waters. The proposed Project IPA would retain this regulation without modification.

Compared to existing conditions, the creation of the proposed Project IPA would not have a direct adverse effect on underwater cultural resources existing within the SCSR, whether they be recorded, known but unrecorded, or yet unknown. The proposed Project IPA proposes no physical alteration to the ocean floor or the bottom of relevant bays or estuaries, and therefore would not directly disturb any resources present.

The proposed Project IPA would result in the deletion of the Refugio SMCA, Big Sycamore SMR, Point Fermin SMP, Doheny Beach SMCA, Doheny SMCA, Agua Hedionda Lagoon SMR, and San Dieguito Lagoon SMP. Deleting these areas from the MPA system is not expected to have a significant adverse impact to cultural resources because: 1) no submerged cultural resources are known to occur within their boundaries, and/or 2) existing regulations

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

at these locations do not prohibit recreational fishing, boating, or diving so eliminating them as MPAs is not expected to result in a change in anchoring impacts (note: all such activities are prohibited at the Big Sycamore Canyon SMR but no submerged cultural resources are known to occur within this MPA so no impacts from the IPA are expected).

Some MPAs will result in a reduction or elimination of recreational and/or commercial fishing compared to existing conditions. To the extent these restrictions reduce anchoring impacts to the ocean floor, they could result in a decrease in potential impacts to submerged resources. Such a beneficial impact, should it occur, is expected to be slight because many new or expanded MPAs will still allow other boating and diving activities that can potentially affect submerged resources. Moreover, areas designated as SMRs or SMCAs may see increased recreational use by divers. In such cases, potential benefits from eliminating fishing boat disturbance of the ocean bottom may be offset by additional anchoring from dive boats.

The proposed Project IPA would not have an adverse effect on any Traditional Cultural Properties (TCPs) that may exist in the SCSR. In accordance with PRC 5097.9, the Department will not interfere with the free expression or exercise of any traditional Native American religious rites, and will not otherwise restrict traditional Native American cultural activities within the MPAs as long as those cultural activities do not include the take of living marine resources.

Mitigation: No mitigation is required because there would be no adverse impact.

Impact CR-2: Substantial Adverse Effects on Archaeological Resources

Current regulations prohibit all unauthorized salvage and extraction of artifacts from state waters. The proposed Project IPA would retain this regulation without modification.

As with historical resources (see above), the creation of the proposed Project IPA would not have a direct adverse effect on underwater archaeological resources existing within the SCSR, whether they be recorded, known but unrecorded, or yet unknown. The proposed Project IPA proposes no physical alteration to the ocean floor or the bottom of relevant bays or estuaries, and therefore would not directly disturb any resources present. Deleting the Refugio SMCA, Big Sycamore SMR, Pt. Fermin SMP, Doheny Beach SMCA, Doheny SMCA, Agua Hedionda Lagoon SMR, and San Dieguito Lagoon SMP is also not expected to have a significant indirect adverse impact to cultural resource for the reasons described above in Impact CR-1.

Restrictions proposed by the proposed Project IPA could have a potential beneficial impact to any underwater resource that may exist within or beneath the MPAs by limiting fishing activities and associated anchoring, thereby reducing the potential for accidental damage to resources. Such a beneficial impact, should it occur, is likely to be either slight or offset because, as noted above, the proposed Project IPA will still allow boating and diving in most

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

areas and in some instances designation of an area as an SMR or SMCA could result in increased recreational use by divers.

Mitigation: No mitigation is required because there would be no adverse impact.

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

8.2 PUBLIC SERVICES AND UTILITIES

This section describes the existing setting and potential public services and utilities impacts of the proposed Integrated Preferred Alternative (IPA) and its alternatives. Specifically, it describes existing conditions related to public services and utilities; analyzes the potential impacts of the proposed Project IPA and alternatives on public services and utilities; and identifies mitigation measures to address significant impacts, as appropriate.

8.2.1 Regulatory Framework

Primary federal, state and local regulations related to offshore public services and utilities are described below.

8.2.1.1 Power Generation Facilities And Desalination Regulations

Although power generation facilities and desalination facilities (these facilities are frequently combined) are located on land, the cooling system for power plants can be designed to utilize ocean water through an off shore water pipeline. Power plant once-through cooling water systems impact aquatic organisms by thermal discharge effects, impingement, and entrainment (Steinbeck 2008). Thermal discharge is heated water from the cooling water system that is discharged. This heated discharge water can cause impacts to biological resources.

Desalination facilities also include an off shore intake pipeline and impingement of aquatic organisms results during water intake as organisms are pulled into contact with the intake screens, and are held there by the velocity of the water being pumped through the water intake system. Unless the organisms are able to escape, they perish. Entrainment occurs when small aquatic organisms (fish and clam larvae, etc.) are carried through the intake screens (screen mesh size is usually 5/16 or 3/8 of an inch) and through the remainder of the cooling system or intake system for desalination facilities.

The following is an outline of the regulations specific to power generation facilities that utilize ocean water cooling and for desalination facilities.

8.2.1.1.1 Federal Law, Regulations, and Policies.

Clean Water Act of 1972 (33 USC §404 et seq.). Permits to dredge or fill waterways are required. Effluent discharge must be permitted by the National Pollution Discharge Elimination System Program (NPDES).

Under Section 316(b) of the Clean Water Act (CWA), an applicant must utilize best technology available to minimize any adverse impacts to biological resources due to the use of a once-through cooling water system or water intake system for desalination facilities. In

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

1987, Section 320 was added to the CWA to establish the National Estuary Program, whose goal is to identify, restore, and protect nationally significant estuaries of the United States.

Coastal Zone Management Act. The Federal Coastal Zone Management Act (CZMA) of 1972, as administered by the state of California through the California Coastal Act, applies to the proposed Project IPA.

Federal Energy Regulatory Commission. The Federal Energy Regulatory Commission (FERC) is the United States federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, and oil pipeline rates. FERC also reviews and authorizes liquefied natural gas terminals, interstate natural gas pipelines and non-federal hydropower projects.

8.2.1.1.2 State Law, Regulation, and Policies.

California Coastal Act of 1976 (PRC §30000 et seq.). The California Coastal Act requires the protection of coastal waters from adverse impacts of wastewater discharges and entrainment. Section 30230 of the Coastal Act states that marine resources shall be maintained, enhanced, and, where feasible, restored. Section 30231 of Coastal Act requires actions that minimize adverse impacts to biological productivity of coastal waters, including: minimization of discharge and entrainment. Section 30240 of Coastal mandates protection of environmentally sensitive habitats from the degradation of habitat value.

Warren-Alquist Act. In 1974 the Warren-Alquist State Energy Resources Conservation and Development Act created the California Energy Commission. The Act required that, prior to constructing or modifying an electric generating plant, the Commission was to certify the need for the plant and the suitability of the site of the plant. Section 25527 states that Certain areas, such as estuaries, state parks, wilderness, scenic or natural reserves, and areas for wildlife protection, are prohibited areas as sites for facilities, unless consistent with the primary uses of such areas, and where there will be no substantial adverse impacts.

California Porter-Cologne Water Quality Control Act 1972; California Water Code §13000-14957; Division 7, Water Quality. The act establishes the framework for regulation of activities affecting water quality in the state, as well as policies for the water quality control program. Section 13142.5 (b), establishes a state policy that new or expanded power plants proposing to use seawater for cooling: shall implement the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life.

Clean Water Act Section 316(b) has since 1972 required that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. Section 316(b) is implemented through National Pollutant Discharge Elimination System (NPDES) permits, issued pursuant

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

to Clean Water Act Section 402, which authorize the point source discharge of pollutants to navigable waters.

The State Water Resources Control Board (SWRCB) is designated as the state water pollution control agency for all purposes stated in the Clean Water Act, including water quality control planning and waste discharge regulation.

The SWRCB and Regional Water Quality Control Boards (RWQCB) are authorized to issue NPDES permits to point source dischargers in California, including Once-through Cooling power plants.

Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling. On May 4, 2010 the SWRCB, the statewide policy making and oversight body for the RWQCBs, adopted the Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling. The intent of the Policy is to protect marine and estuarine life from the impacts of once-through cooling without disrupting the critical needs of the state's electrical generation and transmission system. The Policy establishes technology-based standards to implement federal CWA Section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life. The policy applies to the 19 existing power plants (including two nuclear plants) that currently have the ability to withdraw over 15 billion gallons per day from the state's coastal and estuarine waters using a single-pass system, also known as once-through cooling. Section 316(b) is implemented through NPDES permits, issued by the RWQCBs.

California Public Utilities Commission regulates investor-owned electric and gas utilities within the state of California, including Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric. Among its stated goals for energy regulation are to establish service standards and safety rules, authorize utility rate changes, oversee markets to inhibit anti-competitive activity, prosecute unlawful utility marketing and billing activities, govern business relationships between utilities and their affiliates, resolve complaints by customers against utilities, implement energy efficiency and conservation programs and programs for the low-income and disabled, oversee the merger and restructure of utility corporations, and enforce the California Environmental Quality Act for utility construction.

8.2.1.2 Wastewater Treatment Facilities and Storm Drainage

Publicly owned treatment works (POTWs) collect wastewater from homes, commercial buildings, and industrial facilities and transport it via a series of pipes, known as a collection system, to the treatment plant. Here, the POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage only. However, POTWs also receive wastewater from industrial (non-domestic) users. The General Pretreatment

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Regulations establish responsibilities of federal, state, and local government, industry and the public to implement Pretreatment Standards to control pollutants from the industrial users which may pass through or interfere with POTW treatment processes or which may contaminate sewage sludge.

In 1987 the CWA was amended to require the United States Environmental Protection Agency (EPA) to establish a program to address storm water discharges. In response, EPA promulgated the NPDES storm water permit application regulations. These regulations require that facilities with storm water discharges apply for an NPDES permit.

As part of storm water permits, facilities are often required to implement pollution prevention plans. The plan needs to identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with a facility. The plan should also describe and ensure the implementation of practices that reduce the pollutants in storm water discharges.

8.2.1.2.1 Federal Statutes and Regulations.

Clean Water Act. The Clean Water Act (CWA) is the primary federal law governing water pollution in the United States. The main goals of the CWA are to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

National Pollutant Discharge Elimination System Permit Program. The 1972 amendments to the CWA provide the statutory basis for the EPA administered NPDES permit program (Section 402). NPDES permits contain industry-specific, technology-based and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent. The permit will then set forth the conditions and effluent limitations under which a facility may make a discharge.

Water Quality Act of 1987. The Water Quality Act of 1987, also known as the CWA amendments, added provisions to the CWA requiring states to promulgate water quality standards for toxic pollutants for which water quality criteria had been developed. The CWA amendments also required NPDES permits for municipal, industrial, and general construction activity storm water discharges.

The federal government's role in pretreatment began with the passage of the CWA in 1972. The CWA called for EPA to develop national pretreatment standards to control industrial discharges into sewage systems. The National Pretreatment Program is designed to reduce the amount of pollutants discharged by industry and other non-domestic wastewater sources

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

into municipal sewer systems, and thereby, reduce the amount of pollutants released into the environment from publicly owned wastewater treatment plants.

8.2.1.2.2 State Regulatory Setting.

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Act (Porter-Cologne) provides the state with broad jurisdiction over water quality and waste discharge, and also provides the state the authority to prepare regional Basin Plans to protect the state's water resources. Under the Porter-Cologne Water Quality Control Act and Section 401 of the federal CWA, the SWRCB and the RWQCBs regulate discharges to surface waters (including wetlands), groundwater, and point and non-point sources of pollution. The basin plan designates existing and potential beneficial uses for each water body within its geographic region, sets numeric and narrative water quality objectives to protect the beneficial uses, and describes strategies and time schedules for achieving these water quality objectives.

The RWQCBs regulate all nonpoint source discharges under one of two statutory requirements: the NPDES Storm Water Permitting Program and the Coastal Nonpoint Pollution Control Program. The CWA Section 402 program is designed to regulate storm water and urban runoff (i.e., the nonpoint source discharges that become point sources). Virtually all other nonpoint sources are subject to the Coastal Nonpoint Pollution Control Program.

The RWQCBs' permit authority includes the issuance of waste discharge requirements and conditions on CWA Section 401 water quality certification authorizations. The water quality objectives for surface waters in the south coast study region (SCSR) are established by the Water Quality Control Plans (Basin Plans) for Regions 3 (Central Coast), 4 (Los Angeles), 8 (Santa Ana), and 9 (San Diego). The standards represent maximum levels of pollutants, or acceptable ranges (for parameters such dissolved oxygen, temperature or pH) that allow beneficial uses of the water basin to continue unimpaired. The RWQCB has primary authority for ensuring that water resources are protected from degradation by pollutant discharges. To develop water quality standards that are consistent with the uses of a water body, each RWQCB attempts to classify historical, present, and future beneficial uses of the waters under its jurisdiction as part of the Basin Plan for its region. The Basin Plan is periodically reviewed and updated. Finally, each RWQCB is required to identify water bodies that do not meet water quality objectives pursuant to Section 303(d) of the CWA.

Beneficial uses of the major rivers and groundwater basins, along with narrative and numerical water quality objectives, are established in the Basin Plans. Beneficial uses of surface water in the SCSR include municipal and domestic supply; agricultural supply; industrial process supply; industrial service supply; groundwater recharge; navigation; hydropower generation; contact and non-contact recreation; warm, freshwater habitat; cold,

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

freshwater habitat; wildlife habitat; estuarine habitat; marine habitat; wildlife habitat; preservation of biological habitat; and commercial and sports fishing.

Point-source discharges from wastewater treatment facilities via off shore pipelines to the marine environment, as well as municipal separate storm sewer system outfalls to coastal waters, are regulated under waste discharge requirements issued by the RWQCBs, which incorporates NPDES requirements. Waste discharge requirements issued to wastewater treatment plants for offshore discharges incorporate numerical effluent limitations that will support maintenance of the water quality objectives established in the California Ocean Plan (SWRCB 2005). The wastewater treatment plant dischargers are required to monitor and report the quality of their discharges for compliance with these effluent limitations. Operators of municipal separate storm sewer systems are required to implement and require the implementation of best management practices that are protective of the beneficial uses of the receiving waters. Municipal separate storm sewer system operators are required to monitor and report the quality of their discharges and receiving waters to determine the impact of their discharges on beneficial uses.

8.2.1.3 Underwater Cables

Underwater cables can provide communication cables for large geographic areas. Submarine cables are typically used by telecommunication companies to carry heavy communication traffic instead of relying on satellites. Submarine cables are typically about 1–3 inches in diameter and are laid by a large specialized cable-laying ship that spools the cable out large holding tanks (globalsecurity.org).

In shallow water where fishing is prevalent, cable is typically buried. When crossing hard bottomed areas where burial is not feasible an armored cable is used with an outside diameter of 2.5 inches. Except in the deepest waters, submarine cables need to be buried in order to avoid the risk of damage due to fishing techniques and abrasion from tidal movements. There are many regulations for undersea cables within international waters. Depending on the location of the cable and the location of the tie in to an existing cable regulations can be established. The following is a description of federal regulations for United States undersea cables that might be applicable to undersea cables off the California coast.

Pursuant to the Submarine Cable Landing License Act (47 U.S.C. 34–39) the President of the United States must grant permission to any entity planning to land a submarine cable in the United States. This statute requires an entity to get permission before it is allowed to land and operate a submarine cable “directly or indirectly connecting the United States with any foreign country, or connecting one portion of the United States with any other portion thereof,” except for any submarine cable, “all of which, including both terminals, lie wholly within the continental United States.”

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

In a related Executive Order (E.O. 10530) the President delegated authority to the Federal Communications Commission to grant, deny, or condition submarine cable landing licenses, except that no license can be granted or revoked without the Federal Communications Commission first obtaining approval from the Secretary of State and advice from any executive department of the government as the may be deemed necessary. The National Telecommunications and Information Administration, an agency within the Department of Commerce, advises the Department of State and the Federal Communications Commission on all submarine cable landing license applications.

Aside from the two federal requirements, development of underwater cables off the coast of California is permitted as “development” and typically is reviewed under the appropriate jurisdictions’ permitting requirements for other types of development, which are described in Section 8.3.1 of this Draft EIR.

8.2.2 Environmental Setting

Proposed marine protected areas (MPAs) are not currently served by public services and utilities due to their nature as protected, offshore areas for underwater habitats. Establishment of MPAs within the SCSR would not impact the existing utilities identified in Table 8.2-1. Intake and discharge locations within proposed MPAs would continue to operate based on existing permit conditions. However, the proposed MPAs are most likely outside of the intake and discharge locations for power generation facilities utilizing once-through ocean cooling systems and existing desalination facilities with ocean intake and discharge systems.

The following is a description of POTWs and outfalls that are potentially within waters near the eight proposed new MPAs in the proposed Project IPA that lie along the mainland coast:

- Point Conception – This MPA is located in a remote coastal area without POTW or municipal separate storm sewer system outfalls.
- Kashtayit State Marine Conservation Area (SMCA) – This MPA is located adjacent to the coast. Although there are no POTWs in the vicinity of this MPA, it is anticipated that minor municipal separate storm sewer system outfalls associated with State Highway 101 discharge to the coast.
- Naples SMCA – This MPA is located adjacent to the coast. Although there are no POTWs in the vicinity of this MPA, it is anticipated that minor municipal separate storm sewer system outfalls associated with State Highway 101 discharge to the coast.
- Campus Point State Marine Reserve (SMR) – This MPA is located adjacent to the coast. Although there are no POTWs in the vicinity of this MPA, it is anticipated that minor municipal separate storm sewer system outfalls associated with State Highway 101 and the communities of El Encanto Heights and Ellwood may discharge to the coast.

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

**TABLE 8.2-1
POINT SOURCES IN THE MLPA SOUTH COAST STUDY REGION**

Point Source	Effluent	Discharge rating
Municipal Wastewater Treatment Facilities		
City of Los Angeles Hyperion Treatment Plant	Treated sanitary wastewater	Major
Los Angeles County Sanitation District's Joint Water Pollution Control Plant (JWPCP)	Treated sanitary wastewater	Major
Orange County Sanitation District's Sewage Treatment Plant	Treated sanitary wastewater	Major
San Diego Metropolitan Sewerage System's Point Loma Ocean Outfall operated by the City of San Diego	Treated sanitary wastewater	Major
San Elijo Joint Powers Authority's San Elijo Water Pollution Control Facility	Treated sanitary wastewater	Major
Encina Wastewater Authority's Encina Ocean Outfall	Treated sanitary wastewater	Major
City of Oceanside's Oceanside Ocean Outfall	Treated sanitary wastewater	Major
Southeast Regional Reclamation Authority's SERRA Ocean Outfall	Treated sanitary wastewater	Major
City of Oxnard's Waste Water Treatment Plant (WWTP)	Treated sanitary wastewater	Major
South Orange County Wastewater Authority's (SOCWA) Aliso Ocean Outfall	Treated sanitary wastewater	Major
International Boundary and Water Commission's South Bay International Wastewater Treatment Plant	Treated sanitary wastewater	Major
City of Santa Barbara's El Estero WWTP	Treated sanitary wastewater	Major
Goleta Sanitary District's WWTP	Treated sanitary wastewater	Major
Carpinteria Sanitary District's WWTP	Treated sanitary wastewater	Major
Montecito Sanitary District's WWTP	Treated sanitary wastewater	Major
City of Avalon's WWTP NPD	Treated sanitary wastewater	Major
Summerland Sanitary District's WWTP	Treated sanitary wastewater	Minor
U.S. Navy Naval Air Station, North Island's San Clemente Island	Treated sanitary wastewater	Minor
Industrial Desalination Plants		
Chevron U.S.A. Inc.'s Gaviota Oil, Gas, and Desalination	Desalination brine	Minor
U.S. Navy Naval Air Station's San Nicholas Island	Desalination brine	Minor
Southern California Edison Co's Pebbly Beach Desalination Plant	Desalination brine and possibly cooling water	Minor
South Orange Coastal Ocean Desalination Project	Pilot test of beach wells	Unknown
Carlsbad Desalination Project	Permitted – not built	Unknown
Industrial Power Plants		
Southern California Edison Co.'s SONGS Unit 3 (San Onofre)	Cooling water	Major

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

**TABLE 8.2-1 (CONTINUED)
POINT SOURCES IN THE MLPA SOUTH COAST STUDY REGION**

Point Source	Effluent	Discharge rating
Southern California Edison Co.'s SONGS Unit 2 (San Onofre)	Cooling water	Major
AES Corporation's Redondo Beach Generating Station	Cooling water	Major
Cabrillo Power LLC's Encina Power Plant	Cooling water	Major
Harbor Generating Station	Cooling water	Major
Haynes Generating Station	Cooling water	Major
Reliant Energy's Ormond Beach Generating Station	Cooling water	Major
El Segundo Power LLC's Generating Station	Cooling water	Major
AES Hunting Beach LLC's AES Huntington Beach	Cooling water	Major
Los Angeles City's Scattergood Generating Station	Cooling water	Major
Reliant Energy's Ocean Vista Power Station at Mandalay Beach	Cooling water	Major
Southern California Edison Co.'s Songs Unit 1	Cooling water	Major
Other Industrial Permitted Discharge Sites		
Cultured Abalone Aquaculture	Aquaculture wastewater	Minor
UC San Diego, Scripps Institute Of Oceanography	Marine lab and public aquarium waste seawater	Minor
USC Wrigley Institute Marine Science Center	Marine lab waste seawater	Minor
Chevron U.S.A.'s El Segundo Refinery	Refinery wastewater	Major
Nuevo Energy Company's Platform Esther	Treated sanitary waste from oil platform	Minor
Nuevo Energy Company's Platform Eva	Treated sanitary waste from oil platform	Minor

Source: Department 2009.

- Point Dume SMCA and SMR – This MPA is located adjacent to the coast and it is anticipated that there may be minor municipal separate storm sewer system outfalls associated with State Highway 1 and the City of Malibu. The City of Malibu is not served by a POTW, so there is no POTW outfall to the MPA.
- Point Vicente SMCA – This MPA is located adjacent to the coast and it is anticipated that there may be minor municipal separate storm sewer system outfalls associated with the City of Rancho Palos Verdes.
- South La Jolla SMCA – This MPA is located adjacent to the coast and it is anticipated that it will receive discharges from municipal separate storm sewer system outfalls associated with the communities of La Jolla and Pacific Beach.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

- Tijuana River Mouth SMCA – This MPA is located adjacent to the coast and it is anticipated that it will receive discharges from municipal separate storm sewer system outfalls associated with the communities of Imperial Beach, City of Tijuana, Mexico, and the Imperial Beach Naval Air Station.

The permit requirements for these facilities will continue to be monitored under the terms and conditions of the existing NPDES permits issued by the RWQCB. The permit conditions include discharge prohibitions, treated water limitations, receiving water limitations, pretreatment specifications, infiltration/inflow and spill prevention program requirements and other provisions intended to protect the beneficial uses of the receiving water body. The establishment of the MPAs will not result in a modification of the permit requirements for POTWs and/or outfalls these permit requirements would be retained.

Underwater cables will not be impacted by the establishment of the MPAs since the main threat to underwater cables is from fishing techniques. Cable maintenance and repair is rare but will continue to be allowed within MPAs. These events will require a vessel to deploy maintenance and/or repair procedures for the cable. Vessels will be allowed within the MPAs so no impacts to the repair and/or maintenance of underwater cables is expected from establishment of the MPAs.

8.2.2.1 Law Enforcement Assets

The 2008 *Master Plan for Marine Protected Areas* notes that a lack of law enforcement resources is one of the reasons existing MPAs fall short of their potential to protect resources. (Fish and Game Code Section 2851 (a)). This lack of resources is not unique to the MPA context, and is true across all marine management activities in California. To remedy this, the MLPA requires that the Marine Life Protection Master Plan include recommendations for improving the effectiveness of enforcement practices. (Fish and Game Code Section 2856(a)(I),(J)). Increased use of cooperative agreements between agencies is also encouraged to ensure adequate enforcement. In addition, because of the added emphasis on MPAs established by the MLPA and the clear need for increased enforcement resources, additional assets are required (Department 2009) (Fish and Game Code Section 2856 (a)(2)(K)).

No single federal, state, or local agency has complete jurisdiction over the coastal and marine environment. Therefore, Department works closely with the enforcement programs of multiple entities on matters of mutual enforcement interest, including the U.S. Fish and Wildlife Service (USFWS), U.S. Department of the Interior, National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), U.S. Coast Guard, National Park Service (NPS), and California Department of Parks and Recreation. Though these programs often provide financial or logistical support, they do not provide significant staff resources statewide, especially for offshore patrols necessary for MPA enforcement, or, patrols of areas not adjacent to their own facilities. As part of seeking new cooperative agreements as outlined by the 2008 *Master Plan for Marine Protected*

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Areas, the Department will make efforts to acquire more direct assistance from appropriate agencies. Effective enforcement of state and federal regulation within and around the MPAs will improve the likelihood for success of MPAs in conserving and protecting marine resources.

8.2.2.1.1 California Department of Fish and Game. The California Department of Fish and Game (Department) has management authority over living marine resources within state waters. The Department's Law Enforcement Division wardens are charged with enforcing marine resource management laws and regulations over an area encompassing approximately 1,100 miles of coastline and out to the seaward boundary of the Exclusive Economic Zone (EEZ) located 200 miles offshore. Enforcement duties include all commercial and sport fishing statutes and regulations contained in the Fish and Game Code and Title 14, California Code of Regulations, marine water pollution incidents, homeland security, and general public safety. General fishing regulations and other restrictions apply within MPAs but are subject to specific MPA restrictions. Furthermore, the Department has jurisdiction over any vessels that deliver catch to Californian ports, and all California-registered fishing vessels operating in federal waters (Department 2009).

A federal Cooperative Enforcement Agreement with the NOAA deputizes the Department to enforce the Magnuson Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Endangered Species Act, the Marine Mammal Protection Act (MMPA), the National Marine Sanctuaries Act, and the Lacey Act. The Department enforcement patrols regularly extend into federal waters between 3 and 12 nautical miles from shore as well as the rest of the EEZ beyond 3 nautical miles. A significant portion of both commercial and recreational fishing efforts – and subsequently enforcement effort – occurs outside state waters in the EEZ (Department 2009).

The Department maintains a fleet of seven large patrol boats in the 54- to 65-foot class stationed at major ports throughout the state (Department 2004). A cadre of 22 wardens and 5 support personnel staffs these patrol boats. The Department also has 8 patrol boats in the 24- to 30-foot range, and another 15 patrol skiffs stationed at ports and harbors throughout the state. Overall, the Department has 269 wardens in the field, responsible for a combination of both inland and marine patrol. Some of these wardens have a “marine emphasis” focusing primarily on ocean enforcement, in addition to enforcing inland regulations. The Department wardens are peace officers whose authority extends to any place in the state (Fish and Game Code Section 856, Penal Code Section 830.1).

The Department's Special Operations Unit, which reports directly to the Marine Assistant Chief who acts out of the Department's Sacramento headquarters, may be used to assist with major MPA violations. The unit consists of wardens who are tasked with conducting statewide covert investigations primarily dealing with the illegal commercialization of fish and/or wildlife, in particular, large poaching operations that severely impact California's fish

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

and wildlife resources. Special Operations Unit investigations are varied, and may involve any of the following: commercialization of recreationally caught or illegally taken bear, deer, turkey, abalone, lobster, sturgeon, salmon and steelhead, and a variety of other marine and wildlife species. The unit has no uniform patrol responsibility anywhere in the state.

The Department has existing collaborative efforts in enforcement with 1) NOAA Fisheries in regard to Lacey Act violations for fish transported across state boundaries; 2) the U.S. Coast Guard on enforcement; 3) the Pacific Fishery Management Council on fisheries management plans and fishing gear deployment; 4) the State Department of Weights and Measures in assuring the proper procedures for the weighing of fish and the completion of landing receipts; and 5) the State Department of Parks and Recreation, NPS, Harbor Patrol, local police and local sheriffs departments in matters of mutual enforcement efforts (Department 2001).

8.2.2.1.2 U.S. Fish and Wildlife Service. The USFWS conserves, protects and enhances populations of fish, other wildlife, and plants. It also manages the system of National Wildlife Refuges. This system includes the following coastal refuges in California: Castle Rock, Humboldt Bay, San Pablo Bay, Marin Islands, Farallon, Don Edwards San Francisco Bay, Salinas River, Guadalupe-Nipomo Dunes, Seal Beach, San Diego Bay, San Diego, and the Tijuana Slough. The Seal Beach, Tijuana Slough, and San Diego National Wildlife Refuge Complex is the only refuge within the SCSR (Department 2009).

8.2.2.1.3 NOAA Fisheries. The Department has a Joint Enforcement Agreement with NOAA Fisheries. NOAA Fisheries provides funding to the state to enforce federal regulations in state waters; federal offshore waters; and in bays, estuaries, rivers and streams. NOAA Fisheries has regulatory authority for marine finfish, invertebrates, sea turtles, and marine mammals other than sea otters in waters 3 to 200 nautical miles from shore. NOAA Fisheries derives its authority from the Magnuson-Stevens Act of 1976, the MMPA and the federal Endangered Species Act. Under the Magnuson-Stevens Act, NOAA Fisheries manages any fishery that is the subject of a fishery management plan developed by regional fishery management councils as well as some non-fishery management plan species (Department 2009).

8.2.2.1.4 U.S. Coast Guard. The U.S. Coast Guard (USCG), which is now a part of the U.S. Department of Homeland Security, maintains stations and centers within the SCSR. These stations are listed in Table 8.2-2.

8.2.2.1.5 U.S. Navy. The U.S. Navy has numerous bases, air stations, ranges, and operating areas in and adjacent to the SCSR as described in Table 8.2-3. Comprised of hundreds of interconnected, instrumented and non-instrumented ranges, the Southern California Range Complex covers 45,000 acres of land, 113,000 square nautical miles of airspace and 120,000 square nautical miles of ocean training areas. Within the SCSR, the Southern California

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

**TABLE 8.2-2
U.S. COAST GUARD FACILITIES
IN THE SOUTH COAST STUDY REGION**

Name of Facility	County
Integrated Support Command San Pedro	Los Angeles
Air Station Los Angeles	Los Angeles
Marine Safety Office Long Beach	Los Angeles
Group Long Beach	Los Angeles
Flotilla 27 Newport Beach	Orange
Air Station San Diego	San Diego
Marine Safety Office San Diego	San Diego
Group San Diego	San Diego

Source: Department 2009.

**TABLE 8.2-3
NAVY FACILITIES IN THE SOUTH COAST STUDY REGION**

Name of Coastal Facility	County
Point Mugu Naval Air Station	Ventura
Port Hueneme Construction Battalion Center	Ventura
Seal Beach Naval Weapons Station	Orange
Coronado Naval Base Fleet and Industrial Supply Center	San Diego
Coronado Naval Amphibious Base, Coronado CA	San Diego
Silver Strand Training Complex	San Diego
North Island Naval Air Station North Island	San Diego
Point Loma Naval Base Point Loma	San Diego
San Diego Naval Station Base San Diego	San Diego
San Diego Naval Mine and Anti-submarine Warfare Training Center Command	San Diego
Naval Outlying Landing Field Imperial Beach	San Diego
Balboa Naval Hospital	San Diego
San Clemente Island	San Diego
San Nicolas Island	Ventura

Source: Department 2009.

Range Complex extends from the ocean floor up to an altitude of 80,000 feet, and from shore facilities and ranges to almost 200 nautical miles offshore.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.2.2.1.6 U.S. Park Police. The U.S. Park Police is a distinct federal agency that is empowered to enforce all Department regulations. Park Police provide 24-hour coverage, and work closely with NPS to enforce regulations within national parks.

8.2.2.1.7 National Park Service. The National Park Service (NPS) has several park lands located along the California coast. Two national parks are located in the SCSR: the Channel Islands National Park and the Cabrillo National Monument. Both are underwater parks; the seaward boundary of Channel Islands National Park is 1 nautical mile around each of the five park islands (Anacapa, Santa Cruz, Santa Rosa, San Miguel, and Santa Barbara islands), and Cabrillo National Monument's seaward boundary is 300 yards seaward of mean low water.

The Channel Islands National Park, established in 1980, currently encompasses San Miguel, Santa Rosa, Santa Cruz, Anacapa, and Santa Barbara islands, as well as submerged lands and waters within 1 nautical mile of each island. NPS regulates landing and camping on the islands, access to cultural and archeological sites, and use of personal watercrafts. Channel Islands National Park works closely with the Channel Islands National Marine Sanctuary and other public and private partners to coordinate the preservation and protection of the Channel Islands. The Channel Islands National Marine Sanctuary completely surrounds the Channel Islands National Park and overlaps the national park boundary to the first nautical mile from shore which is within the national park (Department 2009).

8.2.2.1.8 California Highway Patrol. The California Highway Patrol works in conjunction with other agencies, especially in the northern section of the SCSR, to enforce regulations along the coastline.

8.2.2.1.9 California Department of Parks and Recreation. The Department of Parks and Recreation manages approximately one-third of the California coastline and manages coastal wetlands, estuaries, beaches, and dune systems within State Park system units. Through California State Lands Commission leases, the California Department of Parks and Recreation has the management authority over 15 underwater areas, though it does not have the authority to restrict the take of living marine resources. The California Parks and Recreation Commission has the authority to establish, modify, or delete state marine reserves, state marine parks, and state marine conservation areas, but must have the concurrence of the California Fish and Game Commission (Commission) on any proposed restrictions related to the extraction of living marine resources (PRC Section 6725).

State and Regional Parks provide law enforcement services within respective park boundaries, and both are managed on a county level. Rangers from both offices are empowered to enforce state and federal regulations, and generally stay within the jurisdictional boundaries of their parks. They also often collaborate with other agencies such as the county sheriffs, coast guard, and NPS to ensure full coverage of the coastline.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.2.2.1.10 Sheriffs. Law enforcement services provided by sheriffs are on the county level. Sheriff's departments often work in collaboration with other agencies such as the NPS Law Enforcement Division, the State Park Police and the USCG. The following is a description of available resources from sheriffs' offices on the coast by county.

The Santa Barbara County Sheriff's Department has over 600 sworn and non-sworn employees providing a wide variety of services to the public. The sheriff's department search and rescue capabilities include a dive team.

In Ventura County, there are 360 sworn deputies available for field patrol on staff and approximately 72 on duty per shift at any given time in the field. The sheriff's department coordinates with the Ventura County Harbor Patrol and the USCG, the Department, as well as state and county park authorities to meet enforcement goals (Ross Bonfiglio, Media Information Officer Ventura County Sheriff's Department, personal communication).

The Los Angeles County's Sheriff's Department is the largest in the world comprised of three patrol divisions (Field Operations Regions I, II, and III) along the SCSR. The Los Angeles County Sheriff's Department has three stations which serve coastal communities these are the Malibu/Lost Hills, Marina Del Rey and Avalon working in conjunction with the USCG where there is need for additional patrol or support. Coastal portions of western Los Angeles County are served by the Malibu/Lost Hills Station's six sergeants, six lieutenant and two deputy officers. Avalon Sheriff's Station provides law enforcement for Santa Catalina Island, San Clemente Island, and the ocean waters between the islands and mainland of Southern California. The personnel roster of the station consists of a Station Commander; three sergeants, and nine deputy sheriffs. These personnel are augmented by as many as twelve reserve deputies during the busiest holiday seasons and on summer weekends. Marina del Rey Station operates six patrol boats in the harbor waters. Growth in the sheriff's department is proportional to population growth for the county, law enforcement services can be expected to remain the same relative to total county population (Los Angeles County 2010).

In Orange County, the Sheriff-Coroner Department is a sizeable, multi-faceted law enforcement agency with approximately 4,000 staff and over 800 reserve personnel. The department is structured into 20 divisions comprising five organizational functions. These include public protection such as land and coastal patrols, homeland security, and emergency services; Technical services such as the coroner, investigations, communication, and forensics; jail operations; and administrative and support services. The Sheriff-Coroner Department services unincorporated Orange County, as well as contracted policing services for 12 Orange County cities, John Wayne Airport, Orange County Superior Court, the Social Services Agency, and Orange County Transportation Authority (Orange County 2010).

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

The San Diego County Sheriff's Department is comprised of approximately 4,000 sworn officers and professional support staff which provide general law enforcement, detention, and court services. The sheriff manages seven major detention facilities, eight major substations, four patrol substations, a crime laboratory, and various support operations. The department is organized into six general service areas, including: Office of the Sheriff, Law Enforcement Services, Detention Facility Services, Court Services, Human Resource Services, and Management Services. The department provide law enforcement services for unincorporated San Diego County, as well as the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach, and Vista (San Diego County 2010).

8.2.2.1.11 Port Police and Harbor Patrol. In Orange County, the Harbor Patrol/Marine Operations Bureau is staffed by a lieutenant who serves as county Harbormaster, seven sergeants, and 40 deputy sheriffs providing 24-hour enforcement, marine fire fighting and search/rescue services along the 48 miles of coastline and within the three major harbors at Newport Beach, Sunset-Huntington and Dana Point. Marine Operations works closely with local and federal government agencies, sharing information for the detection and prevention of suspected acts of terrorism. The Marine Operations fleet consists of six twin-engine fireboats and nine single-engine patrol boats. Marine Operations is overseen by the captain of the Orange County Sheriff's Department, Homeland Security Division. The Newport Beach office serves as the headquarters for the Marine Operations Bureau, and also as an official reporting station for the National Weather Service and NOAA. The 7,000-square-foot Harbor Patrol Headquarters building contains an emergency operations center, conference and training rooms, a marine maintenance facility, and a state-of-the-art 800 MHz dispatch area. This dispatch center also serves as a backup for the county's primary dispatch facility at Loma Ridge (Orange County 2010).

The Port of San Diego's Harbor Police is made up of 166 Port District employees. Approximately 141 of the employees are sworn law enforcement officers and 25 are civilian support staff. The Harbor Police provide uniformed police services and marine fire fighting within the territorial limits of the Port of San Diego. Other services provided by the Harbor Police include professional law enforcement and support staff interacting with the public to ensure a safe and secure environment at Lindbergh Field, on San Diego Bay and on Tidelands (Port of San Diego 2010).

The task of policing the harbors and ports of Los Angeles County is undertaken by several separate agencies. The Los Angeles County Sheriff's Department Marina del Ray Station provides harbor patrol detail from the Ventura County line to Palos Verdes Point and the unincorporated county area. The Sheriff's Department maintains a fleet of six vessels and works closely with the US Coast Guard, Los Angeles County Lifeguard Baywatch, and Los Angeles County Fire Department as first responders and rescue units. The department also maintains a Dive/Rescue Team of 15 certified divers (Los Angeles County 2010). The Los Angeles Port Police maintain patrols and surveillance for the Port of Los Angeles and

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

surrounding Harbor Areas. The LA Port Police maintain patrol units, a dive team, and a K-9 unit, and assists with the Cargo Theft Interdiction Program and High Intensity Drug Trafficking Area task force along with various federal agencies (Los Angeles County 2010). The Port of Long Beach maintains its own Harbor Patrol for 24-hour surveillance and patrol in conjunction with various law enforcement organizations including the Long Beach Police Department, Customs and Border Protection, USCG, and Homeland Security. The Long Beach Harbor Patrol contains a dive team, security submersibles, and a K-9 unit (Port of Long Beach 2010).

The Santa Barbara Harbor Patrol provides emergency response, security, and law enforcement in the Santa Barbara Waterfront jurisdiction. The Harbor Patrol coordinates its operations with the USCG, Santa Barbara Police Department, Santa Barbara Fire Department, the California Department of Fish and game, and the Santa Barbara County Sheriff's Department. In addition to foot, vehicle, and boat patrols, the Harbor Patrol maintains two fire rescue boats and a first response fire suppression team. The Harbor Patrol performs frequent open water rescues and disabled boat retrievals (Santa Barbara County 2010).

8.2.2.2 MPA Enforcement Considerations

The level and type of enforcement activity in an individual MPA depends upon the objectives of the individual MPA and its accompanying regulations. In some cases, MPAs may be enforced without direct contact of individual vessels, such as in state marine reserves where a vessel is obviously not engaged in fishing. In limited-take areas, the specific regulations may require close examination of individual vessels to determine whether fishing activities comply with the regulations (e.g., whether a fishing vessel stows its gear while transiting a no-take area).

Beyond the MPA classification, other elements of MPA design have implications for an effective enforcement plan. The following factors facilitate enforcement of MPAs:

- Straight line coordinates of offshore boundaries which follow lines of latitude and longitude—more easily recognized by users and enforcement is simplified.
- Larger shoreline lengths—provide a buffer against unintentional boundary infractions.
- Proximity to cities—enhances the ability to enforce as more assets are readily available and deployment of staff and equipment is easier; however may pose problems for level of use.
- Distance from heavily used areas—areas near urban development are often more heavily visited and require more enforcement effort to ensure compliance.
- Fewer points of public access—requires less monitoring and staffing than MPAs with multiple access points (e.g., multiple shoreside access points versus only offshore access).

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

- Boundaries adjacent to the shoreline—enforceable using smaller vessels and shoreside patrol when compared to offshore MPAs with no shoreline connection.
- Adjacent to onshore feature and facilities—existing staff (e.g., river mouths or state parks and state park ranger stations) can assist in enforcement and monitoring.

The number of and distance between MPAs also impacts the Department’s ability to enforce the MPA regulations. If MPAs are too far from one another, individual patrols are not able to enforce multiple areas. If MPAs are too numerous, individual patrols are not able to reach all areas. Each case would require additional enforcement personnel to cover the entire network of MPAs in the SCSR.

Finally, the enforcement plan must consider natural barriers to enforcement. MPAs established in areas with normally rough conditions may be difficult to patrol or access. Offshore MPAs require larger vessels and dedicated at-sea patrol. MPAs located farther offshore or more distant from ports have higher patrol costs in both time and expenses. Though MPAs in very remote and difficult-to-access areas will naturally have fewer visitors and a decreased chance of unintentional violations, they are also uniquely suited for unobserved intentional violations.

8.2.2.3 Emergency Response Services

The USCG, the primary maritime law enforcement agency, currently provides emergency response within existing MPAs. Search and Rescue is one of the Coast Guard’s oldest missions. Coast Guard Search and Rescue response involves multi-mission stations, cutters, aircraft, and boats linked by communications networks. Emergency response services include distress monitoring, communications, provision of medical advice, initial medical assistance, and/or medical evacuation. The USCG develops, establishes, maintains, and operates rescue facilities for the promotion of safety on, under, and over international waters and waters subject to U.S. jurisdiction; conducts safety inspections of most merchant vessels; and investigates marine casualties.

8.2.2.4 Marine Protected Areas Enforcement Plans

The MLPA identifies adequate enforcement as a program goal (California Fish and Game Code Section 2853(c)(2)). To this end, the Department will prepare enforcement plans for the proposed MPAs once the MPAs are established. The primary purpose of an MPA enforcement plan is to ensure compliance with regulations designed to achieve the individual MPA objectives. The objectives of the enforcement plan include the following three primary categories:

1. Provide an effective and comprehensive operational ability.
2. Maintain and enhance cooperative efforts with other agencies.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

3. Ensure public awareness of regulations and rationale and provide enhanced public outreach and education.

Priorities are to be developed based on the potential for resource impact, level of use, and potential for infractions. High priority areas include habitats that are particularly vulnerable to damage, areas with high aggregations of critical species or species at low abundance, and areas where infractions are likely to occur or have occurred at high rates in the past.

8.2.3 Impact Analysis

8.2.3.1 Methodology

Impacts of the proposed Project IPA were evaluated qualitatively, based on the potential for MPA establishment to disrupt existing utilities and services.

8.2.3.2 Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines and professional judgment, it was determined that the proposed Project IPA would result in a significant impact on public services if it would:

- Significantly increase the need for enforcement of federal, state, and/or local laws and regulations.
- Result in the need for new or physically altered governmental facilities, in order to maintain acceptable service ratios, response times, or other performance objectives for police, fire, or emergency response.

8.2.3.3 Environmental Impacts

Criterion PS-1: Significantly increase the need for enforcement of federal, state, and/or local laws and regulations.

The proposed Project IPA is a set of state regulations intended to increase the total marine area protected from approximately 182 square miles to approximately 351 square miles (see Section 3.0 of this Draft EIR for detailed discussion and locations of proposed MPAs). This represents a substantial increase in protected ocean area, and the bulk of enforcement responsibility would lie with the Department and its collaborative efforts with enforcement partners. However, because the proposed regulatory changes would modify an existing regulatory program, rather than creating a new program, it is envisioned that enforcement of the revised MPA network would be accomplished through the Department's existing enforcement procedures, utilizing Department wardens, on-board observers, and cooperative agreements with other state and federal agencies as well as the general public (e.g., the CalTIP program, an anonymous hotline by which the public can report poachers and illegal

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

polluters). In addition, the proposed MPA boundaries have been designed in such a way as to improve public understanding (points of access would be minimized, boundary lines would be straight and clearly marked when possible, etc., see Section 8.2.2.2 above), which would increase voluntary compliance and lessen the incidence of inadvertent violations resulting from ignorance or confusion by the regulated public. Clearly marked boundaries would also allow efficient enforcement and improved success in adjudications. Given these considerations, enforcing the proposed network of MPAs would be within the Department's capabilities (California MLPA Initiative 2009). Aside from the MPA regulations themselves, the proposed IPA would not increase the need for enforcement of any federal, state, or local laws or regulations. Impacts relative to enforcement of laws and regulations would be less than significant.

Criterion PS-2: Result in the need for new or physically altered governmental facilities, in order to maintain acceptable service ratios, response times, or other performance objectives for police, fire, or emergency response.

The proposed Project IPA requires no utility services and would not affect existing utilities such as those identified in Table 8.2-1. Undersea cables are typically buried and would not be impacted by establishment of MPAs. Consideration was given for existing uses of the SCSR's marine environment that have been permitted by other federal state agencies during the design process for the proposed Project IPA. An overview of the design process is provided in Section 2.0 of this Draft EIR. Wastewater treatment facilities and storm drainage outfalls will not be impacted by the establishment of the proposed Project IPA. The permit requirements for these facilities would continue to be monitored under the terms and conditions of the existing NPDES permits issued by the RWQCB. Since all of the existing facilities have been permitted, the creation of the MPAs would not impact their operation. The proposed project IPA is a set of passive marine protection regulations that would not require POTW or municipal separate storm sewer system outfalls, cables, power generation, or desalination. The establishment of the proposed Project IPA will not create the need for new or expanded public services within the SCSR.

Because the MPAs would be limited to areas within 3 nautical miles of the shoreline, any emergency situations requiring response from medical, law enforcement, or fire suppression personnel could be responded to within a reasonable period regardless of MPA locations. Further, the proposed MPAs would not prohibit vessel traffic, and would therefore not present an obstacle in the event of an emergency. Given these considerations, no construction of new governmental facilities to accommodate the proposed Project's demand for public services would be required, and impacts would be less than significant.

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

8.3 LAND USE AND RECREATIONAL RESOURCES

This section describes the existing setting and potential impacts of the proposed Integrated Preferred Alternative (IPA) on land use and recreational activities on terrestrial lands adjacent to the south coast study region (SCSR). Specifically, it describes existing conditions related to land uses and recreation, and summarizes the overall federal, state, and regional/local regulatory framework that would affect implementation of the marine protected area (MPA) network components. The existing planning conditions are described within the SCSR, particularly focusing on the permitted uses within state waters.

Recreational activities within this section focus on non-consumptive recreational uses (e.g., diving, wildlife viewing, kayaking, etc.), and also look at trends and hot spots for more popular consumptive recreational activities.

8.3.1 Regulatory Framework

Regulations pertaining specifically to land use and recreational resources are described below. Land use regulations in general relate to terrestrial uses that are controlled and regulated using a system of plans, policies, goals, and ordinances adopted by the various jurisdictions with authority over uses adjacent to the SCSR. The project area for the proposed Project IPA is within the open water and therefore, the local coastal plan information is included for information purposes only.

8.3.1.1 Federal

8.3.1.1.1 Rivers and Harbors Act of 1899. The federal Rivers and Harbors Act of 1899 (RHA) regulates development and use of the nation's navigable waterways. It prohibits the unauthorized obstruction or alteration of any navigable waters of the United States. As defined by the RHA, navigable waters include all waters that are:

- Subject to the ebb and flow of tides and/or
- Presently, historically, or potentially used for foreign or interstate commerce

Regulations implementing Section 10 of the RHA are coordinated with those implementing CWA Section 404. Specifically, the RHA regulates:

- Construction of structures in, under, or over navigable waters;
- Excavation or deposition of material in navigable waters; and
- All work affecting the course, location, condition, or capacity of navigable waters.

The RHA is administered by the U.S. Army Corps of Engineers (Corps), typically in conjunction with Section 404 of the federal Water Pollution Control Act of 1972 (Clean

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Water Act; CWA) (33 U.S.C. 1251 et seq.). If a proposed activity falls under the authority of both CWA Section 404 and RHA Section 10, the Corps processes and issues a single permit. For activities regulated only under RHA Section 10, such as installation of a structure not requiring fill, permit conditions may be added to protect water quality during construction.

8.3.1.1.2 Coastal Zone Management Act. The Federal Coastal Zone Management Act (CZMA) of 1972, as administered by the state of California through the California Coastal Act, applies to the proposed Project IPA.

8.3.1.1.3 National Park Service. The National Parks Service (NPS) was established to conserve natural scenery, wildlife, and natural and historic objects. In addition, the NPS provides management of these resources for future generations. The NPS manages national parks, monuments, historic sites, and recreation areas by developing and implementing park management plans. While their responsibilities are not specifically ocean or coastal oriented, NPS manages four coastal recreational parks in California; only the Cabrillo National Monument is located within the SCSR. The Cabrillo National Monument is an underwater park and its boundary is 300 yards seaward of the mean low water line.

National Park Act of August 19, 1916 (Organic Act), 16 U.S.C. 1, et seq. The National Park Act of August 19, 1916 (16 U.S.C. 1 et seq.), also known as the Organic Act, created the NPS in the Department of the Interior. The NPS is charged with the promotion and regulation of the use of the federal areas known as national parks, monuments, and reservations, so as to conform with “the fundamental purpose to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment for the same in such manner and by means as will leave them unimpaired for the enjoyment of future generations.”

National Wildlife Refuge System Administration Act of 1966 and National Wildlife Refuge System Improvement Act of 1997. The United States Fish and Wildlife Service (USFWS) owns and manages national wildlife refuges and bay waters totaling 30,000 acres. The National Wildlife Refuge System Administration Act of 1966 conserves and protects listed endangered and threatened species and migratory birds through protection and restoration of species’ habitats, and by managing uses, such as recreation, of refuge areas to prevent negative impacts to these species. The National Wildlife Refuge System Improvement Act of 1997 designates wildlife-dependent recreational uses involving hunting, fishing, wildlife observation and photography, and environmental education and interpretation as “priority general public uses.” When these activities are compatible with species protection goals (as determined by USFWS), they are welcome on refuges and receive priority over other uses. The San Diego National Wildlife Refuge complex in the SCSR includes the following: Seal Beach National Wildlife Refuge, South Beach National Wildlife Refuge, Sweetwater Marsh National Wildlife Refuge, and Tijuana Slough National Wildlife Refuge. Refuges are also discussed in Section 6.3 and Section 7.0.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.3.1.1.4 Bureau of Land Management. The U.S. Department of the Interior, Bureau of Land Management (BLM) administers 262 million surface acres of America's public lands, located primarily in 12 western states. The BLM was established to sustain the health, diversity, and productivity of public lands under its jurisdiction for the use and enjoyment of present and future generations. Among other holdings, BLM manages lands within the National Landscape Conservation System through development and implementation of resource management plans. While most of its lands are not located along the coast, BLM does manage several on-shore coastal properties including the California Coastal National Monument, which encompasses more than 20,000 offshore rocks and small islands above mean high tide within 12 nautical miles of the coast. The California Coastal National Monument has developed a resource management plan, which establishes the management framework, outlining the goals and objectives, identifying dozens of management actions needed to implement the plan over the next 15 to 20 years, and providing the major implementation priorities. To effectively manage these lands, BLM has formed numerous partnerships with federal, state, and local entities, including the California Department of Fish and Game (Department) and the California Department of Parks and Recreation (State Parks). BLM's management goals for the California Coastal National Monument emphasize protection of the biological, geological, aesthetic, and cultural resources of the rocks and islands.

8.3.1.2 State

8.3.1.2.1 California Coastal Act (California Public Resources Code Sections 30000, et seq.). The California Coastal Act (California PRC sections 30000 et seq.) was enacted by the state legislature in 1976 to provide long-term protection of California's 1,100-mile coastline for the benefit of current and future generations. Section 30001.5 states that the goals are to:

- a) Protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources;
- b) Assure orderly, balanced utilization and conservation of coastal zone resources, taking into account the social and economic needs of the people of the state;
- c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners;
- d) Assure priority for coastal-dependent and coastal-related development over other development on the coast; and
- e) Encourage state and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

The California Coastal Act created a partnership between the state (acting through the California Coastal Commission [CCC]) and local government (15 coastal counties and 58 cities) to manage the conservation and development of coastal resources through a comprehensive planning and regulatory program. The act mandates that local governments and constitutional entities prepare a land use plan and schedule of implementing actions to carry out the policies of the Coastal Act. The policies constitute the standards used by the CCC to determine the adequacy of local coastal programs and the permissibility of proposed development. The CCC also reviews and approves local coastal programs, which are the basic planning tools used by local governments to guide development in the coastal zone.

Policies within the California Coastal Act that would apply to the proposed Project IPA include the following:

- Section 30230. Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.
- Section 30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

For the entire California coast, except San Francisco Bay, the CCC implements the federal CZMA of 1972. The CCC is responsible for reviewing proposed federal and federally authorized activities to assess their consistency with the approved state coastal management program. The Commission developed the California Coastal Management Program pursuant to the requirements of the federal CZMA. After the National Oceanic and Atmospheric Administration (NOAA) approved the California Coastal Management Program in 1977, all federal activities affecting coastal zone resources became subject to the CCC's regulatory jurisdiction. A federal agency must conduct its activities (including federal development projects, permits and licenses, and assistance to state and local governments) in a manner consistent with the California Coastal Management Program. The process established to implement this requirement is called a consistency determination for federal activities and development projects and a consistency certification for federal permits and licenses and federal support to state and local agencies.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.3.1.2.2 Public Trust Doctrine. The Public Trust Doctrine encompasses the notion that title to lands under navigable waters up to the high water mark is held by the state in trust for the people.¹ The U.S. Constitution grants states sovereignty over their tide and submerged lands, and the Supreme Court established the states' duty to protect (in perpetuity) the public's interest in these areas.² The California Supreme Court has interpreted the range of public interest values in these waterways to include general recreation activities such as swimming and boating; and preservation of lands in their natural state as open space, as wildlife habitat, and for scientific study.^{3,4}

State and local governments have two forms of authority to manage navigation that enable them to strike a balance between recreation and environmental needs: 1) control over development of tide and submerged lands that can affect navigability of waterways, and 2) recreational boating rules. Under the first category, the California State Lands Commission (SLC) manages public uses of navigable waters through its leasing program. When a public or private entity applies for a permit to lease tide and submerged lands, the SLC reviews the application to ensure that the proposed use (e.g., a marina or pier) will maintain the public benefits of the overlying navigable waters. Usually the city or county fulfills this review role because most tide and submerged lands are owned by local authorities through past legislative grants of state lands.

Under the second category, recreational boating rules in Section 660 of the California Harbors and Navigation Code empower local governments to establish ordinances that regulate navigation in waters within their jurisdiction through time-of-day restrictions, speed zones, special-use areas, and sanitation and pollution controls.⁵

8.3.1.2.3 California State Lands Commission. The SLC manages certain lands held in trust for the people of California. Their jurisdiction includes a 3-mile-wide section of tidal and submerged land adjacent to the coast and offshore islands, including bays, estuaries, and lagoons; the waters and underlying beds of more than 120 rivers, lakes, streams, and sloughs;

¹ The concept of a public trust resource originated in Roman law. Through U.S. federal and state constitutional and case law, the doctrine has been applied to these resources in the U.S. For a more detailed discussion of the evolution of public trust law in California, refer to the Public Trust Statements at the California State Lands Commission website: <http://www.slc.ca.gov/Policy%20Statements/Policy_Statements_Home.htm>

² *Illinois Central Railroad v. Illinois*, 1892. 146 U.S. 387. The Public Trust Doctrine has yet to be applied to federal lands and waters through statutes or case law.

³ *Marks v. Whitney*. 1971. 6 Cal.3d 251; *National Audubon Society v. Superior Court*. 1983. 33 Cal.3d 419; *People v. California Fish Co.* 1913. 166 Cal. 576.

⁴ Frank, R.M. 1983. "Forever Free: Navigability, Inland Waterways, and the Expanding Public Interest." *University of California, Davis Law Review*, 16:579. California case law also establishes a link between navigation and recreation, and verges on treating the two as interchangeable public interests.

⁵ Harbors and Navigation Code §660 (b); and *Personal Watercraft Coalition v. Marin County Board of Supervisors*. 2002. 100 Cal. App. 4th 129; and *People ex. rel. Younger v. County of El Dorado*, 96 Cal App.3d. 403.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

and 585,000 acres of school lands granted to the state by the federal government to support public education. The SLC is comprised of four divisions: Environmental Planning and Management, Land Management Division, Marine Facilities Division, and Mineral Resources Management.

8.3.1.2.4 State Parks. State Parks manages nearly 30 percent of the state's coastal terrestrial lands and has been involved in the planning and implementation of underwater parks and reserves since 1960, with the establishment of Point Lobos Marine Reserve off Point Lobos State Reserve. Prior to the passage of the Marine Life Protection Act (MLPA), State Parks had established 14 marine managed areas. In 1979 State Parks prepared its first Underwater Parks Master Plan and updated the plan in 1984. Many of the planning elements and goals fundamental to the department's Underwater Parks Program mirror those of the MLPA and the Marine Managed Areas Improvement Act (Parks and Recreation 2008).

State Parks' program goals include:

- Preservation of outstanding and representative examples of marine habitats found in each seascape province off the coast of California
- Protection of marine resources (flora and fauna) and ecosystems
- Preserving scenic underwater resources
- Providing a variety of nearshore recreational opportunities, such as nature observation, diving, underwater photography, fishing and boating
- Providing public education and interpretation of marine environments, including intertidal areas

8.3.1.3 Local

Local coastal programs (LCPs), when adopted by local governments and certified by the CCC, establish development controls for areas of local jurisdiction within the coastal zone. LCPs are basic planning tools used by local governments (both counties and cities) to guide development in the coastal zone, in partnership with the CCC. LCPs contain the ground rules for future development and protection of coastal resources. The LCPs specify appropriate location, type, and scale of new or changed uses of land and limited water (shorelines). Each LCP includes a land use plan and measures to implement the plan (such as zoning ordinances). Prepared by local government, these programs govern decisions that determine the short- and long-term conservation and use of coastal resources. While each LCP reflects unique characteristics of individual local coastal communities, regional and statewide interests and concerns must also be addressed in conformity with California Coastal Act goals and policies. The CCC also hears appeals of local decisions in areas of an LCP designated as within the CCC's appeal jurisdiction.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

After an LCP has been finally approved, the CCC's coastal permitting authority over most new development is transferred to the local government, which applies the requirements of the LCP in reviewing proposed new developments. The CCC retains permanent coastal permit jurisdiction over development proposed on tidelands, submerged lands, and public trust lands, and the CCC also acts on appeals from certain local government coastal permit decisions. The CCC reviews and approves any amendments to previously certified Local coastal programs.

8.3.2 Environmental Setting

8.3.2.1 Land Uses

The SCSR extends from Point Conception in Santa Barbara County to the U.S.-Mexico border in San Diego County. The SCSR abuts five coastal counties: Santa Barbara, Ventura, Los Angeles, Orange, and San Diego. Areas along the entire coastline of the SCSR support large numbers of people and extensive development, although the largest urban centers occur in the cities of Los Angeles and San Diego. Section 8.3 of this Draft Environmental Impact Report (EIR) includes discussion of population adjacent to the SCSR.

Existing terrestrial land uses designated by the "counties and cities" adjacent to the SCSR include, for example: recreation, open space, residential, public, commercial, industrial and agricultural uses. LCPs contain the basic framework for future development and protection of coastal resources. The LCPs specify the location, type, and scale of new or changes to land use and coastal areas. Each LCP includes a land use plan and zoning measures that implement the LCP.

The SLC has primary jurisdiction over the majority of the SCSR, which is located between the mean high tide line and 3 nautical miles offshore. Non-terrestrial use designations are administered by the SLC and over two hundred leases are known to be either active or inactive within the SCSR.

The SLC issues leases or permits on state lands for purposes including marinas, industrial wharves, tanker anchorages, harvesting of timber, dredging, grazing, mining, oil and gas exploration and extraction, and geothermal development. In addition, private landowners must also obtain a lease to install a recreational pier adjacent to a waterfront residence. Work in harbors and waterways requires dredging permits that are issued to both public and private parties by the SLC.

In 1921, the California State legislature authorized the issuance of prospecting permits and leases for oil and gas development of the state's tide and submerged lands by the Surveyor General, the predecessor of the SLC. Exclusive jurisdiction over all oil and gas development on state-owned property was given to the SLC in 1938. The SLC currently administers more

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

than 100 sites on which oil companies have developed some 1,000 wells that take oil and gas from state lands.

Santa Barbara County has three active shellfish aquaculture leases. These sites grow oysters, clams, mussels, scallops, and abalone for commercial sale. Shellfish aquaculture operations with active state water bottom leases cover 106.7 acres within the SCSR (Department 2009). Aquaculture is discussed in Section 5.0 and Section 7.0 of this Draft EIR.

An active water bottom lease must be in the form of a lease, have time remaining on the lease period, currently meet planting and harvesting requirements as set forth in CCR, Title 14, §237i-j, and be approved by the California Fish and Game Commission (Commission). The boundary and acreage of a specified state water bottom parcel are defined in a lease, as well as the terms and conditions of usage of that area for a specified time. The annual cost is based on a rate per acre as a result of a competitive bidding in a lease auction. The Commission must approve any changes to terms or conditions in the lease (Department 2009).

Thirty-six of the 106.7 acres leased are in use. Santa Barbara Mariculture Company uses 36 of 71.7 leased acres for farming rock, speckled, and Japanese scallops, manila clams, Pacific and Kumamoto oysters, and Mediterranean mussels. Culture practices include longline, rafts, rack and bag, longline on stakes, rack and tray, groundline and bag, bottom culture, and floats. Neushul Mariculture, Inc. uses 1 of 25 leased acres for algae cultivation. Eaglenet Sea Farms, Inc. uses zero of the 10 leased acres for red abalone cultivation by anchored ocean habitats (Department 2009). This issue is also discussed in Section 5.0 of this Draft EIR.

Additional agencies with permit authority over portions of the proposed Project IPA include the CCC and California Department of Fish and Game (Department). The CCC is responsible for administering the California Coastal Act and federally approved California Coastal Management Program pursuant to the CZMA. The California Coastal Act policies implemented by the CCC address issues such as public access and recreation, natural resource protection, agricultural operation, coastal development projects, port activities, and energy production. The SLC monitors existing offshore oil and gas activities to ensure revenue accountability, efficient resource recovery, and protection of the environment. However, since 1982, there has been a federal moratorium on new Pacific Outer Continental Shelf oil and gas leasing activities off the California coast, and since 1989 there has been a ban on issuing new state oil and gas leases in state tidelands.

8.3.2.2 Recreational Activities

In 1999 and 2000, more than 43 percent of all Americans participated in some form of marine recreation. Americans flock to beaches and shores to swim, fish, boat, and enjoy the natural scenery. Populations in the coastal zone are projected to steadily increase, as is the total number of people participating in all forms of marine recreation, with the largest

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

increases expected for beach going activities. California ranks second only to Florida in the number of participants in coastal recreation, with nearly 18 million participants, most of whom take part in one of the 17 non-consumptive activities listed in Table 8.3-1 (Department 2009). Refer to Figures 8-1 through 8-6 for coastal access points and recreational uses in the SCSR.

**TABLE 8.3-1
PARTICIPATION IN COASTAL RECREATION IN CALIFORNIA**

Coastal Activity	Estimated Numbers Statewide for California
Visit beaches	12,598,069
Visit waterside besides beaches	1,500,965
Swimming	8,398,997
Snorkeling	706,998
Scuba diving	288,023
Surfing	1,114,372
Wind surfing	82,201
Motorboating	1,549,289
Sailing	1,087,755
Personal watercraft use	680,309
Canoeing	190,948
Kayaking	433,209
Rowing	280,265
Water-skiing	265,533
Bird watching in saltwater surroundings	2,581,958
Viewing other wildlife in saltwater surroundings	2,551,711
Viewing or photographing scenery in saltwater surroundings	4,175,372

Source: Department 2009.

Note: Data includes civilian non-institutionalized population 16 years and older as sampled Sept. 1999. Extrapolated from a sample of 27,854 households.

The SCSR also contains numerous coastal parks and beaches, which attract visitors to enjoy such activities as swimming, diving, bird watching, whale watching, observing tide pools, and hiking in the magnificent coastal environments.

8.3.2.2.1 Coastal Tourism. California is the most visited state in the U.S. In 2006, California received approximately 14.6 million international visitors, over half of whom visited the Los Angeles-Long Beach area. Coastal California also received approximately 352.3 million domestic visitors, with 84.9 percent being Californians. Within the SCSR, Los

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Angeles County has the highest travel spending, varying between \$14 and \$22 million between 1994 and 2006 (Department 2009), see Figure 8-7.

Coastal tourism and recreation contributed \$12.4 billion to California's gross state product in 2000. Visits to the beach and waterfront activities are the third most popular recreational activities in California, after "sightseeing" and "theme and amusement parks." Theme and amusement parks within the SCSR also represent interest in the coastal and ocean ecosystems. Sea World in San Diego, with an entrance fee of \$55 to \$65, was the fourth most visited theme/amusement park in California, receiving a total of 4.1 million visitors in 2005.

Southern California is also home to aquariums, nautical and maritime museums, and monuments, and fleets and processors that represent the historic fishing community—all of which draw tourists interested in coastal communities, history, and ecosystems. Tourism and recreation are economic drivers in and adjacent to the SCSR; Los Angeles County has the highest travel spending, followed by San Diego and Orange counties, which also showed increasing trends in spending. Travel spending in Ventura and Santa Barbara counties has remained fairly constant, but significantly below the travel spending in Los Angeles, San Diego, and Orange counties, possibly due to a less developed tourist infrastructure, smaller cities, or fewer attractions (Department 2009).

Southern California boasts seven of the state's ten most-visited state parks; of this seven, five are adjacent to the coast. Old Town San Diego Historic State Park, the most visited state park in the state, received 5,431,333 visitors in 2005/2006, and, while not adjacent to the coast, it is within a mile of the ocean. The five parks adjacent to the shore are the Huntington, Bolsa Chica, San Onofre, Doheny, and Cardiff state beaches, which received over 11 million visitors in 2005/2006. Table 8.3-2 lists the ten most frequently visited California state parks adjacent to the shore in the SCSR. The Channel Islands National Park, which encompasses Anacapa, Santa Cruz, Santa Rosa, San Miguel, and Santa Barbara islands and extends one mile offshore around all these islands, received 434,107 visitors in 2005 (Department 2009). Also, adjacent to the coast in the SCSR is the Santa Monica Mountains Recreation Area, which received 553,866 visitors in 2005. Tourists also visit the San Diego National Wildlife Refuge coastal San Diego Bay National Wildlife Refuge, Seal Beach National Wildlife Refuge, and the Tijuana Slough National Wildlife Refuge (Department 2009).

The SCSR is also home to a large number of county and city beaches; therefore, total beach attendance for the SCSR is much greater than the numbers reported for state beaches alone. Beach attendance estimates for Southern California range from 100 to over 151 million beach visits annually (Department 2009). Annual beach visits are 129 million following surveys at 75 beaches in Los Angeles, Orange, and San Diego counties from 2000–2004. Average annual beach visits ranged from a low of about 27,000 at Surfside Beach in Orange

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

**TABLE 8.3-2
TEN MOST FREQUENTLY VISITED CALIFORNIA STATE PARKS
ADJACENT TO THE SHORE IN THE SOUTH COAST STUDY REGION**

Park Name	County	Total Attendance (Fiscal Year 2005/2006)
Huntington State Beach	Orange	2,899,770
Bolsa Chica State Beach	Orange	2,735,919
San Onofre State Beach	San Diego	2,418,209
Doheny State Beach	Orange	2,049,666
Cardiff State Beach	San Diego	1,715,856
Carlsbad State Beach	San Diego	1,671,327
South Carlsbad State Beach	San Diego	1,514,203
Torrey Pines State Beach	San Diego	1,501,778
San Elijo State Beach	San Diego	996,646
Carpinteria State Beach	Santa Barbara/Ventura	779,822

Source: Department 2009.

County to a high of over 7 million at Zuma Beach in Los Angeles County (Department 2009).

8.3.2.2.2 Recreational Fishing. Recreational fishing is a major source of income for the tourism and recreation sector in the SCSR. The main boat-based modes of fishing include commercial passenger fishing vessels (CPFVs), and private and rental boats, including kayaks (angling and diving). Shore based modes of recreational fishing include beach and bank fishing, fishing from manmade structures, and shore based diving. In 2007, fishing from manmade structures was the most common mode of recreational fishing and accounted for 1,341,343 recorded angler days. The second most common mode of recreational fishing was beach and bank fishing with 766,709 angler days (Department 2009).

Boat-based Modes of Recreational Fishing.

Commercial Passenger Fishing Vessels. CPFVs, also called party boats, are crewed vessels that carry recreational anglers and consumptive divers to ocean fishing locations for a fee. CPFVs are generally limited by travel time, and can be characterized by trip duration (multi-day, overnight, three-quarter day, half day, twilight). CPFVs in the SCSR operate out of ports in all five south coast counties from Santa Barbara to San Diego. Over 200 CPFVs operating in the SCSR, ranging in passenger capacity from two to 150 persons, with an average passenger load of 35 persons per trip. CPFVs in the SCSR fish in nearshore waters of the mainland coast, Santa Catalina, Santa Barbara, San Nicholas, and San Clemente

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

islands, and around the Channel Islands, as well as in Mexican waters and offshore banks (Department 2009).

Private and Rental Boats. Private boats are privately owned vessels, and rental boats are vessels that are rented without a crew. The private and rental boat category includes kayaks, float tubes, sailboats, skiffs, and large motor boats that are used to engage in fishing, including but not limited to angling and consumptive diving. In general, these vessels fish the same areas within the SCSR as CPFVs, although areas accessed vary by vessel type and size (Department 2009).

The SCSR coastline is well protected, and distribution of fishing effort is dependent on the population size of the counties rather than limited access points or rough sea conditions. Some anglers travel farther to find good fishing during fair weather. Similarly, in larger boats, anglers will venture to offshore banks and coastal islands within the SCSR for highly migratory species.

Shore-based Modes of Recreational Fishing. Shore-based modes include all land-based fishing access, including beaches, rocky shores, and man-made structures such as public piers. Shore trips include angling as well as scuba and free dive trips where the point of access was shore based and no vessel was used. Shore access for fishing occurs along the shoreline at public beaches, parks, and other locations throughout the SCSR. Public piers are numerous throughout the region, and include Gaviota Pier, Goleta Pier, Santa Barbara Pier, Ventura Pier, Hueneme Pier, Malibu Pier, Santa Monica Pier, Venice Pier, Manhattan Beach Pier, Hermosa Beach Pier, Redondo Beach Pier, Cabrillo Beach Pier, Belmont Pier, Seal Beach Pier, Huntington Beach Pier, Newport Pier, Balboa Pier, San Clemente Pier, Oceanside Pier, Ocean Beach Pier, Shelter Island Pier, and Imperial Beach Pier among other piers and public jetties that allow fishing access. No fishing license is required for recreational fishing from public piers.

8.3.2.2.3 Recreational Beach Use. The SCSR includes approximately 690 miles of mainland coastline and 354 miles of island coastline that provide not only intrinsic natural and aesthetic values, but also recreational opportunities for its users and great economic benefits to the local, regional, and state economies. In 1998, California's beaches statewide generated \$14 billion in direct revenue (\$73 billion including indirect and induced benefits), \$2.6 billion in federal tax revenue, and 883,000 jobs (Department 2009). A more recent study estimates that direct expenditures by beachgoers in California average roughly \$25 per person per day and total spending by beachgoers in the state is approximately \$3.75 billion. Revenues at state parks adjacent to the coast in the SCSR from user fees and concessions reached nearly \$25 million during the 2005/2006 fiscal year. The highest revenues—also the highest attendance—were at Bolsa Chica State Beach, Huntington State Beach, and San Onofre State Park (Table 8.3-3). These three parks account for over one third of the total revenue earned by state parks adjacent to the coast in the SCSR (Department 2009).

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

**TABLE 8.3-3
CALIFORNIA STATE PARK REVENUE FOR PARKS LOCATED
ADJACENT TO SHORE IN SOUTH COAST STUDY REGION 2005/2006**

California State Park	County	Total Revenue Fiscal Year 2005/2006¹
Bolsa Chica State Beach	Orange	\$3,099,729
Huntington State Beach	Orange	\$2,838,061
San Onofre State Park	San Diego	\$2,791,464
South Carlsbad State Beach	San Diego	\$2,006,050
Doheny State Beach	Orange	\$1,874,237
Carpinteria State Beach	Santa Barbara/Ventura	\$1,809,601
San Elijo State Beach	San Diego	\$1,733,429
San Clemente State Beach	Orange	\$1,280,786
Crystal Cove State Park	Orange	\$1,086,114
Leo Carrillo State Beach	LA/Ventura	\$1,080,466
El Capitan State Beach	Santa Barbara	\$976,707
Silver Strand State Beach	San Diego	\$876,544
Point Mugu State Park	Ventura	\$832,560
McGrath State Beach	Ventura	\$668,622
Refugio State Beach	Santa Barbara	\$618,978
Malibu Creek State Park	Los Angeles	\$485,873
Gaviota State Park	Santa Barbara	\$215,770
Emma Wood State Beach	Ventura	\$228,073
Malibu Lagoon State Beach	Los Angeles	\$162,698
San Buenaventura State Beach	Ventura	\$85,920
Cardiff State Beach	San Diego	\$75,110
Robert H. Meyer Memorial State Beach	Los Angeles	\$66,700
Border Field State Park	San Diego	\$233
Dockweiler State Beach	Los Angeles	\$0
Point Dume State Beach	Ventura	\$0
Santa Monica State Beach	Los Angeles	\$0
Will Rogers State Beach	Los Angeles	\$0
Mandalay State Beach	Ventura	\$0
Carlsbad State Beach	San Diego	\$0
Torrey Pines State Beach	San Diego	\$125

Source: Department 2009.

¹ Some state parks do not charge an entrance fee or a parking fee. Therefore, there is no revenue listed for these parks. Some state parks are managed by an entity other than State Parks, and any revenue received by those entities is not included here.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

California beaches are owned by the public, and as a result, one does not necessarily need to pay to visit the beach. Beach visitors may value the beach beyond their direct expenditures such as gas or parking fees. This value, known as consumer surplus, has been estimated to range from a low of \$10.98 (in 2001 dollars) for visits to Cabrillo Beach in Los Angeles County to a high of over \$70 (in 2001 dollars) per person per trip for visits to San Diego beaches. Using a conservative estimate of \$15/visit, the cost of parking alone at some Los Angeles beaches, for the value of a beach day and a conservative estimate of beach attendance of 150 million beach days annually, the non-market value of beach visits in California (85 percent of which occur in Los Angeles, Orange, and San Diego counties) is estimated to be approximately \$2.5 million annually (Department 2009). It is estimated the total value of going to the beach, including market and non-market values, may exceed \$5 billion annually (Department 2009).

The impact of California's beaches on the state and national economy continues to grow; in comparison to Delaware, which ranks just behind California in overall federal funding for shoreline preservation, California generates 20 times more economic activity per federal dollar. In addition to the 30 state parks adjacent to shore (Table 8.3-3), the counties and many of the cities in the SCSR maintain one or more public beaches. The SCSR's miles of state, county, and city beaches, from thin ribbons of sand below steep cliffs to long, wide strips of sand, offer much opportunity for non-consumptive recreational activities such as swimming, sunbathing, sailing, diving, sightseeing, hiking, surfing, kayaking, canoeing, and whale watching (Department 2009).

Approximately 1.1 million surfers live in California, surfing at popular spots along the coast, many of which are in the SCSR. Huntington Beach is one example of popular surfing locations in the SCSR. Huntington Beach draws surfers and spectators alike from around the world during the more than thirty surfing events held there. The 10-day long U.S. Open of Surfing, the world's biggest surfing event, takes place at Huntington Beach and draws over 250,000 tourists and locals alone (Department 2009). The U.S. surfing culture also supports a \$7.48 billion dollar industry as of 2006. Table 8.3-4 lists some of the beach facilities available for recreation and beach access by county in the SCSR. This table includes facilities along the mainland SCSR and doesn't include information for the Channel Islands.

8.3.2.2.4 Boating. Boating is a popular and economically important activity in the SCSR. In 2000, over four million people in California were involved in activities related to marine boating. The contribution of boating to the gross state product was \$11 billion in 1995, representing 1.2 percent of the state economy. The nearshore ocean waters in the SCSR are fairly protected because of the geographic orientation of the Southern California Bight with its east-west orientation protecting the regions from large oceanic events. The Channel Islands also provide protection on the leeward side (south-east side) of each island. There are

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

**TABLE 8.3-4
SPECIFIC FACILITIES AT COASTAL ACCESS SITES**

County	Number of Campgrounds	Number of Stairways to Beach	Number of Paths to Beach	Number of Biking Trails	Number of Boating Facilities	Number of Fishing Sites
Santa Barbara	8	7	7	8	3	22
Ventura	10	4	9	10	5	14
Orange	9	24	27	19	24	46
Los Angeles	6	18	22	13	8	36
San Diego	8	29	23	14	19	62
Total	41	82	88	64	59	180

Source: Department 2009.

Note: Partial list; does not include facilities on the Channel Islands.

also numerous bays, estuaries, and harbors in the SCSR that provide protected waters that are conducive to boating (Department 2009).

Major public boat launch facilities within the SCSR include the Gaviota Pier boat hoist, the Goleta Pier boat hoist, Santa Barbara Harbor launch ramp, Ventura Harbor launch ramp, Channel Islands Harbor launch ramp, Marina Del Rey launch ramp, King Harbor boat hoist and small craft launch ramp, Cabrillo Beach launch ramp, South Shore launch ramp, Davey’s launch ramp, Sunset Aquatic launch ramp, Newport Dunes launch ramp, Oceanside Harbor launch ramp, Dana Basin launch ramp, Shelter Island launch ramp, and others. Additional numerous public launch facilities occur throughout Mission Bay and San Diego Bay, in addition to other locations throughout the SCSR. Please see Table 8.3-5 for public boat launch or hoists locations.

The California Department of Boating and Waterways published a report titled “California Boating Facilities Needs Assessment,” a survey and assessment of boating and boating facilities needs in California. The assessment breaks the state into regions, two of which encompass the SCSR. Santa Barbara, Ventura, Los Angeles, and Orange counties make up one of the two regions, and San Diego County the other. According to this study, the 25 most-used waterways (including freshwater waterways) for residents from Santa Barbara through Orange County included the marine waterways of the Pacific Ocean (i.e., ocean waters not defined by another name), Channel Islands Harbor, Marina Del Rey, Mission Bay, Newport Harbor, Los Angeles-Long Beach Harbor, Dana Harbor, Santa Barbara Channel, San Pedro Bay, Santa Catalina Island, and Alamitos Bay. The Pacific Ocean was the most used waterway in Santa Barbara and Orange counties with 7 percent of all boaters in the region using this waterway (Department 2009).

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

**TABLE 8.3-5
PUBLIC BOAT LAUNCH OR HOISTS LOCATIONS**

County	Launch or Hoist Locations	
Santa Barbara	Santa Barbara Launch Ramp Gaviota Pier/Hoist	Goleta Pier/Hoist
Ventura	Ventura Launch Ramp	Channel Islands Launch Ramp
Los Angeles	Marina Del Rey Launch Ramp Davies Launch Ramp Claremont Ramp Granada Ramp Marine Stadium Ramp	Mother's Beach (hand launch) South Shore Launch Ramp Cabrillo Launch Ramp Avalon Pleasure Pier/Hoist King Harbor Launch Ramp/Hoist
Orange	Dana Point Launch Ramp Newport Dunes Launch Ramp Huntington Harbor Ramp	Sunset Aquatic Launch Ramp North Star Beach (hand launch)
San Diego	Shelter Island Launch Ramp Oceanside Launch Ramp Agua Hedionda Lagoon Launch Ramp Santa Clara Point Launch Ramp Dana Basin Launch Ramp Chula Vista Launch Ramp	Glorietta Launch Ramp National City Launch Ramp Ski Beach Launch Ramp South Shores Launch Ramp De Anza Cove Launch Ramp La Jolla Shores (hand launch)

For residents of San Diego County, the 20 most used waterways (including freshwater waterways) included the marine waterways of the San Diego Bay, Mission Bay, Pacific Ocean, and Oceanside Harbor. San Diego Bay was the most used waterway in the region with 21.5 percent of all boaters in San Diego County using this waterway (Department 2009).

8.3.2.2.5 Recreational Scuba Diving. Scuba diving is a popular activity within the SCSR, especially around the Channel Islands. About 20 percent of California's 1.5 million certified divers are "active," meaning they dove within the past 12 months and plan to dive within the next year. California, which accounts for an estimated 12 percent of the total national revenue generated by recreational scuba diving, generates approximately \$180 million annually; equipment sales produce an additional \$60 million. There are over thirty dive shops in San Diego County alone. Some of these shops specialize in the increasingly popular activity of underwater photography while others focus on custom wetsuits or equipment sales. Many of these shops also offer dive boat trips and scuba instruction. Guided Discoveries, a non-profit organization, runs a summer camp located in Toyon Bay on Santa Catalina Island where teenage campers can become scuba certified (Department 2009).

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

Many dive sites exist within the SCSR’s islands and mainland coast, and some of the popular diving sites are listed in Table 8.3-6 and Figure 8-1. The SCSR mainland coastline offers many scuba access points from the shore; only popular scuba diving sites are listed here. These locations are often easily accessible and known for their scenic value. Scuba diving trips on the Channel Islands require boat access for divers that live on the mainland, and are excluded from this table.

**TABLE 8.3-6
POPULAR MAINLAND SCUBA DIVING SITES**

Santa Barbara County	Ventura County	Los Angeles County	Orange County	San Diego County
Naples Reef	Rincon Reef	Leo Carrillo (Beach, Lil Cove and No. Lot)	Corona Del Mar	La Jolla Canyon
Carpinteria Reef	La Jennelle	Nicholas Canyon	Little Corona	Scripps Canyon
Gaviota State Beach	Long Walk	La Piedra	Reef Point	Goldfish Point
Tajiguas	North Deer Creek	El Pescador	North Crescent Bay	La Jolla Cove
Refugio State Beach	Deer Creek Road	El Matador	South Crescent Bay	Hospital Point
Ellwood	Staircase	Paradise Cove	Shaw’s Cove	The Wreck of the Ruby E
Isla Vista	Neptune’s Net	Escondito Creek	Fisherman’s Cove	Marine Room
Arroyo Burro Park		Latigo Beach	Heisler Park	Boomer Beach
Leadbetter		Latigo Canyon	Diver’s Cove	Quast Hole
Mesa Lane		Point Dume	Main Beach	Sunset Cliffs
Hammonds		Corral Beach	Cleo Street Barge	Osprey Point
		Big Rock	Cress/Mountain Street	Rockslide
		Topaz Jetty	Wood’s cove	Point Loma Kelp Beds
		Malaga Cove	Montage Resort	Swami’s
		Marineland	Dana Point Harbor	
		White Point	Moss Point	
		Big Rock	Treasure Island	
		Gladstone’s	Aliso Beach	
		Vet’s Park		
		Cardiac Hill		

Source: Department 2009.

Note: Partial list, scuba diving sites on the Channel Islands require boat access for divers that live on the mainland and are excluded from this list.

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

8.3.2.2.6 Boardwalks, Kayaking, and Other Activities. Visitors and locals take advantage of the boardwalks and bike paths that line many of Southern California’s most popular beaches. Beachgoers can walk, jog, skateboard, bike, and more along these paths. Beachgoers and visitors support the many bike rental companies, retail stores, restaurants, and hotels that operate along these boardwalks such as the Venice Beach boardwalk, Santa Barbara’s West Beach bike path, and the Mission Beach boardwalk in San Diego.

More than one-half million people participated in some form of kayaking in California in 1999, 2.5 million people participated in wildlife viewing, and more than 4 million people took photos at the beach (Department 2009). Kayaking, whale watching, and nature observation have all increased in popularity. There are at least 32 kayak rental shops in the coastal counties in the SCSR and some popular kayak trip locations are listed in Table 8.3-7. Although the SCSR coastline offers many access points from the shore, only popular kayak trip locations are listed here. These locations are often easily accessible and known for their scenic value.

**TABLE 8.3-7
POPULAR KAYAK TRIP LOCATIONS**

Santa Barbara County	Ventura County	Los Angeles County	Orange County	San Diego County
Butterfly Lane to Sharks Cove	Anacapa Island	Port of Los Angeles	Newport Harbor to Reef Point	La Jolla Shores to Mission Bay
Hendry’s County Beach to Santa Barbara Harbor		Royal Palms State Beach to Cabrillo Beach	Reef Point to Aliso Beach County Park	San Diego Bay
Loon Point to Sand Point (including Carpinteria Reef)				
Naples Reef to Goleta Pier				
Refugio State Beach to El Capitan State Beach				
Santa Cruz Island: Cueva Valdez to Arch Rock				

Source: Department 2009.

Note: Partial list for example only; only most popular locations are listed.

The coast of Southern California is heavily populated, and Southern California’s beaches offer a location for residents and visitors alike to gather for a wide variety of other recreational activities. Beach volleyball courts are located on many public beaches. Frisbee games, yoga classes, open water swim events, lifeguard competitions, triathlons, and more are regular occurrences on the beaches of the SCSR.

8.3.2.2.7 Tidepool Visitors and Wildlife Watching. Tidepool visitation is another popular recreational activity within the SCSR. While tidepool visitation is a non-consumptive activity

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

in theory, careless tidepool visitors or great numbers of visitors can cause damage and disturb the habitat during their visit by trampling or handling tidepool species (Department 2009). Tidepool locations in the SCSR were taken from “California Coastal Access Guide” by the CCC, the NPS, San Diego Natural History Museum, and Orange

County Parks websites and are listed in Table 8.3-8. Tidepool locations within the Channel Islands National Park are limited to only the most accessible areas; therefore, Table 8.3-8 does not represent an exhaustive list of tidepooling sites in the SCSR. Several agencies and organizations, including some of the state parks, Long Beach Marine Institute, Cabrillo National Monument, and the Orange County Marine Protected Areas Committee, have tidepool awareness programs to teach proper tidepool etiquette (Department 2009).

Whale watching and wildlife viewing are also very popular in the SCSR due especially to the number of marine mammals that pass through the Santa Barbara Channel. There are at least 21 boats that participate in whale watching activities from Santa Barbara to San Diego, many of which participate in both whale watching and sport fishing, depending upon the season. Boats out of Santa Barbara offer whale watching tours throughout the year. Also, at least one helicopter company out of Long Beach offers tours of Santa Catalina Island and the southern coast of California (Department 2009).

Watching wildlife from shore is also a popular activity in the SCSR. Pinnipeds, cetaceans, seabirds, and shorebirds can be viewed from numerous locations. Pinniped rookeries and haulouts are shown on Figures 7-19 and 7-20. These figures also provide seabird diversity and colony location information. Piers and many prominent points of land can be used to view whales and other cetaceans. Estuaries in the SCSR are often used for viewing resident and migrating waterfowl, seabirds, and shorebirds. Wildlife watching from shore also includes fish. From March to August on the right nights, observers can watch grunion runs on many beaches in the SCSR. Youth groups and schools organize trips to watch the grunion run, and a statewide volunteer monitoring program records grunion runs and associated conditions on numerous sandy beaches (Department 2009).

8.3.2.2.8 Maritime Heritage Structures. The SCSR has a rich maritime heritage including several lighthouses listed in Table 8.3-9 which are still active today. These maritime heritage structures are also popular tourist destinations.

8.3.3 Impact Analysis

8.3.3.1 Methodology

Effects to recreational activities and facilities were assessed by evaluating the potential change in use patterns resulting from the proposed Project IPA component relative to the most popular locations known for non-consumptive recreational users. These potential

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

**TABLE 8.3-8
TIDE-POOLING SITES WITHIN THE SOUTH COAST STUDY REGION**

Santa Barbara County	Ventura County	Los Angeles County	Orange County	San Diego County
Anacapa Island - Frenchy's Cove*	Emma Wood State Beach	Bluff Cove	Crystal Cove State Park*	Bird Rock*
Arroyo Hondo*	Mussel Shoals Beach *	Leo Carrillo State Beach*	Dana Point*	Cabrillo National Monument*
Carpinteria State Beach*		Malaga Cove - south end*	Doheny State Beach	Cardiff State Beach*
Devereux Point*		Palos Verdes Estates Shoreline Preserve	Heisler Park State Marine Reserve*	La Jolla Underwater Marine Park*
El Capitan State Beach		Point Fermin Reserve*	Little Corona Del Mar Beach*	Ocean Beach Park
Gaviota State Park*		Royal Palms County Beach	Three Arch Cove Beach	San Elijo State Beach
Leadbetter Point		Stairs to Beach at Latigo Beach	Treasure Island Beach*	San Onofre State Beach*
Refugio State Beach*			San Clemente State Beach	Scripps Beach*
Rincon Point				Sun Gold Point
San Miguel Island - Cuyler Harbor*				
Santa Cruz Island - Smuggler's Cove*				
Santa Rosa Island - Becher's Bay				

Source: Department 2009.

Note: * Indicates monitoring site.

changes were evaluated for their potential to impact existing recreational facilities and infrastructure.

8.3.3.2 Criteria for Determining Significance

Appendix G of the State CEQA Guidelines state that the project would have a significant impact on land use if it:

- Physically divides an established community
- Conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan,

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

**TABLE 8.3-9
ACTIVE LIGHTHOUSES IN THE SOUTH COAST STUDY REGION**

Lighthouse	Location	County
Anacapa Island	Entrance to Santa Barbara Channel	Ventura
Long Beach	San Pedro Middle Breakwater of Long Beach Harbor	Los Angeles
Los Angeles Harbor	San Pedro Breakwater	Los Angeles
Point Conception	West Entrance to Santa Barbara Channel	Santa Barbara
Santa Barbara	Santa Barbara Point	Santa Barbara
Port Hueneme	East Entrance to Santa Barbara Channel	Ventura
Point Loma (New)	Southern End of Point Loma	San Diego
Point Vicente	Palos Verdes/North of Los Angeles Harbor	Los Angeles

Source: Department 2009.

local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect

- Conflicts with any applicable habitat conservation plan or natural community conservation plan

Based on Appendix G of the State CEQA Guidelines, the project would have a significant impact on recreational resources if it:

- Increases the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- Includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

8.3.3.3 Environmental Impacts

Land Use conflicts would occur if any of the following conditions or criteria were met.

Criterion LAND-1: Physically divide an established community?

The proposed Project IPA would not physically divide an established community because these are terrestrial-based considerations that do not apply to state waters in the SCSR.

Criterion LAND-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect

The proposed Project IPA is consistent with the policies contained in the California Coastal Act. The following policies from the California Coastal Act will be promoted with the implementation of the proposed Project IPA.

- **30230:** Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.
- **30231:** The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

By creating the MPAs, marine resources will be maintained, enhanced, and potentially restored. The biological productivity and the quality of coastal waters are intended to be enhanced by the MPAs. There is also a monitoring component of the MPAs that will evaluate their performance and make recommendations for adjusting management techniques. Adaptive management is a part of the MPLA. The MLPA requires monitoring to determine whether its goals related to use are being met. If the goals of the MLPA (see Section 3.2) are not being met, then either regulatory or management changes could occur to try and meet the goals. This will help ensure that the above policies are consistently advanced through the proposed Project IPA.

State Parks. Several California state parks are located adjacent to proposed MPAs, including Border Field State Park, Corona del Mar State Beach, Crystal Cove State Park, Doheny State Beach, El Matador State Beach, Gaviota State Park, Point Dume State Beach, Refugio State Beach, Cardiff State Beach, and San Elijo State Park. Underwater park units with the SCSR occur at Refugio State Beach, Crystal Cove State Park, Doheny State Beach, and Cardiff and San Elijo State Beaches, and Silver Strand State Beach. Additionally, Gaviota State Park and Malibu Lagoon State Park include public fishing piers as part of their park units. The Department of Parks and Recreation has expressed concern to the Commission over loss of protections in existing State Parks underwater park units, and conflicts between management objectives for some existing state beaches and proposed MPAs within the IPA. Due to these

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

concerns, regulatory options for Crystal Cove SMCA, Refugio SMCA, Doheney SMCA, and Swami's SMCA addressing State Parks management conflicts were incorporated into the proposed Project IPA for consideration. With the expansion of the proposed MPAs near these California state parks, the adjacent areas will be further protected and conserved.

University of California Natural Reserve System. Reserves adjacent or overlapping MPAs proposed in the proposed Project IPA include the Scripps Coastal Reserve and Coal Oil Point Natural Reserve. Proposed MPAs within the IPA adjacent to these reserves include Campus Point SMR and San Diego Scripps Coastal SMCA. Proposed regulations are consistent with adjacent UC Natural Reserve management, and no impacts to Natural Reserves have been identified.

Department of Fish and Game Ecological Reserves. Several Department ecological reserves overlap existing and proposed MPAs. Many of these existing MPA are proposed to be modified or in some cases deleted under the proposed Project IPA. Ecological reserves with existing and proposed MPAs that have overlapping boundaries include Goleta Slough Ecological Reserve, Bolsa Chica Ecological Reserve, Upper Newport Bay Ecological Reserve, Agua Hedionda Lagoon Ecological Reserve, San Dieguito Lagoon Ecological Reserve, Batiquitos Lagoon Ecological Reserve, and San Elijo Lagoon Ecological Reserve. The effects of the duplication of regulation under Title 14 of the California Code of Regulations section 632 and section 630 was reviewed during the development of the proposed Project IPA regulations. The proposed regulation for MPAs within ecological reserves adds a reference to activities authorized pursuant to Section 630. Therefore, text that duplicates text in Section 630, Title 14, CCR is deleted and incorporated by reference and no conflicts with the planned uses of state ecological reserves is expected.

National Parks and Bureau of Land Management. The California Coastal National Monument, Santa Monica Mountains Recreation Area, and Cabrillo National Monument are adjacent to MPAs proposed within the proposed Project IPA. No associated conflicts with any land use plan, policy or agency regulations for these federal management areas have been identified based on plan information available for review.

County and City Governments. Within the SCSR, many proposed MPAs, such as the Goleta Slough SMCA or the Famosa Slough SMCA, have been proposed in areas where there is some overlap with local government management activities, such as flood control, vector control, and dredging, and water treatment facilities. However, regulations proposed for these areas have been crafted to allow ongoing activities to continue, and no impacts or conflicts are anticipated.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Criterion LAND-3: Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan

Three habitat conservation plans (HCP) and/or Natural Community Conservation Plans (NCCP) are located adjacent to proposed MPAs, including the Central/Coastal Orange County NCCP (R.J. Meade Consulting, Inc. 1996), the Palos Verdes NCCP/HCP (URS 2004), and the San Diego County MHCP NCCP/HCP (specifically the San Diego MSCP – Incorporated Subarea Plans; City of San Diego 1997). The jurisdiction of these NCCP/HCPs extend to the Mean High Tide Line and do not include state waters, therefore NCCP/HCP jurisdiction does not extend into the SCSR in these areas. Because NCCP/HCP jurisdiction does not extend into the SCSR, there are no associated conflicts with these NCCP/HCPs. With the expansion of the proposed MPAs near these NCCP/HCPs, the adjacent area will be further protected and conserved.

The Central/Coastal Orange County NCCP (R.J. Meade Consulting, Inc. 1996) encompasses the Upper Newport Bay SMCA. In the proposed Upper Newport Bay SMCA the existing regulated activities, including restrictions on swimming areas, boat speed, shoreline access and access fees, would remain the same as the existing Upper Newport Bay SMP. In addition, the proposed Upper Newport Bay SMCA regulations would allow routine maintenance, dredging, monitoring, research and education, and habitat restoration to continue. Since existing conditions would not be changed, there are no associated conflicts with the Central/Coastal Orange County NCCP in this area. Additionally, the proposed Upper Newport Bay SMCA expands farther south than the existing Upper Newport Bay SMP boundary. With the expansion of the proposed MPA within the Central/Coastal Orange County NCCP, the area will be further protected and conserved.

Recreational conflicts would occur if any of the following conditions or criteria were met.

REC-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated

An increase in take regulations within proposed MPAs adjacent to parks, launch ramps, parking lots, or other facilities may cause people to recreationally fish elsewhere. Although there are many places available for consumptive recreational activities within the SCSR that are not proposed as MPAs, there could be re-distribution of recreational fishing activities that result in a significant increase in use of parking lots or other facilities at existing neighborhood or regional parks or other recreational facilities. However, recreational use would generally be diffused amongst many existing neighborhood or regional parks or other recreational facilities due to high accessibility within the SCSR.

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

REC-2: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment

The main purpose of the proposed Project is to increase the coherence and effectiveness of the proposed Project IPA at protecting marine life, habitat and ecosystems within the SCSR. Further, the Project would not involve the construction or expansion of any recreational facilities that could result in an adverse effect on the environment.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.4 VESSEL TRAFFIC

This section describes the existing setting and potential vessel traffic impacts of the IPA. Specifically, it describes existing conditions related to vessel traffic; summarizes the overall federal, state, and regional/local regulatory framework for vessel traffic that would affect implementation of an MPA network component; analyzes the potential impacts of the IPA on vessel traffic; and identifies mitigation measures to address significant impacts, as appropriate.

8.4.1 Regulatory Framework

This section describes the applicable federal and state regulations governing vessel traffic patterns and practices within the SCSR.

8.4.1.1 Federal

8.4.1.1.1 Title 33 of the Code of Federal Regulations. Title 33 of the Code of Federal Regulations (CFR) is the portion of the CFR that governs Navigation and Navigable Waters within the United States. It is divided into three Sections based on regulatory entity (U.S. Coast Guard [USCG], Army Corps of Engineers, and Saint Lawrence Seaway Development Corporation).

8.4.1.1.2 U.S. Coast Guard Regulations. USCG enforces the Navigation Rules for Inland and International Waters as found in Title 33 of the Code of Federal Regulations, Volume I, Chapter I, Parts 1–124, Navigation and Navigable Waters (current as of June 22, 2010).

8.4.1.1.3 Convention on the International Regulations for Preventing Collisions at Sea Demarcation Lines. International Navigation Rules (Rules) were formalized in the Convention on the International Regulations for Preventing Collisions at Sea, 1972, and were adopted by Congress as the International Rules Act of 1977. The Rules (commonly called 72 COLREGS) are part of the Convention, and vessels flying the flags of states ratifying the treaty are bound to the rules. The United States has ratified this treaty and all United States flag vessels must adhere to these Rules where applicable. The COLREGS include rules on steering and sailing, look-out, safe speed, risk of collision and actions to avoid collision, traffic separation schemes, conduct of vessels in sight of one another, and conduct of vessels in restricted visibility. The Rules also include specific requirements for vessels engaged in fishing, and vessels restricted in their maneuverability. The International Rules in the Navigation Rules book is published by the Coast Guard. These Rules are applicable on waters outside of established navigational lines of demarcation. The lines are called COLREGS Demarcation Lines and delineate those waters upon which mariners shall comply with the Inland and International Rules. COLREGS Demarcation lines are contained in Title 33 of the Code of Federal Regulations, part 80 (33 CFR 80) of the Navigation Rules manual.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Regulated Navigational Area. A Regulated Navigation Area (RNA) is a region of water within a boundary defined by the United States Coast Guard. It can incorporate a variety of sub-regions such as Safety Zones, Defense Areas, Security Zones, and Regulated Areas. Within these waters, the local district commander has the authority to regulate vessels deemed to be hazardous or facing hazardous conditions. Regulations include vessel size, speed, draft limitations and other operating conditions, as well as times of entry, exit, and specific movements. The district commander's authority includes a formalized Traffic Separation Scheme (TSS) that helps to maintain and control commercial and large vessel two-way movements through series of designated and adjoining lanes and turnabout locations. Vessel Traffic Services (VTS) is a complementary program that provides advice, control and management of participating vessels. A primary distinction between the TSS and VTS programs is that the TSS is a physically mapped suite of locations subject to Rule 10 of the International Navigation Rules, while the VTS is a staffed facility that communicates with crews of the vessels to facilitate their safe passage.

The SCSR falls into two Federal Navigation Regulation zones: Sector Los Angeles-Long Beach Marine Inspection Zone and Captain of the Port Zone, and Sector San Diego Marine Inspection Zone and Captain of the Port Zone. Sector Los Angeles-Long Beach's (LA-LB) office is located in San Pedro, CA. The boundaries of Sector LA-LB's Marine Inspection Zone and Captain of the Port Zone start at a point near the intersection of Monterey County and San Luis Obispo County and the California coast, proceeding southwest to the outermost extent of the Exclusive Economic Zone (EEZ); thence south along the outermost extent of the EEZ; thence northeast to the intersection of Orange County and San Diego County and the California coast. The USCG also protects the Districts' major ports, which include the Tier one ports of Los Angeles, and Long Beach, as well as 27 Tier two ports within them. Sector San Diego's office is located in San Diego, California. The boundaries of Sector San Diego's Marine Inspection Zone and Captain of the Port Zone start at a point near the intersection of Orange County and San Diego County and the coast, proceeding southwest to the outermost extent of the EEZ; thence south along the outermost extent of the EEZ to the intersection of the maritime boundary with Mexico; thence east along the maritime boundary with Mexico to its intersection with the California coast. The USCG also protects the Districts' major ports, which include the Tier One port of San Diego, as well as 9 Tier two ports within it (USCG 2008). In Southern California, vessel traffic information and related safety recommendations are provided to the USCG by the Marine Exchange of Southern California (see below).

8.4.1.1.4 Army Corps of Engineers Regulations. The Army Corps of Engineers enforces navigational rules for vessel traffic near/in danger zones, restricted areas, and disposal and dumping areas, as found in Title 33 of the Code of Federal Regulations, Volume I, Chapter I, Parts 200–399, Navigation and Navigable Waters (current as of June 22, 2010).

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Danger Zones and Restricted Areas. A danger zone is defined as a water area (or areas) used for target practice, bombing, rocket firing or other especially hazardous operations, normally for the armed forces. The danger zones may be closed to the public on a fulltime or intermittent basis, as stated in the regulations. A restricted area is a defined water area for the purpose of prohibiting or limiting public access to the area. Restricted areas generally provide security for Government property and/or protection to the public from the risks of damage or injury arising from the Government's use of that area.

Disposal and Dumping Areas. The disposal and dumping areas were established for various purposes related to dumping of toxic wastes (no longer allowed) and/or depositing of dredged materials. They may constitute hazards to navigation. The U.S. Environmental Protection Agency (EPA) and the Department of the Navy also establish disposal and dumping areas. Refer to Section 8.5 for more information on hazards and hazardous materials.

8.4.1.2 State

State regulations regarding navigation and safety are found in Title 14 of the California Code of Regulations. State laws governing boating operation and safety are found in Section 650, Article 1, Chapter 5, Division 3 of the California Harbors and Navigation Code. State regulatory oversight also includes implementation of the Oil Spill Prevention and Response Act of 1990.

8.4.1.2.1 Oil Spill Prevention and Response Act of 1990. The Oil Spill Prevention and Response Act of 1990 (SB 2040) was passed by California Legislature as a response to the Alaska's Exxon Valdez (1989) and California's American Trader (1990) oil spills. The goals of SB 2040 are to improve the prevention, removal, abatement, response, containment, and clean up and mitigation of oil spills in the marine waters of California. SB 2040 created harbor safety committees for the major harbors of the state of California to plan "for the safe navigation and operation of tankers, barges, and other vessels within each harbor... (by preparing)... a harbor safety plan, encompassing all vessel traffic within the harbor." The Department of Fish and Game's (DFG) Office of Spill Prevention and Response (OSPR; formerly known as the Office of Oil Spill Prevention and Response) is the lead agency for implementing SB 2040 under the direction of its Administrator. The California State Lands Commission (SLC) operates the state's marine terminal inspection and monitoring program, as required by SB 2040, which is coordinated with OSPR and the USCG.

8.4.1.2.2 State Lands Commission. The SLC Lands Division is responsible for leases of land or mineral rights on state lands, which includes submerged lands out to three miles from shore; SLC's Marine Facilities Division regulates offshore moorings and onshore terminals used in the transfer of petroleum. The primary focus of their regulation is preventing oil spills, through testing and regulation of pipelines in these facilities. The Marine Facilities

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Division develops Marine Oil Terminal Engineering and Maintenance Standards, which are incorporated into applicable sections of the State Building Code. The Division also develops standards for the discharge of ballast water to control the release of nonindigenous species. None of these activities would be affected by the project, and the SLC has no direct authority or connection with this project.

8.4.1.3 Local

8.4.1.3.1 Marine Exchange of Southern California. This private non-profit corporation has been maintaining and providing information on vessel traffic in Southern California in the early 1900s. In the 1980s the Marine Exchange partnered with the USCG to provide vessel traffic advisory service, and the arrangement was formalized in the 1990s by state law creating the Vessel Traffic Service operated by the Marine Exchange as an agent of the State of California in partnership with the Ports of Los Angeles and Long Beach and other agencies for the USCG. The Marine Exchange Area of Responsibility (AOR) includes all waters outside of federal breakwaters, extending 25 nautical miles from shore from Point Fermin southward along the coast. This arrangement is the only joint-venture government/private section vessel traffic system in the country. Information and recommendations regarding navigation and safety are provided by the Marine Exchange and enforcement of federal navigation and safety regulations, port security, and homeland defense procedures and policies is provided by the USCG.

8.4.1.3.2 Harbor Patrol. Local harbor patrol or harbor police enforce federal and state laws and regulations within individual ports and harbors. In addition, most large ports (Tier one ports) have developed individual harbor safety plans that identify key regional safety issues. Safety issues may include questions regarding the need for escort tugs, required capabilities of escort tugs, and the need for new or enhanced vessel traffic information systems to monitor and advise vessel traffic (Department 2009). See Section 8.2 (Public Services and Utilities) of this Draft EIR for more information.

8.4.1.3.3 Santa Barbara Channel Oil and Gas Lanes. Oil and natural gas derived from offshore production platforms in the Santa Barbara Channel (both state and federal leases) are transported through state waters to onshore marine terminals by underwater pipelines located within designated pipeline corridors. These pipelines obviate the need to deliver crude oil and gas onto tankers for transport to shore, and thereby greatly reduce the amount of large-vessel traffic that would otherwise generated by offshore oil and gas operations. Despite this fact, some level of vessel traffic remains associated with offshore platforms, as these facilities are in need of regular vessel service to convey food, supplies, and personnel to the platforms and to transport waste material back to shore. These types of operations are commonly performed by platform supply vessels, which travel to the offshore platforms in the SCSR regularly from Port Hueneme, the Port of Long Beach, and Santa Barbara Harbor. Because platform supply vessels frequently visit more than one platform at a time, and

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

because the SCSR's offshore platforms are closer to shore than the coastwise vessel traffic lanes, platform supply vessels do not routinely utilize the coastwise traffic lanes when travelling to or among the platforms.

Marine tanker ships and barges are also used to transport crude oil to the terminals from non-platform sources. An ongoing project at the Ellwood terminal involves transporting oil and gas produced at offshore platform Holly through pipelines to an onshore terminal. Crude oil is pumped into storage tanks prior to being loaded onto a barge for shipment to refineries. The natural gas is distributed by pipeline to the Southern California Gas Company. The Ellwood facility is located near the existing Goleta Slough and Campus Point state marine reserves (SMRs).

8.4.2 Environmental Setting

Major considerations for the environmental setting include the locations of major ports and other transportation nodes, shipping lanes, vessel traffic closure areas, and types and numbers of commercial and recreational vessels and their associated movement in and around the SCSR.

8.4.2.1 Port Complexes and Transportation Nodes

“A port complex comprises one or more port areas of varying importance whose activities are geographically linked either because these areas are dependent on a common inland transport system or because they constitute a common initial destination for convoys” (US Department of Defense 2010).

8.4.2.1.1 Port Complexes. The busiest port complexes in the United States are located in the SCSR. The three major port complexes include: Santa Barbara (Santa Barbara and Ventura counties), Los Angeles (Los Angeles and Orange counties), and San Diego (San Diego County). Each port complex contains major ports (Tier one ports) and minor ports (Tier two ports). A brief profile of individual ports is described by county below.

Santa Barbara County. Santa Barbara Harbor is located in the City of Santa Barbara. The harbor holds 1,054 slips, side and end ties, 16 open water moorings, and 24 fisherman float spaces. The harbor contains four marinas and a boat launch and offers recreational boating and commercially operated recreation activities such as sport fishing, wildlife tours, yacht cruises, and sailing.

In 2007, there were 175 commercial fishing vessels, 222 commercial fishermen, 61 fish businesses and two aquaculture businesses that reported landings in Santa Barbara County. From 1998 through 2007, the top ten commercial fisheries based on average annual landings in pounds were, in decreasing order, sea urchin, market squid, rock crab, ridgeback prawn, sea cucumber, spiny lobster, California halibut, shark (sharks, skates, and rays, excluding

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

white and angel sharks), white sea bass, and nearshore fishes. Aquaculture products grown were red abalone, mussels and oysters (Department 2009).

Ventura County. Ventura Harbor is located in the City of Ventura and is operated by the Ventura Port District. The harbor contains both a marina and a boat launch, and offers recreational boating, swim beaches, and commercially operated recreation activities such as sport fishing, tours, scuba diving and sailing (County of Ventura 2005).

Port Hueneme is located in the City of Port Hueneme, and serves as California's only deepwater port between Los Angeles and San Francisco. The port is administered by the Oxnard Harbor District and the U.S. Navy. The Port contains six wharves that are used for cargo transfer, tanker lightering, and servicing offshore oil supply vessels, and to a less extent, commercial and sport fishing. The Port of Hueneme handles a variety of commodities in addition to offshore oil and gas supplies. These include automobiles, bananas, citrus and fresh fruit, fish, fuel, wood pulp, forest products, pipe, steel and other general cargo (County of Ventura 2005). Currently, the number of annual vessel calls is 270, but is expected to increase to almost 500 by 2020 due to wharf infrastructure investment projects (Port of Hueneme 2010).

Channel Islands Harbor is located in the City of Oxnard and is operated by the Ventura County General Services Agency. The Harbor holds 2,300 small crafts and future expansion is being planned. The harbor contains both a marina and boat launch and offers recreational boating, swim beaches, and commercially operated recreation activities such as sport fishing, tours, scuba diving and sailing (County of Ventura 2005).

In 2007, there were 184 commercial fishing vessels, 232 commercial fishermen, and 89 fish businesses that reported landings in Ventura County ports. The top ten commercial fisheries, based on average annual landings in pounds from 1998 through 2007 were (in decreasing order) market squid, Pacific sardine, mackerel/anchovy, sea urchin, sea cucumber, rock crab, California halibut, ridgeback prawn, Pacific bonito, and tuna. It should be noted that highly migratory fishes, such as for example tuna, are caught primarily outside of the SCSR. However, these fisheries are still considered economically important to this county (Department 2009).

Los Angeles County.

Tier One Ports. Los Angeles County features a large port complex, comprised of the adjacent ports of Los Angeles and Long Beach. The Port of Los Angeles is located on 7,500 acres in San Pedro Bay, and features 27 terminals (25 cargo terminals and two passenger terminals), 270 berths, 69 container cranes, and 17 marinas encompassing 3,800 recreational boat slips. The port is the busiest port in the United States by container volume, and the 16th-busiest container port internationally (Port of Los Angeles 2010). The Port of Los Angeles exhibits high levels of vessel traffic that mainly support the transportation of oil and

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

petroleum products. The Los Angeles Harbor receives a majority of the oil imported into the United States, and has a large number of refining facilities. The entire port encompasses 7,500 acres, 43 miles of waterfront and features 27 cargo terminals, including dry and liquid bulk, container, breakbulk, automobile and omni facilities. The port is also home to the World Cruise Center, encompassing a total of 18 acres and features two terminal buildings serving approximately 11 cruise lines. In 2009, the port's annual vessel call was 2,179, a decrease from 2,370 in 2008 (Port of Los Angeles 2010). The Los Angeles/Long Beach ports also contain 24 petroleum terminals. In addition, a public boat launch facility, and chartered sportfishing and whale watching services exist within the port.

The Port of Long Beach abuts the Port of Los Angeles to the west, and is the second-busiest seaport in the United States, and the 17th-busiest container port internationally. In 2009, top imports at the Port of Long Beach included crude oil, electronics, plastics, furniture, and clothing; and top exports included petroleum coke, refined petroleum, chemicals, waste paper, and foods (Port of Long Beach 2010). The port occupies 3,200 acres, and contains 10 piers, 80 berths, and 71 post-panamax gantry cranes (Port of Long Beach 2010). Specialized terminals move petroleum, automobiles, cement, lumber, steel and other products. The port is also home to Carnival Cruise Line's Long Beach Cruise Terminal, plus a variety of private docks, as well as several public boat launch facilities, marinas, and chartered sportfishing and whale watching services within the port.

Terminal Island is an artificial island in San Pedro Bay that contains ancillary land uses supporting the ports of Los Angeles and Long Beach. The island encompasses hosts canneries, shipyards, and Coast Guard facilities, as well as a Federal Correctional Institution.

Tier Two Ports. Tier two ports in Los Angeles County include Marina Del Rey, Avalon Harbor, and King Harbor. King Harbor is located on the Santa Monica Bay and serves mainly as water craft launching, slip rentals, dock facilities and supports sport fishing and recreational water activities (King Harbor Marina 2010). Marina Del Rey is located within the City of Marina Del Rey and is one of the largest man-made small harbors in the U.S. The harbor hosts 19 marinas that provide boat storage, haulout facilities, and a yacht center and offers commercially operated recreation facilities (i.e., yacht clubs, boat clubs, charters and rentals including sport fishing and "party boats," and sailing centers).

Avalon Harbor is located on Santa Catalina Island within Avalon Bay. Avalon harbor hosts boat storage, shoreboat services, and public amenities, and offers recreational boat camping areas (Santa Catalina Island Company 2010). Boat moorings that occur in some of the island's various coves under the jurisdiction of Avalon Harbor; in other coves, these moorings are under the authority of Two Harbors. Two Harbors is located at the west end of the island, and consists of Isthmus Cove and Catalina Harbor. Two Harbors provides dingy dock and marine fuel dock services and hoist mooring sites and anchorage for recreational boating. Vessel routes providing commercial passenger service to Santa Catalina Island serve both Two

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Harbors and Avalon Harbor, and transfer passengers to various mainland locations in the southern portion of the SCSR. Shoreboat transportation among the harbors on Santa Catalina Island also occurs.

In 2007, there were 265 commercial fishing vessels, 304 commercial fishermen, and 77 fish businesses that reported landings in Los Angeles County ports. The top ten fisheries, based on average annual landings in pounds from 1998 through 2007 were, in decreasing order, Pacific sardine, market squid, mackerel/anchovy, tuna, sea urchin, swordfish, Pacific bonito, sharks (sharks, skates, and rays, excluding white and angel sharks), sea cucumbers, and white sea bass. It should be noted that highly migratory fisheries (e.g., tuna and swordfish) are caught primarily outside of the SCSR. However, these fisheries are still considered economically important to this county (Department 2009).

Orange County. Tier two ports include Dana Point Harbor, Newport Harbor, and Huntington Harbor. Dana Point Harbor is located within the City of Dana Point, and hosts three marinas and a public boat launch facility. Dana Point Harbor offers boat services and commercially operated recreational activities such as fishing and whale watching excursions, kayaking, and Catalina Island transportation (City of Dana Point 2010). Newport Harbor is located within the City of Newport Beach and hosts numerous marinas and anchorages, as well as charter, rental, and public boat launch facilities. Huntington Harbor is located within the City of Huntington Beach and hosts numerous marinas and anchorages, and public boat launch facilities. Areas around Newport Harbor and Huntington Harbor also have a large variety of private dock locations.

In 2007, there were 81 commercial fishing vessels, 72 commercial fishermen, and 46 fish businesses that reported landings in Orange County ports. The top ten fisheries, based on average annual landings in pounds from 1998 through 2007 were, in decreasing order, DTS complex, spiny lobster, sea urchin, spot prawn, swordfish, mackerel/anchovy, rock crab, croakers, market squid, and California sheephead. It should be noted that highly migratory fisheries (e.g., swordfish) are caught outside of the SCSR. However, these fisheries are still considered economically important to this county (Department 2009).

San Diego County.

Tier One Ports. The Port of San Diego is located in San Diego Bay and extends across five sister cities including Imperial Beach, National City, Chula Vista, San Diego and Coronado. The port is the third busiest port complex in the SCSR, and is one of the three busiest port complexes in the country, with high amounts of vessel traffic that support the transportation of oil and petroleum products (Department 2009). The port also has a large volume of military vessel traffic, as it shelters various naval air stations, a naval amphibious base, training centers, and marine terminals. The port hosts two maritime cargo terminals, a cruise ship terminal, 17 public parks, multiple public boat launch facilities, and the largest

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

charter sportfishing fleet in the state, various wildlife reserves, a Harbor Police department and the leases of more than 600 tenant and sub-tenant businesses around San Diego Bay. The port's B Street Cruise Ship Terminal hosts approximately 190 cruise ships and receives approximately 200 annual cruise ship calls. A Port Master Plan has been developed that outlines future development plans and goals (Port of San Diego 2010). There are eight marine oil terminals in the San Diego region.

Tier Two Ports. Tier two ports in San Diego County consist of Mission Bay and Oceanside Harbor. Mission Bay is located in the City of Mission Bay, north of the Port of San Diego, and features nine marinas containing 1,800 slips, numerous public boat launch facilities, and sportfishing charters. Oceanside Harbor is located in the City of Oceanside, and hosts 24 slips and several side ties. Oceanside Harbor offers a launching ramp, sportfishing charters, boat storage, dinghy racks, a yacht club, and a police force (City of Oceanside 2010).

In 2007, there were 153 commercial fishing vessels, 145 commercial fishermen, 53 fish businesses and one aquaculture business that reported landings in San Diego County ports. The top ten fisheries, based on average landings in pounds from 1998 through 2007 were, in decreasing order, tuna, sea urchin, swordfish, spiny lobster, Pacific sardine, sharks (sharks, skates, and rays, excluding white and angel sharks), rock crabs, DTS complex (Dover sole, thornyheads and sablefish), spot prawn, and California sheephead. Aquaculture products consisted of mussels and oysters. It should be noted that highly migratory fishes (e.g., tuna and swordfish) are caught primarily outside of the SCSR. However, these fisheries are still considered economically important to this county and are included in the analyses (Department 2009).

8.4.2.1.2 Transportation Nodes. There are approximately 160 marina and launch ramp facilities in the SCSR (roughly half of coastal marinas and ramps statewide), with over 35,000 boat slips and tie-ups (Sadrozinski, pers. Comm.). Ports with marinas, public launch ramps, and hoists in the study region are listed in Tables 8.4-1 and 8.4-2.

8.4.2.2 Coastwise Shipping Lanes

Designated coastwise shipping lanes traverse the California coast from near Point Arguello, in western Santa Barbara County, through Santa Barbara Channel, continue southeast to the Ports of Los Angeles and Long Beach, then continue south to the Port of San Diego. The shipping lanes consist of both a Northbound and Southbound Coastwise Traffic Lane and a Separation Zone in between. Southern California is a heavily traveled vessel transportation corridor. Most coastwise vessel traffic passes through the Santa Barbara Channel en route to major ports on the U.S. west coast. Exceptions are super tankers, which for safety reasons generally avoid the channel by traveling south of the Channel Islands. Vessel transportation

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

**TABLE 8.4-1
PORTS WITH MARINAS**

County	Ports with Marinas
Santa Barbara	Santa Barbara Harbor
Ventura	Ventura Harbor Channel Islands Harbor Port Hueneme
Los Angeles	Marina Del Rey King Harbor Port of Los Angeles Port of Long Beach Alamitos Bay San Pedro Bay Avalon Harbor
Orange	Huntington Harbor Newport Harbor Dana Point Harbor
San Diego	Oceanside Harbor Mission Bay San Diego Harbor

Source: Department 2009.

in the south coast include many types of vessels including tankers, container ships, bulk carriers, military vessels, research vessels, cruise ships, tugs and tows, commercial fishing boats, and other commercial vessels (SLC 2003).

The coastwise shipping lanes operate in accordance with a Traffic Separation Scheme (TSS). A TSS is an internationally recognized vessel routing designation that separates opposing flows of vessel traffic into lanes approximately 1 nautical mile (NM) wide (such as the Northbound Coastwise Traffic Lane), with a zone between lanes approximately 2 NM wide (Separation Zone) where traffic is to be avoided. Vessels are not required to use any designated TSS, but failure to use one, if available, would be a major factor for determining liability in case of a collision (SLC 2003). Refer to Section 8.5 Hazards and Hazardous Materials for more information on vessel accidents.

From Point Conception to Point Dume (Santa Barbara and Ventura Counties), the proposed Point Conception SMR is the only MPA proposed near or within a coastwise shipping lane. This MPA is proposed approximately 2.5 miles north of the Northbound Coastwise Traffic Lane (Marine Map 2010).

From Point Dume to Dana Point (Los Angeles and Orange Counties), there are two proposed MPA locations that are located near or within a coastwise shipping lane. These MPAs include Point Vicente SMR and Abalone Cove SMCA. The Point Vicente SMR is located at

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

**TABLE 8.4-2
PUBLIC BOAT LAUNCH OR HOIST LOCATIONS**

County	Launch or Hoist Locations
Santa Barbara	Santa Barbara Launch Ramp Gaviota Pier/Hoist Goleta Pier/Hoist
Ventura	Ventura Launch Ramp Channel Islands Launch Ramp
Los Angeles	Marina Del Rey Launch Ramp Davies Launch Ramp Claremont Ramp Granada Ramp Marine Stadium Ramp Mother's Beach (hand launch) South Shore Launch Ramp Cabrillo Launch Ramp Avalon Pleasure Pier/Hoist King Harbor Launch Ramp/Hoist
Orange	Dana Point Launch Ramp Newport Dunes Launch Ramp Huntington Harbor Ramp Sunset Aquatic Launch Ramp North Star Beach (hand launch)
San Diego	Shelter Island Launch Ramp Oceanside Launch Ramp Agua Hedionda Lagoon Launch Ramp Santa Clara Point Launch Ramp Dana Basin Launch Ramp Chula Vista Launch Ramp Glorietta Launch Ramp National City Launch Ramp Ski Beach Launch Ramp South Shores Launch Ramp De Anza Cove Launch Ramp La Jolla Shores (hand launch)

Source: Department 2009.

the border of the Northbound Coastwise Traffic Lane and the Abalone Cove SMCA is located less than a mile from the Northbound Coastwise Traffic Lane (Marine Map Nautical Chart).

From Dana Point to the Mexico Border (San Diego County), there are no proposed MPA locations located near or within a coastwise shipping lane.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

The most congested areas occur at the entrances to major ports in the region discussed in Table 8.4-1. Harbor Safety Committees established by state law at the major ports, improved Vessel Traffic Service, and other safety measures have served to improve navigation safety and response in these areas. None of the proposed MPAs are at or near the entrance to any of the major ports in the region.

8.4.2.3 Restricted Access Areas

8.4.2.3.1 Military Use Areas. The Army Corps of Engineers, Department of the Army, and the Department of Defense (DOD) use specific areas in the SCSR for military operation and training purposes along the mainland coast and surrounding the Channel Islands. Military use areas prohibit vessel traffic access in danger zones and restricted areas under individual regulations. Each area has prescribed requirements, access limitations and controlled activities, as described in the CFR. Danger zones and restricted areas within the SCSR are described by County, as they pertain to vessel traffic.

Santa Barbara and Ventura Counties. Vandenberg Air Force Base has nine danger zones surrounding the base, which are closed during launch activities. Port Hueneme has restricted areas, dump sites, buoy testing zones, and danger zones which surround Laguna Point, southeast of Point Hueneme. Restrictions state that no vessels or persons may enter the restricted area unless permission is obtained from Port Hueneme's Commanding Officer. Point Mugu has two danger zones, consisting of small arms firing ranges that are closed during firing procedures. In addition, one restricted area prohibits the entry of all vessels unless permission is obtained in advance from Point Mugu's Commanding Officer.

Los Angeles and Orange Counties. San Pedro Bay has one danger zone, consisting of a practice firing range for the U.S. Army Reserve, National Guard, and Coast Guard units, and is closed during periods of firing. In addition, San Pedro Bay has one restricted area that prohibits any person or vessel from entering, navigating, anchoring or mooring without first obtaining the permission of the Warden of the Federal Correctional Institution at Terminal Island. Seal Beach has one restricted area near the Anaheim Bay Harbor Naval Weapons Station and prohibits entry of any recreational craft and any activity involving persons in the water. Long Beach Harbor has one restricted area that is reserved exclusively for use by naval vessels. Permission for any person or vessel to enter the area must be obtained from the enforcing agency.

San Diego County. Port of San Diego has five restricted areas near the Naval Amphibious Base, the Naval Air Station North Island, and the San Diego harbor. Regulations state that vessel traffic will be allowed (except within 100 feet of Bravo Pier) but shall proceed across the areas by the most direct route and without unnecessary delay. Only vessels owned by, under hire to, or performing work for the Naval Air Station or the Naval Weapons Station may operate within 100 feet of Bravo Pier. Camp Pendleton has three restricted areas

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

associated with the Camp Pendleton Marine Corps Base. Regulations state that no vessel or craft of any size shall lie-to or anchor in the restricted areas at any time other than a vessel operated by or for the U.S. Coast Guard, local, State or Federal law enforcement agencies.

San Nicolas Island. Regulations promulgated by the U.S. Army Corps of Engineers (see 33 CFR 334.980) designate the waters surrounding San Nicolas Island as a restricted area, and restrict vessel traffic in two portions of the restricted area (identified in the regulations as Section Bravo and Section Charlie). In these areas, no vessels other than Pacific Missile Range craft and those cleared for entry by the Commander of the Pacific Missile Range, or the Officer-in-Charge at San Nicolas Island are permitted to enter at any time except in an emergency. However, the regulations also provide that dredging, dragging, seining, or other fishing operations are permitted within these areas, except when the areas are declared closed by the Commander of the Pacific Missile Range. Thus, the restricted areas at San Nicolas Island must be avoided by all vessels except for those engaged in fishing.

San Clemente Island. San Clemente Island has exclusive use zones, security zones, restricted areas, and danger zones that are restricted to naval vessels, as they present a hazard to mariners. Portions of the waters surrounding the island are designated as a danger zone which is closed during scheduled military use. Range marker poles are used as physical indicators of the three restricted zones and local Notices to Mariners are broadcast as needed to advise of area closures (Department 2009).

Effective June 21, 2010, the U.S. Coast Guard issued a Final Rule (see 75 FR 28194) amending the CFR to establish a safety zone around San Clemente Island in support of potentially hazardous military training and testing exercises (see 33 CFR 165.1411). The safety zone is intended to protect the public from hazardous, live-fire and testing operations and to reduce the incidence of operational delays. The safety zone completely surrounds San Clemente Island and is subdivided into nine mapped sections, with eight sections titled Sections A through G and a ninth section designated around Wilson Cove.

The Coast Guard's regulations at 33 CFR 165.23 governing activities within safety zones explicitly prohibit entry into safety zones except by permission of the Captain of the Port or the District Commander. However, regulatory language governing the safety zone at San Clemente Island includes provisions allowing the Captain of the Port to temporarily suspend enforcement in Sections A through F of the safety zone. During periods when enforcement is suspended, entry and use of the safety zone by non-military vessels is not be prohibited. The Captain of the Port provides public notice of suspended enforcement through notices to mariners and by posting a schedule of restricted access periods by date, location and duration on the San Clemente Island website at <http://www.scisland.org>.

Suspended enforcement does not occur within Section G and the Wilson Cove section of the safety zone, and entry into or navigation through these sections of the safety zone is

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

prohibited. However, the Final Rule provides a telephone number and radio procedure for obtaining authorization to navigate through Section G and Wilson Cove on a case-by-case basis. If authorization is not obtained, vessel traffic in the area must maintain a distance of three nautical miles from the island to bypass these locations. If the Navy determines that facilitating safe transit through Section G and Wilson Cove negatively impacts range operations, the Navy will cease this practice and enforce the safety zones in these two areas without exception (33 CFR 165.1141(d)(2)).

8.4.2.3.2 Power Plant Areas. Several coastal power plants are located within the SCSR with restricted access due to security reasons. San Onofre Nuclear Generating Station, for example, prohibits vessel traffic from entering, transiting, or anchoring within one NM of the power plant (measured from 33°22'30"N, 117°33'50"W), though it does not prevent recreational activities in the surf zone or on the beach.

8.4.2.4 Navigation and Weather Buoys

At particular locations, the SCSR contains floating buoys that have been permanently installed for purposes of navigational safety and data collection. Navigation buoys are most commonly installed to identify the location of pilot channels and prevent collisions among vessels entering or leaving harbors. Such buoys are usually placed reasonably near to shore, but can also be installed in offshore locations to indicate a given distance to port. In locations where reefs or other submerged boating hazards may exist, buoys may be used to alert passing vessels of the danger. Buoys are also frequently used as markers in nearshore waters to delineate the boundaries of recreational swimming areas. In addition to buoys installed for navigational safety purposes, the SCSR also contains several larger buoys, equipped with various measurement devices that have been deployed for the purposes of recording meteorological and oceanographic conditions. The National Data Buoy Center identifies a total of 25 data buoys moored within the SCSR, most of which are located within state jurisdictional waters. Although buoys are unmanned for the most part, occasional replacement or repair of moored buoys is necessary to ensure that the units have not become damaged or detached, and are functioning as intended. An examination of nautical charts overlain on the proposed MPA network using the Marine Map Decision Support Tool (Marine Map 2010) indicated that at a minimum, there are numerous mooring buoys within and adjacent to the proposed Point Conception SMR and Matlahuayl SMCA.

8.4.2.5 Vessel Types

The following sections describe the major types of vessels that venture out from SCSR ports or that transit in the region.

8.4.2.5.1 Fishing Vessels. Fishing vessels can be categorized into three basic modes: commercial fishing vessels, commercial passenger fishing vessels (CPFVs), and private and rental boats.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Commercial Fishing Vessels. Commercial fishing vessels are dedicated vessels that fish for commercial profit. Some commercial fishing vessels can be large, with the ability to fish hundreds of miles off-shore, and are capable of hauling large catches of fish. These vessels usually require a crew that includes a captain, or skipper, a first mate, a boatswain/deckboss, and deckhands with specialized skills (Bureau of Labor Statistics 2010). Other commercial fishing vessels, such as those that engage in commercial fishing for lobster and urchin, can be smaller in size.

Commercial Passenger Fishing Vessels. CPFVs, also called party boats, carry recreational anglers to ocean fishing locations for a fee. CPFVs have the greatest range of any recreational fishing mode and are generally limited by travel time, and less so by weather or other considerations. CPFVs in the study region operate out of ports in all five south coast counties from Santa Barbara to San Diego. There are over 200 CPFVs operating in the SCSR, ranging in passenger capacity from two to 150 persons, with an average passenger load of 35 persons per trip. CPFVs in the study region fish in nearshore waters of the mainland coast, Santa Catalina, Santa Barbara, San Nicholas, and San Clemente islands, and around the Channel Islands, as well as in Mexican waters and offshore banks (Department 2009).

Private and Rental Boats. Private boats are privately owned vessels, and rental boats are vessels that are rented without a crew. The private and rental boat category includes kayaks, sailboats, skiffs, and large motor boats. In general, these vessels fish the same areas within the study region as CPFVs, although areas accessed vary by vessel type and size. The coastline is well protected, and distribution of fishing effort is dependent on the population size of the counties rather than limited access points or rough sea conditions. Some fishermen travel farther to find good fishing during fair weather. Similarly, in larger boats, anglers will venture to offshore banks and coastal islands within the study area for highly migratory species (Department 2009).

8.4.2.5.2 Non-fishing Commercial and Recreational Vessels.

Commercial Vessels. There are a number of different types of commercial craft, such as ferries, tugs, crew and supply boats, as well as charter excursion boats that travel within the SCSR. In 2004, roughly 300 commercial vessels identified their home port within Southern California. However, a much larger numbers of vessels transit in and through the study region. The majority of these transits are large commercial vessels, such as container ships and bulk product carriers, which travel within two miles of shore and carry up to one million gallons of bunker fuel, which is similar to crude oil (Department 2009).

Container ships, informally known as “box boats,” carry the majority of the world’s dry cargo or, manufactured goods such as metal ores, coal, and wheat. Capacity is measured in twenty-foot equivalent units (TEU), defined as the number of standard 20-foot containers

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

(measuring 20 × 8.0 × 8.5 feet) a vessel can carry. Most containers used today measure 40 feet in length. There are large main line vessels that use deep sea routes, and many small “feeder” ships that supply large ships at centralized hub ports. According to the American Association of Port Authorities (AAPA) 2008 World Port Rankings, the Port of Los Angeles and the Port of Long Beach rank 16th and 17th respectively in heaviest TEU traffic worldwide (AAPA 2008).

Recreational Vessels. The number of non-consumptive recreational vessels has been increasing in the study region. Non-consumptive recreational vessels include wildlife watching boats (mainly birds and whales), recreational cruising boats, kayaks, jet skis, and sail boats. For example, Island Hoppers (private ventures capitalizing on the demand for recreational harbor tours, wildlife viewing, and transportation to the Channel Islands) generate vessel trips daily from Santa Barbara, Ventura, San Pedro (Los Angeles Harbor), Long Beach, Dana Point (Orange County) and San Diego. An operator in the Los Angeles Area provides up to 30 round trips per day service to Catalina Island from ports in Long Beach, San Pedro and Dana Point. These activities differ from Commercial Passenger Fishing Vessels (CPFV) as operating locations, trip durations and destinations are generally established for efficient transportation or to view wildlife occurring in the SCSR. According to data from the California Department of Motor Vehicles, the California Recreational Fisheries Survey (CRFS), and the Department’s vessel permitting data for the three major port complexes in the SCSR, there are approximately 296,747 registered recreational marine or aquatic vessels in the SCSR (Table 8.4-3) (Department 2009).

**TABLE 8.4-3
REGISTERED VESSELS IN THE SCSR**

County	Registered Vessels 1990	Pleasure Vessels 1990	Registered Vessels 2007	Pleasure Vessels 2007
Santa Barbara	9,083	8,636	10,679	10,253
Ventura	22,299	21,896	26,558	26,136
Los Angeles	123,824	122,027	124,420	123,145
Orange	67,545	66,528	70,014	69,126
San Diego	56,363	55,037	69,427	68,087

Source: Department 2009.

8.4.2.5.3 Research Vessels. There are number of research vessels within the SCSR that support research and education. In Santa Barbara County, the Channel Islands National Marine Sanctuary supports The Shearwater. Within Los Angeles County, Southern California Marine Institute maintains two research vessels, Sea Watch and Yellowfin. In Orange County, the Ocean Institute maintains three vessels, Pilgrim, Spirit of Dana Point and Sea Explorer. In San Diego County, the Scripps Institute of Oceanography maintains four

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

research vessels: Roger Revelle, Melville, New Horizon, and Robert Gordon Sproul (Department 2009).

8.4.2.5.4 Military Vessels. Types of military vessels range from small work boats to major combatants such as aircraft carriers, cruisers, and submarines. The activity level of ships and boats is characterized as a ship or boat event. They include operational, training, post maintenance, and Research, Development, Test, and Evaluation (RDT&E) events. Some of these events may occur simultaneously, as the vessels operate together or separately in one of the many training areas available.

8.4.2.6 California Recreational Fisheries Survey

The CRFS conducts interviews of anglers returning to public launch ramps. CRFS samplers intercepted a total of 22,278 private and rental boats within the SCSR. The most surveys took place in San Diego County while the fewest took place in Santa Barbara County. San Diego County also had the highest rate of boats that had fished for finfish recreationally (69 percent), and Santa Barbara County had the lowest rate (45 percent). Santa Barbara County had the highest percentage of commercial fishing or non-fish vessels at approximately 10 percent. San Diego County had the lowest percentage of vessels not fishing (28.5 percent), while Los Angeles County had the highest (46.1 percent). See Table 8.4-4 for a complete summary of the CRFS results for all counties in the study region (Department 2009).

The CRFS figures are not indicative of the overall proportions of vessels engaging in consumptive and non-consumptive activities within the SCSR. Many vessels, in particular sailboats, are moored in the region's marinas and buoyed areas, and were not interviewed in the survey (Department 2009). However, the CRFS data do yield examples of the various purposes for consumptive and non-consumptive vessel traffic within the SCSR, and provide a coarse-level comparison of the popularity of the various activities.

8.4.3 Impact Analysis

8.4.3.1 Study Methods

Effects to vessel traffic were qualitatively assessed by evaluating the IPA's proposed MPA locations in relationship to known navigational rules such as Traffic Separation Schemes.

8.4.3.2 Criteria for Determining Significance

Based on Appendix G of the State CEQA Guidelines with an adaptation for marine traffic, it was determined that the proposed Project would result in a significant impact on vessel traffic if it would:

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

**TABLE 8.4-4
RECREATIONAL VESSEL TRIPS BY ACTIVITY AND COUNTY IN 2007
FOR VESSELS INTERVIEWED AT PUBLIC LAUNCH RAMPS**

	Santa Barbara		Ventura		Los Angeles		Orange		San Diego		Total Study Region	
	Vessels	%	Vessels	%	Vessels	%	Vessels	%	Vessels	%	Vessels	%
Vessels Fishing												
Fished recreationally for finfish	656	45.3	1,549	50.3	3,267	51.1	1,839	59.4	5,673	68.7	12,984	58.3
Intended to fish recreationally, but no gear in water	11	0.8	53	1.7	114	1.8	38	1.2	76	0.9	292	1.3
Recreational shellfish	4	0.3	14	0.5	10	0.2	3	0.1	8	0.1	39	0.2
Recreational squid only					3	--	2	0.1	1	--	6	--
Fished commercially	132	9.1	154	5	50	0.8	37	1.2	150	1.8	523	2.4
Total Vessels Fishing	803	55.5	1,770	57.5	3,444	53.9	1,919	62	5,908	71.5	13,844	62.2
Vessels Not Fishing												
Recreational cruising	376	26	807	26.2	2,478	38.8	965	31.2	1,684	20.4	6,310	28.3
Burial at sea			2	--					6	0.1	8	--
Bird watching									1	--	1	--
Diving, non-consumptive	18	1.2	48	1.6	57	0.9	38	1.2	135	1.6	296	1.3
Enforcement (public agency)	3	0.2	18	0.6	11	0.2			36	0.4	68	0.3
Hunting, gun									2	--	2	--
Boat maintenance	72	5	160	5.2	207	3.2	85	2.7	215	2.6	739	3.3
Research (public agency)	52	3.6	21	0.7	13	0.2	6	0.2	40	0.5	132	0.6
Whale watching	1	0.1	4	0.1			12	0.4	6	0.1	23	0.1
Other commercial activity	26	1.8	108	3.5	29	0.5	3	--	65	0.8	231	1.1
Removing boat from slip, no trip	95	6.6	143	4.6	148	2.3	65	2.1	143	1.7	594	2.7
Unidentified	1	--	1	--	1	--	5	0.2	22	0.3	30	0.1

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

**TABLE 8.4-4 (CONTINUED)
RECREATIONAL VESEL TRIPS BY ACTIVITY AND COUNTY IN 2007
FOR VESSELS INTERVIEWED AT PUBLIC LAUNCH RAMPS**

	Santa Barbara		Ventura		Los Angeles		Orange		San Diego		Total Study Region	
	Vessels	%	Vessels	%	Vessels	%	Vessels	%	Vessels	%	Vessels	%
Total Vessels Not Fishing	644	44.5	1,312	42.5	2,944	46.1	1,179	38	2,355	28.5	8,434	37.8
Total All Boats	1,447	100	3,082	100	6,388	100	3,098	100	8,263	100	22,278	100

Source: Department 2009.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

- Substantially increase oceanic hazards, in particular due to changes in vessel traffic concentration (i.e., congestion)
- Result in disruption of existing vessel traffic patterns and marine navigation

8.4.3.3 Environmental Impacts

Criterion VT-1: Substantially increase oceanic hazards, in particular due to changes in vessel traffic concentration (i.e., congestion)

The proposed Project IPA would establish MPAs that have certain restrictions in terms of allowable activities; however, vessels would not be restricted from transiting through them. The primary vessel groups that would be potentially impacted by the proposed MPAs are those engaged in commercial and recreational fishing. These user groups may be displaced from some of the new MPAs, thereby forcing them to conduct their activities at the periphery of MPA boundaries or in other locations with fewer restrictions. This could result in an increased competition for resources in locations outside of MPAs, and potential increased concentration (i.e., congestion) in such locations. A secondary user group potentially impacted by the proposed Project IPA would be divers and scientific researchers attracted to the reserve's underwater habitats. Both within and outside of the proposed MPAs, there may be a minor increase in concentration of vessel traffic attributed to the primary and secondary user groups, which could conceivably create a hazard from having more boats operating in a smaller area. In addition, increases in habitat and wildlife in the SCSR as a result of the proposed Project IPA may result in additional wildlife viewing vessel trips to individual MPAs.

The proposed Project IPA would increase the extent of MPAs within the SCSR by approximately 169 square miles, an increase of 93 percent compared to existing conditions. Because of this substantial increase in area, it is very unlikely that boat concentrations within the MPAs would cause congestion, especially considering that current traffic associated with consumptive uses would decrease within the MPAs. Although the increase in protected areas would be substantial when viewed as a percentage of the current MPA network, the increase would nevertheless only constitute a small fraction of the SCSR. The vast majority of state waters in the region would remain open to consumptive commercial and recreational uses. Because the area available for fishing uses greatly exceeds the area from which fishing effort would be displaced by the proposed Project IPA, it is reasonable to conclude that substantial vessel congestion in fishing grounds would not occur. Further, captains and operators of each individual vessel would be subject to international navigational rules, which would be unaffected by implementation of the proposed regulatory changes. These rules place the responsibility upon individuals to pilot their vessels in a safe manner. The existing TSS, Vessel Traffic System monitoring, safety reviews and recommendations by Harbor Safety Committees, USCG enforcement, and other systems in place to ensure safe navigation and vessel operations would remain in place. Consequently, potential impacts related to vessel

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

density and oceanic hazards from the proposed Project IPA would be less than significant, and no mitigation would be required.

Criterion VT-2: Result in disruption of existing vessel traffic patterns and marine navigation

Based on a query of the Marine Map Decision Support Tool (Marine Map 2010), a web application that enables a graphical examination of the proposed MPA boundaries relative to nautical designations and other features, some MPAs are proposed in the vicinity of the current coastwise vessel traffic lanes. The offshore boundary of the proposed Point Vicente SMR is adjacent to the northbound coastwise shipping lane leaving the Los Angeles/Long Beach port complex, and the southern extent of the proposed Abalone Cove SMCA, which would border the Point Vicente SMR to the east, is only slightly further away. With the exception of these two locations, all other MPAs designated by the IPA would be located at least one nautical mile from designated shipping lanes. Because of this limited interface between shipping lanes and proposed MPAs, and because boaters are generally familiar with the locations of shipping lanes, it is unlikely that implementation of the proposed Project IPA would result in a substantial increase in the number of fishing vessels within commercial shipping lanes. Thus, the proposed Project IPA would not significantly disrupt vessel traffic patterns and marine navigation with respect to the coastwise shipping lanes. Three existing MPAs within the northern Channel Islands (the Anacapa Island SMCA, Anacapa SMR, and Scorpion SMR) overlap the southbound coastwise shipping lane through the Santa Barbara Channel; however, these existing MPAs would not be altered by the proposed regulatory changes and are thus not a part of the proposed Project.

The proposed Project IPA would not alter the accessibility of existing mainland ports and harbors to vessel traffic. The proximity of MPAs to ports or major access points has been thought to cause problems to vessel traffic, particularly if vessels are required to travel over greater distances, or in dangerous conditions. Because vessel safety in emergencies and foul weather is critical, transit through and anchoring in MPAs is allowed in all of the proposed MPAs. There are areas where boating and anchoring are restricted or limited to specific areas or restricted to daylight hours, for example in certain areas surrounding the safety zone around San Clemente Island. Transit, however, is allowed and anchoring in emergency situations is always permitted pursuant to federal law. Since these restrictions exist in the present MPAs in these locations, the proposed Project IPA would not change existing use patterns. In addition, vessels engaged in fishing can legally transit MPAs, so long as fishing gear is stowed.

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; therefore, the proposed Project's impact on existing

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

marine routes and navigation would be less than significant, and no mitigation would be required.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.5 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the proposed Integrated Preferred Alternative (IPA) with respect to hazards and hazardous materials. Specifically, the section identifies the existing conditions within the south coast study region (SCSR); analyzes the potential impacts of the proposed Project related to hazards and hazardous materials; and identifies mitigation measures to address these impacts, as appropriate.

8.5.1 Regulatory Framework

Regulations pertaining specifically to hazards and hazardous materials are described further in this section. For general information regarding coastal and open water jurisdictions within the SCSR, resource-based agencies, and commissions, please refer to Section 2.0 of this Draft Environmental Impact Report (EIR).

8.5.1.1 International Shipping Laws and Regulations

The International Maritime Organization (IMO) maintains a comprehensive regulatory framework for shipping that includes safety, environmental concerns, legal matters, technical cooperation, maritime security, and the efficiency of shipping. Measures are aimed at the prevention of accidents, including standards for ship design, construction, equipment, operation, and staffing, as well as key treaties. Other measures recognize that accidents may happen, and include procedures concerning distress and safety communications (IMO 2010).

The International Convention for the Prevention of Pollution from Ships (MARPOL), 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), is the principal instrument established by the IMO for preventing marine pollution. Annex I, Regulation 26 of MARPOL requires that every oil tanker of 150 tons gross tonnage and above and every ship other than an oil tanker of 400 tons gross tonnage and above carry on board a shipboard oil pollution emergency plan approved by the Administration (Flag State). The IMO has also issued “Guidelines for the Development of Shipboard Oil Pollution Emergency Plans” to assist both tanker owners and governments. Traffic separation schemes must also be developed and approved by the IMO, such as the approved traffic separation schemes off the entrance to the Santa Barbara Channel. It should be noted that plans that meet the 1990 Oil Pollution Act (OPA) and the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (California Senate Bill 2040) requirements also meet IMO requirements.

8.5.1.2 Federal Statutes and Regulations

A number of federal laws regulate oil and gas facilities, marine terminals and vessels that occur within and near the SCSR. These laws address design and construction standards, operational standards, spill prevention, and cleanup. Regulations to implement these laws are contained primarily in Code of Federal Regulations (CFR) Titles 33 (Navigation and

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

Navigable Waters), 40 (Protection of Environment), and 46 (Shipping). Key federal laws addressing oil pollution are discussed below.

8.5.1.2.1 Resource Conservation and Recovery Act. The Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. §6901 et seq.) is a United States Environmental Protection Agency (EPA) administered law that gives EPA the authority to control the generation, transportation, treatment, storage, and disposal of hazardous waste, as well as the management of non-hazardous solid wastes. RCRA includes the Hazardous and Solid Waste Amendments of 1984 (HSWA) that focus on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Other mandates include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

8.5.1.2.2 Oil Pollution Act. The OPA was signed into law in August 1990 (Public Law 101–380 [H.R.]: August 18, 1990). The OPA establishes provisions that expand the federal government’s ability to respond to oil spills. The OPA also created the national Oil Spill Liability Trust Fund, which is available to provide up to one billion dollars per spill incident. In addition, the OPA provided new requirements for contingency planning both by government and industry. The National Oil and Hazardous Substances Pollution Contingency Plan has been expanded in a three-tiered approach: the federal government is required to direct all public and private response efforts for certain types of spill events; Area Committees—composed of federal, state, and local government officials—must develop detailed, location-specific area contingency plans; and owners or operators of vessels and certain facilities that pose a serious threat to the environment must prepare their own facility response plans. Finally, the OPA increases penalties for regulatory noncompliance, broadens the response and enforcement authorities of the federal government, and preserves state authority to establish law governing oil spill prevention and response.

The EPA is responsible for the National Contingency Plan, and acts as the lead agency in response to an onshore spill. EPA also serves as co-chairman of the Regional Response Team, which is a team of agencies established to provide assistance and guidance to the on-scene coordinator during the response to a spill. The EPA also regulates disposal of recovered oil and is responsible for developing regulations for spill prevention, control, and countermeasures plans. These plans are required for non-transportation-related onshore and offshore facilities that have the potential to spill oil into waters of the United States or adjoining shorelines.

The United States Coast Guard (USCG) is responsible for federal contingency planning, and acts as a co-chair with the California Department of Fish and Game (Department) in the Port Area Committees for Contingency Planning. The area committees are each chaired by a USCG representative and include oil spill response representatives from federal, state, and local government agencies. The State Office of Spill Prevention and Response is the lead

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

non-federal agency. The SCSR contains two port areas that have developed area contingency plans; the Los Angeles/Long Beach area and the San Diego area. Each area contingency plan is site-specific, and provides clear directives on oil spill response, including the organization of incident command, planning and response roles and responsibilities, response strategies, and logistics. In addition, site-specific response plans are described for various coastal segments where there are species and other resources of concern. The plan also provides site-specific information on resources of concern, local contacts, access to sites, and containment strategies. Each Area Contingency Plan is updated annually, so that the plans are current and accurate. The USCG also issues regulations under OPA addressing requirements for response plans for tank vessels, offshore facilities, and onshore facilities that could reasonably expect to spill oil into navigable waterways.

8.5.1.2.3 Clean Water Act. The Clean Water Act (CWA) is the primary federal law governing water pollution in the United States. The main goals of the CWA are to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands.

National Pollutant Discharge Elimination System Permit Program. The 1972 amendments to the CWA provide the statutory basis for the EPA administered the National Pollutant Discharge Elimination System (NPDES) permit program (Section 402). NPDES permits contain industry-specific, technology-based and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent. The permit will then set forth the conditions and effluent limitations under which a facility may make a discharge.

The CWA, 40 CFR Part 112, aims to prevent the discharge or threat of discharge or oil into navigable water or adjoining shorelines. The regulations require a written spill prevention, control, and countermeasures plan to be prepared for facilities that store or treat oil that could leak into navigable waters.

8.5.1.2.4 Water Quality Act of 1987. The Water Quality Act of 1987 is an amendment to the CWA that requires industrial stormwater dischargers and municipal separate storm sewer systems to obtain EPA-administered NPDES permits.

8.5.1.2.5 Act to Prevent Pollution from Ships. The Act to Prevent Pollution from Ships (33 U.S.C. §§1905-1915) implements the MARPOL Convention (see Section 8.5.1.1).

This act applies to all U.S.-flagged ships and to all foreign-flagged vessels operating in navigable waters of the United States or while at port under U.S. jurisdiction. The USCG has primary responsibility to prescribe and enforce regulations necessary to implement this Act

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

in these waters. The regulatory mechanism established to implement MARPOL is separate and distinct from the CWA and other federal environmental laws.

8.5.1.2.6 Hazardous and Solid Waste Amendments of 1984. The HSWA are amendments to both the Solid Waste Disposal Act of 1965, and the RCRA. The HSWA created the Land Disposal Restrictions Program, established the RCRA Corrective Action requirements, established permitting deadlines for hazardous waste facilities, regulates small-quantity generators of hazardous waste, and requires a nationwide survey of the conditions at solid waste landfills. The HSWA remain incorporated within the Solid Waste Disposal Act, as amended by RCRA, and the three combined acts are generally referred to as RCRA.

8.5.1.2.7 Refuse Act of 1899. The Refuse Act of 1899 is a federal statute governing the use of waterways and administered by the Army Corps of Engineers. The Act, a section of the Rivers and Harbors Act of 1899, prohibits “dumping of refuse“ into navigable waters, except by permit, in order to control debris that obstructs navigation. The Refuse Act was followed by the Federal Water Pollution Control Act of 1948, 33 U.S.C.A. §1251, which created water quality standards and prescribed the levels of pollutants permitted in a given body of water. Since 1972, federal regulation of water pollution has been primarily governed by the CWA.

8.5.1.2.8 United States Coast Guard Regulations. The USCG, through 33 CFR (Navigation and Navigable Waters) and 46 CFR (Shipping), is the federal agency responsible for vessel inspection, marine terminal operations safety, coordination of federal responses to marine emergencies, enforcement of marine pollution statutes, marine safety (navigation aids, etc.), and operation of the National Response Center for spill response, and is the lead agency for offshore spill response. The USCG implemented a revised vessel boarding program in 1994 designed to identify and eliminate substandard ships from U.S. waters. The USCG is also responsible for reviewing marine terminal operations manuals and issuing letters of adequacy upon approval. At the present time, the USCG relies on the California State Lands Commission (SLC) to review operations manuals and inspect terminals.

8.5.1.2.9 National Oceanic and Atmospheric Administration. NOAA provides scientific support for response and contingency planning, including, but not limited to: hazard assessment, hazardous substances trajectory modeling, and coastal environments sensitivity. NOAA also provides expertise on living marine sources and their habitats, including endangered species, marine mammals, and National Marine Sanctuary ecosystems. NOAA provides information on actual and predicted meteorological, hydrological, and oceanographic conditions for marine, coastal, and inland waters, and tide and circulation data for coastal waters.

8.5.1.3 State of California Statutes and Regulations

The following California state laws and regulations address gas and liquid pipelines, oil and gas facilities and hazardous materials.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.5.1.3.1 Office of Environmental Health Hazard Assessment. The Office of Environmental Health Hazard Assessment (OEHHA) provides a health advisory for fish consumption. According to OEHHA, fish that contain high levels of toxic chemicals are found in many different parts of California. OEHHA reports that in Southern California (Los Angeles area) – certain kinds of fish contain high levels of industrial chemicals and pesticides. According to OEHHA, most advisories are issued because of mercury in fish. In a few cases, fish are contaminated with PCBs or other chemicals. OEHHA provides an Advisory Map for Water Bodies with Safe Eating Guidelines for Fish Consumption. OEHHA also provides specific advice for women in childbearing years and children.

8.5.1.3.2 Lempert-Keene-Seastand Oil Spill Prevention and Response Act of 1990. The Act covers all aspects of marine oil spill prevention and response in California. It establishes an Administrator who is given very broad powers to implement the provisions of the Act. The Act also gives the SLC certain authority over marine terminals. In 1991 the Office of Spill Prevention and Response was established within the Department. The Act seeks to protect the waters of the state from oil pollution and to plan for the effective and immediate response, removal, abatement, and cleanup in the event of an oil spill. It requires immediate cleanup of spills following approved contingency plans. It assigns primary authority to Office of Spill Prevention and Response to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in the marine waters of the state. It also requires vessel and marine facilities to have marine oil spill contingency plans.

8.5.1.3.3 Hazardous Waste Control Law. The Hazardous Waste Control Law (HWCL) is administered by the California Environmental Protection Agency Department of Toxic Substances Control (DTSC). DTSC has adopted extensive regulations governing the generation, transportation, and disposal of hazardous wastes. These regulations impose cradle-to-grave requirements for handling hazardous wastes in a manner that protects human health and the environment. The HWCL regulations establish requirements for identifying, packaging, and labeling hazardous wastes. They prescribe management practices for hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. Hazardous waste is tracked from the point of generation to the point of disposal or treatment using hazardous waste manifests. Manifests must list a description of the waste, its intended destination, and regulatory information about the waste.

8.5.1.3.4 Hazardous Materials Transportation in California. California regulates the transportation of hazardous waste originating or passing through the state in 13CCR. The California Highway Patrol and Caltrans have primary responsibility for enforcing Federal and state regulations and responding to hazardous materials transportation emergencies. The highway patrol enforces materials and hazardous waste labeling and packing regulations that prevent leakage and spills of material in transit, and provide detailed information to cleanup

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

crews in the event of an incident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are all part of the responsibility of the highway patrol. The highway patrol conducts regular inspections of licensed transporters to ensure regulatory compliance. Caltrans has emergency chemical spill identification teams at locations throughout the state.

8.5.1.3.5 California Coastal Act of 1976. The California Coastal Act of 1976 (Coastal Act; Public Resources Code sections 30000–30900) establishes policies and guidelines that provide direction for the conservation and development of the California coastline. The Coastal Act established the California Coastal Commission (CCC) as the state’s coastal management, regulatory, and permitting agency for all development within California’s coastal zone. The CCC shares permitting and regulatory authority with local governments who have a certified local coastal program. The policies set forth in Chapter 3 of the California Coastal Act require the avoidance or minimization of adverse impacts to the people, communities, visual character, and sensitive resources of California’s coastal zone from hazardous developments.

Section 30232 of the act addresses hazardous materials spills, and states that protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. In addition, effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Section 30262 of the act sets requirements for oil and gas development and transportation, and states that new or expanded oil and gas facilities shall be consolidated, platforms or islands will not be sited in areas of substantial hazard to vessel traffic, and that all offshore produced oil shall be transported onshore, and to processing and refining facilities by pipeline only. In addition, Section 30262 states that the protection of marine habitat and environmental quality will be maximized, and the best achievable technology shall be used when an offshore well is abandoned.

8.5.2 Environmental Setting

With respect to hazards and hazardous materials, the baseline environmental conditions reflect the current conditions and operation status of existing facilities within the SCSR. The SCSR has a number of areas that contain hazards and hazardous materials such as contaminated sediments, a Superfund site, and oil and gas facilities.

8.5.2.1 Sediment Contamination

The Draft Staff Report-Water Quality Control Plan for Enclosed Bays and Estuaries prepared in 2008 by the State Water Resources Control Board (SWRCB) and California Environmental Protection Agency (Cal-EPA) provides general information regarding

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

sediment contamination in the Southern California Bight. According to the report, sediments in bays and estuaries in the SCSR have been identified to be contaminated with a variety of pollutants from sources including industrial and agricultural discharges, municipal wastewater treatment plants, and stormwater. Contaminated sediments are typically located in bays and harbors due to their proximity to anthropogenic contaminant sources and their hydrological characteristics that contribute to particulate settlement and retention. In the Southern California Bight, bays and harbors were reported as containing 22 percent of total Bight-wide sediment contamination, even though they constitute only 6 percent of the area surveyed (SWRCB and Cal-EPA 2008). Within bays and harbors, areas of greater sediment contamination are typically located in areas with low water exchange rates, such as blind slips, and/or in areas of high sedimentation, such as river or creek mouths. Urban, industrial and recreational uses of marine waters and associated upstream watersheds all contribute to contaminants found in sediments offshore of the Bight. Effects of these contaminants subsequently degrade the associated beneficial uses of the waters overlying the sediments, including the biological, commercial, industrial, and recreational values. Exposure to contaminated sediments can have a significant effect on the health, diversity and abundance of invertebrates. Foraging fish and birds may also be exposed by ingesting contaminated invertebrates or sediments. In turn, those organisms consuming contaminated fish may be exposed to toxic pollutants (SWRCB and Cal-EPA 2008). The SWRCB has implemented a Bay Protection and Toxic Cleanup Program to identify areas of sediment contamination and is in the process of developing and adopting sediment quality objectives for enclosed bays and estuaries.

8.5.2.1.1 Sediment Contamination within the Regional Water Quality Control Board

Los Angeles Region. The Los Angeles Region encompasses all coastal drainages flowing into the Pacific Ocean between Rincon Point (on the coast of western Ventura County) and the San Gabriel River drainages, as well as the drainages of five coastal islands (Anacapa, San Nicolas, Santa Barbara, Santa Catalina and San Clemente). In addition, the region includes all coastal waters within three miles of the continental and island coastlines. Two large deepwater harbors (Port of Los Angeles and Port of Long Beach harbors) and one smaller deepwater harbor (Port Hueneme) are contained in the region. There are small craft marinas within the harbors, as well as tank farms, naval facilities, fish processing plants, boatyards, and container terminals. Several small-craft marinas also exist along the coast (Marina del Rey, King Harbor, and Ventura Harbor); these contain boatyards, other small businesses and dense residential development. Several large, primarily concrete-lined rivers (Los Angeles River, San Gabriel River) lead to unlined tidal prisms, which are influenced by marine waters. Some of these tidal prisms receive a considerable amount of freshwater throughout the year from publicly owned treatment works discharging tertiary treated effluent. Lagoons are located at the mouths of other rivers draining relatively undeveloped areas (Mugu Lagoon, Malibu Lagoon, Ventura River Estuary, and Santa Clara River Estuary). There are also a few isolated coastal brackish water bodies receiving runoff from agricultural or residential areas. Santa Monica Bay, which includes the Palos Verdes Shelf,

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

dominates a large portion of the open coastal water bodies in the region (SWRCB and Cal-EPA 2008).

The Los Angeles Region Contaminated Sediment Task Force was formed to create a long-term strategy for managing contaminated sediments as authorized by California Senate Bill 673. As part of the Bay Protection and Toxic Cleanup Program, the Los Angeles Regional Water Quality Control Board (RWQCB) prioritized contaminated sites to protect water and sediments from discharges of waste, in-place sediment pollution, and contamination (CCC 2010). Within the Los Angeles Region, four sites were designated high priority toxic hot spots:

- **Mugu Lagoon/Calleguas Creek Tidal Prism, Eastern Arm, Main Lagoon, Western Arm.** The area has been identified as an impaired water body due to sediment contamination (dichlorodiphenyltrichloroethane [DDT], polychlorinated biphenyls [PCBs], metal, chlordane and chlorpyrifos) (SWRCB and Cal-EPA 2008).
- **Santa Monica Bay/Palos Verdes Shelf.** The Palos Verdes Shelf has been identified as an impaired water body due to sediment contamination (DDT, PCBs, cadmium, copper, lead, mercury, nickel, zinc, polynuclear aromatic hydrocarbon (PAHs), and chlordane), sediment toxicity, tissue bioaccumulation of pollutants (DDT, PCBs, silver, chromium, and lead), and the issuance by the California OEHHA of a health advisory warning against consumption of white croaker (*Genyonemus lineatus*). Elevated DDT and PCB levels have been the focus of much attention by a variety of regulatory authorities, among them the EPA, which is developing a plan for remediation of the area. Although heavy metals contamination is recognized as an additional source of impairment, remediation of the DDT impairment may fully or partially address the issue (SWRCB and Cal-EPA 2008).
- **Los Angeles Outer Harbor/Cabrillo Pier.** The area in the vicinity of the Cabrillo Pier in the Outer Los Angeles Harbor is considered impaired due to sediment contamination (PAHs, DDT, zinc, copper, and chromium), sediment toxicity, and tissue bioaccumulation of DDT. High bacteria levels are also a concern. As part of the Main Channel Deepening Project, the United States Army Corps of Engineers and Port of Los Angeles are currently in the process of expanding the Cabrillo Shallow Water Habitat area to cover much of the area with available uncontaminated sediments, effectively capping a portion of the area. Additional efforts are being undertaken by the Port of Los Angeles to address sources of impairment other than the existing sediments (SWRCB and Cal-EPA 2008).
- **Los Angeles Inner Harbor/Dominguez Channel/Consolidated Slip.** Within the Inner Los Angeles Harbor, the Consolidated Slip and the Dominguez Channel Watershed are recognized to be impaired: sediment contamination (PAHs, zinc, chromium, lead, DDT, chlordane, and PCBs), sediment toxicity, benthic community effects, and tissue

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

bioaccumulation (DDT, chlordane, PCBs, organotins, and zinc) have been documented. Fish consumption advisories have also been posted for these areas. The Consolidated Slip Restoration Program Working Group is currently considering remediation alternatives under the leadership of the Los Angeles RWQCB. The group has recently compiled data showing the extent of contamination to be at least 20 feet below the harbor bottom in some areas. Restoration alternatives for sediments in the Consolidated Slip as well as the Dominguez Channel Watershed are in development, which are recognized to be a potential source of recontamination (SWRCB and Cal-EPA 2008).

In addition, the Los Angeles RWQCB identified several sites within the Los Angeles Region as moderate or low toxic hot spots. Sites listed within the Los Angeles area, and the respective reasons for listing, include Marina del Rey (sediment toxicity, DDT, PCBs, copper, mercury, nickel lead, zinc and chlordane), Los Angeles River Estuary (sediment toxicity, DDT, PAH and chlordane), Ballona Creek Tidal Prism (sediment toxicity, DDT, zinc, lead, chlordane, dieldrin, and chlorpyrifos), and Huntington Harbor Upper Reach (sediment toxicity, chlordane, DDE, and chlorpyrifos) (SWRCB and Cal-EPA 2008).

8.5.2.1.2 Sediment Contamination within the RWQCB Santa Ana Region. The Santa Ana Region comprises all upland basins draining into the Pacific Ocean between the southern boundary of the Los Angeles Region and the Santa Ana River drainage into Newport Bay and Aliso Creek (SWRCB and Cal-EPA 2008).

Within the Santa Ana Region, one site was designated by the Santa Ana high priority toxic hot spots:

- **Lower Newport Bay Rhine Channel.** The area has been identified as an impaired water body due to sediment contamination (arsenic, copper, lead, mercury, zinc, dichlorodiphenyldichloroethene [DDE], PCBs, and tributyltin [TBT]) (SWRCB and Cal-EPA 2008).

In addition, several sites were identified by the Santa Ana RWQCB as moderate or low toxic hot spots. Sites listed within the Santa Ana area, and the respective reasons for listing, include Anaheim Bay Naval Reserve (sediment toxicity, chlordane, and DDE), Upper Newport Bay Narrow (sediment toxicity, chlordane, zinc, and DDE), and Lower Newport Bay Island (exceeds water quality objectives, copper, lead, mercury, zinc, chlordane, DDE, PCBs, and TBT) (SWRCB and Cal-EPA 2008).

8.5.2.1.3 Sediment Contamination within the RWQCB San Diego Region. During the early 1980s, the San Diego RWQCB began an investigation focusing on pollutant sources, fates, and effects in San Diego Bay. The San Diego RWQCB directed the placement of the station locations for the State Mussel Watch program and augmented this work with significant staff effort to collect sediment samples at more than 300 sites throughout the Bay. As a result of this effort, the San Diego RWQCB identified several areas in San Diego Bay

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

with sediments contaminated with chemical pollutants. Further investigations by the San Diego RWQCB identified the sources or potential sources of the contamination at most of these sites. In 1985, to combat this water quality problem, the RWQCB embarked on the San Diego Bay Cleanup Program, a long-term endeavor to control contaminant inputs and remediate sediment contamination (SWRCB and Cal-EPA 2008).

The San Diego Region comprises all basins draining into the Pacific Ocean between the southern boundary of the Santa Ana Region and the California-Mexico boundary. The San Diego Region is located along the coast of the Pacific Ocean from the Mexican border to north of Laguna Beach. The region is rectangular in shape and extends approximately 80 miles along the coastline. The region includes portions of San Diego, Orange, and Riverside Counties. The population of the region is heavily concentrated along the coastal strip. Six deepwater sewage outfalls and one across-the-beach discharge from the new border plant at the Tijuana River empty into the ocean. Two harbors, Mission Bay and San Diego Bay, support major recreational and commercial boat traffic. Coastal lagoons are found along the San Diego County coast at the mouths of creeks and rivers. San Diego Bay is long and narrow, 15 miles in length and approximately one mile across. A deep-water harbor, San Diego Bay has experienced waste discharge from former sewage outfalls, industries, and urban runoff. Up to 9,000 vessels may be moored there. San Diego Bay also hosts four major U.S. Navy bases with approximately 80 surface ships and submarines. Coastal waters include bays, harbors, estuaries, beaches, and open ocean (SWRCB and Cal-EPA 2008).

Within the San Diego Region, one site is designated as a high priority toxic hot spot:

- **San Diego Bay Seventh Street Channel Paleta Creek, Naval Station.** The area has been identified as an impaired water body due to sediment contamination (chlordane, DDT, PAHs and total chemistry) and benthic community effects (SWRCB and Cal-EPA 2008).

Several sites in the San Diego area are listed as moderate or low toxic hot spots. Sites listed and the respective reasons for listing include, San Diego Bay Between “B” Street and Broadway Piers (benthic community impacts, PAHs, total chemistry), San Diego Bay Central Bay, Switzer Creek (sediment toxicity, chlordane, lindane, DDT, total chemistry), San Diego Bay Chollas Creek (benthic community impacts, chlordane, total chemistry), San Diego Bay Foot of Evans and Sampson Streets (benthic community impacts, PCBs, antimony, copper, total chemistry) (SWRCB and Cal-EPA 2008).

8.5.2.2 Superfund Sites

The Palos Verde Shelf Superfund Site is an area of contaminated sediment off the Palos Verdes Peninsula. The contaminated sediment lies in the Pacific Ocean at depths of 150 feet and more. The fishes found in the Palos Verdes Shelf area contain high concentrations of DDT and PCBs. Although current concentrations have dropped from historical highs,

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

concentrations of DDT and PCBs in fish tissues continue to pose a threat to human health and the natural environment. Los Angeles County wastewater (effluent) has been discharged at White Point off the Palos Verdes Shelf since 1937. Sewage is treated at the Joint Water Pollution Control Plant in the City of Carson before it enters the outfalls. The Los Angeles County Sanitation District (LACSD) is in charge of the county's sanitation system. Among the many industries that used the sewer system was the Montrose Chemical Corporation, the nation's largest manufacturer of DDT. From the 1950s to 1971 tons of DDT and associated manufacturing waste entered the sewer system to be discharged ultimately from the outfalls at White Point. In 1971, the last year Montrose used the county sewers, an estimated 50,500 pounds of DDT were discharged from the outfalls. PCBs, another persistent hazardous substance, also formed part of the industrial waste stream that was discharged to the sewer system until their ban in 1976. After these persistent pollutants ceased to dominate the waste stream, LACSD continued discharging treated wastewater onto the Palos Verdes Shelf. This created a layer of cleaner sediment on top of the DDT- and PCB-contaminated sediment. On the Palos Verdes Shelf, an estimated 5.7 million tons of sediment have been affected by the effluent discharged from the White Point outfalls. Mixed within these effluent affected sediments are an estimated 110 tons of DDT and 11 tons of PCBs. The affected sediment forms an identifiable deposit over a mile offshore at a depth of 150 feet to the shelf break. The deposit ranges in thickness from 2 inches to over 2 feet, with the area of greatest accumulation at 200 feet. It is thickest and has the highest concentrations of DDT and PCBs in the vicinity of the outfalls, then fans out to the northwest (EPA 2010).

On September 30, 2009, EPA signed an interim Record of Decision that selected a cleanup remedy for Palos Verdes Shelf. The selected remedy has three components: placing a cover of clean silty sand over the portion of the contaminated sediment deposit that has the highest contaminant surface concentrations and appears to be erosive; monitoring the natural recovery that is occurring in other areas of the Shelf; and continuing the Institutional Controls program that uses outreach and education, enforcement, and monitoring to minimize consumption of fish that contain DDT and PCBs (EPA 2010).

8.5.2.3 Oil and Gas Facilities

The SCSR is rich in oil and gas activities; the area contains various oil platforms located off the coast, including networks of pipelines running from platforms to onshore facilities. There are also approximately 80 marine terminals in state waters along the California coast and numerous land-based oil production, transportation, and storage facilities. Most of these marine terminals located in the SCSR. As of May, 2008, there are 26 production platforms, one processing platform, and six artificial oil and gas production islands located in the offshore waters of California. Of these platforms, four are located in state waters offshore of Santa Barbara and Orange counties (see Figures 6-8 and 6-9), and 23 are located in federal waters offshore of Santa Barbara, Ventura, and Los Angeles counties (Department 2009).

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.5.2.3.1 Historical Releases. The risk of hazardous material contamination from oil spills is high in the SCSR. In federal waters adjacent to the SCSR there have been 4 notable oil spill events since 1990, all in the Santa Barbara Channel and all from platform incidents. The single most notable oil spill event in California's history was the 1969 oil spill from Union Oil of California's (UnoCal) Platform "A" off Santa Barbara. This spill allowed an estimated 80,000 barrels of crude oil to escape into the ocean, covering an 800 square mile area and affecting thirty-five miles of coastline. As a consequence, approximately 4,000 water birds died, numerous marine mammals were poisoned, and many fisheries were adversely affected. There has been no spill of the same magnitude in Southern California since that time (Department 2009).

In state waters, there have been four notable oil spills since 1990. The causes of these spills include pipeline breaks and a tanker accident. The cause of one spill remains unknown. Unlike the incidents in federal waters, there have not been any significant spills related to platforms in state waters. The spills have had direct and indirect impacts on marine life; for example, more grunion than seabirds were killed in the American Trader oil spill (see Table 8.5-1). In addition, oil spills pose serious threats to grunion eggs, and the last four spills have occurred in grunion spawning habitat. Table 8.5-1 summarizes the four oil spills in state waters since 1990 (Department 2009).

The 1969 blowout and oil spill from UnoCal's Platform A in the Santa Barbara Channel received international attention and was a major catalyst in the development of modern environmental law in the United States. The spill influenced the passage of major state and federal legislation, such as the National Environmental Policy Act, CWA, California Environmental Quality Act (CEQA), California Coastal Initiative in 1972 (Proposition 20), and California Coastal Act of 1976. Pursuant to these and other statutes, development permits for onshore and offshore oil and gas facilities cannot be issued without provisions to protect terrestrial, marine, visual, recreational, and air resources (Department 2009). Although oil and gas pipelines and processing facilities are engineered to current safety standards, materials still pose risks to human health and the environment. Accidental spills can cause human health risks, biological, and hydrological damage, as well as public exposure to toxic materials, fires, and explosions.

8.5.2.3.2 Characteristics of Crude Oil. Crude oil is a heterogeneous mixture of solids, liquids, and gases. This mixture includes sediments, water and water vapor, salts, sulfur, and acid gases, including hydrogen sulfide and carbon dioxide. Total sulfur content in crude oils ranges from approximately one to four percent by weight, and hydrogen sulfide (H₂S) concentrations can reach 150 parts per million (ppm) in "sour" crude oil. Other constituents of crude oil include nitrogen and oxygen compounds, and water- and metal-containing compounds, such as iron, vanadium, and nickel. A spill of crude oil could result in the release of flammable and/or toxic vapors including propane, butane, pentane, benzene and hydrogen sulfide.

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

**TABLE 8.5-1
OIL SPILL INCIDENTS IN STATE WATERS, 1990–2008**

Name	Date	Location	Cause	Pollution	Resource Impact
American Trader Oil Spill	02/7/90	Huntington Beach, Orange County	Tanker incident	416,598 gal crude oil	3,400 birds killed. Fish contaminated. Restricted recreational activities.
McGrath Oil Spill	12/25/93	McGrath State Beach, Ventura County	Pipeline break	87,150 gal crude oil	206 birds killed. Damaged riparian and coastal habitat.
Torch/Platform Irene Oil Spill	09/28/97	Northern Santa Barbara County (offshore and coastline)	Pipeline break	6,846 gallons of petroleum products	700 birds killed. Sandy and rocky beach habitat affected. Restricted recreational beach use.
Ventura County Oil Spill	01/13/05	Santa Barbara to Ventura	Unknown	Oil: type and amount unknown	86 birds killed.

Source: Department 2009.

8.5.2.4 Damage Assessment, Remediation, and Restoration Program Sites

NOAA’s Damage Assessment, Remediation, and Restoration Program (DARRP) collaborates with other agencies, industry, and citizens to protect and restore coastal and marine resources threatened or injured by oil spills, releases of hazardous substances, and vessel groundings. DARRP was formally created in 1992 after the 1989 Exxon Valdez oil spill. DARRP’s multidisciplinary team of scientists, economists, and attorneys work with response agencies and co-trustees to:

- Protect coastal and marine natural resources
- Respond to discharges of oil and hazardous substances
- Assess risks and injuries to natural resources
- Restore injured natural resources and related socioeconomic benefits (DARRP 2010)

In California, the DARRP has restored and/or protected 1,600 acres of marine habitats, 2,900 acres of freshwater and terrestrial habitats, and 48 stream miles. Legal settlements have resulted in 60 protection and restoration projects statewide. Cleanup actions have also promoted recovery of coastal resources and communities at 22 hazardous waste sites. Currently DARRP lists 11 hazardous waste sites and one oil spill case in the SCSR, as either priority cases, or featured cases, as listed below and seen on Figure 8-9.

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

Priority cases are those cases that the DARRP program believes, within current 2010 budget constraints, are most important to address because they provide greatest potential benefit to natural resources in NOAA’s trust. Priority cases within the SCSR are presented in Table 8.5-2 (listed north to south).

**TABLE 8.5-2
DARRP PRIORITY CASES IN THE SOUTH COAST STUDY REGION**

Priority Case Name	Case Location	EPA Facility ID
Port Hueneme Naval Base Hazardous Waste Site	Ventura County	CA6170023323
Halaco Engineering Co Hazardous Waste Site	Port Hueneme, Ventura County	CAD009688052
Teledyne Ryan Hazardous Waste Site	San Diego, San Diego County	CAD990833014
Naval Training Center (Boat Channel) Hazardous Waste Site	Coronado, San Diego County	NA
North Island Naval Air Station Hazardous Waste Site	Coronado, San Diego County	CA7170090016
Naval Amphibious Base Coronado Hazardous Waste Site	Coronado, San Diego County	NA
Former Tow Basin Facility Hazardous Waste Site	San Diego, San Diego County	NA
Solar Turbines Inc. Hazardous Waste Site,	San Diego, San Diego County	CAD008314908
NASSCO/SW Marine Shipyard Hazardous Waste Site	National City, San Diego County	NA
Naval Station San Diego Hazardous Waste Site	National City, San Diego County	NA

Source: DARRP 2010.

Featured cases provide detailed information about current, or past, DARRP efforts including case history and contacts, remedial or injury assessment, restoration planning, and related technical documents. This information is presented in Table 8.5-3.

8.5.3 Impact Analysis

Once the baseline risks are quantified, significance criteria are used to determine if there is an increased level of risk associated with the proposed Project IPA or its alternatives, and to determine if proposed changes introduce a significant increase in potential impacts.

8.5.3.1 Study Methods

Desktop research was performed as well as consultation with various agencies including the DTSC and RWQCBs. The understanding that the project, as a set of regulations, will not

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

**TABLE 8.5-3
DARRP FEATURED CASES IN THE SOUTH COAST STUDY REGION**

Featured Case	Case Location	Case Status	Case Overview
Palos Verdes Shelf Hazardous Waste Site	Rancho Palos Verdes, Los Angeles County	Case settled. In restoration.	From the late 1940s to the early 1970s, millions of pounds of DDT and PCBs were discharged into ocean waters off the Southern California coast. Almost all of the DDTs originated from the Montrose Chemical Corporation's manufacturing plant in Torrance, California, and were discharged into LACSD's wastewater collection system. The DDT-contaminated wastewater was discharged for years through the wastewater outfall into the Pacific Ocean off White Point, in a submarine area known as the Palos Verdes Shelf. Montrose also dumped hundreds of tons of DDT-contaminated waste into the ocean near Santa Catalina Island. Additionally, large quantities of PCBs from numerous sources throughout the Los Angeles basin were also released into ocean waters through the LACSD's wastewater outfall on the Palos Verdes Shelf. This site is discussed further in Section 8.5.1.2.
T/V American Trader Oil Spill Case	Huntington Beach, Orange County	Settled in 1997. Under restoration.	On February 7, 1990, the steam tanker American Trader spilled approximately 400,000 gallons of Alaska North Slope crude oil into the Pacific Ocean off of Huntington Beach, California. The vessel's anchor punctured two holes in the starboard cargo tank due to a combination of ocean swells and inadequate water depth during an attempted mooring at the sea berth. At the time, the vessel was lightering a cargo of Alaska North Slope crude oil from the Keystone Canyon, a very large crude carrier anchored in Long Beach, California, to several locations along the Southern California coast, including the Golden West terminal at Huntington Beach. The oil affected 60 square miles of ocean and washed ashore along approximately 14 miles of beaches, affecting seabirds and recreational use of beaches.

utilize hazardous materials in its implementation, provided context for analysis in relation to CEQA's significance criteria, which are discussed below.

8.5.3.2 Significance Criteria

Based on the standards of significance from Appendix G of the State CEQA Guidelines, a project would normally result in a significant impact relative to hazards and hazardous materials if it would result in any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment
- Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area
- Be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Have environmental effects which will result in substantial adverse effects on human beings, either directly or indirectly

8.5.3.3 Environmental Impacts

Criterion HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

The proposed regulatory changes would not require or induce the routine transport, use or disposal of hazardous materials; therefore there would be no impact.

Mitigation: No mitigation would be required.

Criterion HAZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment

The designation of the marine protected areas (MPAs) would not require the use of hazardous materials and there would be no reasonably foreseeable upset or accident condition involving the release of hazardous materials into the environment. For an evaluation of the proposed Project's impacts relative to increased chances of marine vessel collisions, please refer to Section 8.4 (Vessel Traffic) of this Draft EIR. Because the proposed Project would not involve or affect the use of hazardous materials within the SCSR, impacts related to any upset and accident conditions would be less than significant.

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

Mitigation: No mitigation would be required.

Criterion HAZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school

Although the proposed regulatory changes would affect only offshore areas, some coastal schools and universities do occur within 0.25-mile of the SCSR. However, the proposed regulatory changes would not result in hazardous emissions or handling of hazardous or acutely hazardous materials, substances or waste. Therefore there would be no impact.

Mitigation: No mitigation would be required.

Criterion HAZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment

There are areas within the Southern California Bight that have been identified on lists compiled pursuant to Government Code Section 65962.5 as having contaminated sediments. Many of these sites are currently undergoing assessment, monitoring and remediation. The designation process of the MPAs has avoided known contaminated sediment areas. MPAs could be located in areas where contaminated sediments exist, but have not been identified. However, the designation of MPAs would not create a hazard to the public or the environment. Therefore there would be no impact.

Mitigation: No mitigation would be required.

Criterion HAZ-5: Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area

The regulatory changes proposed under the IPA would be limited to offshore areas within the SCSR, and no areas affected are within an airport land use plan. However, several large and small public and public-use airports occur in coastal areas adjacent to the SCSR, some of which are within two miles of areas affected by the proposed Project IPA. The proposed regulatory changes would not result in any construction activities or require the use of workers, and there are no residents in the proposed Project area. Although some changes in boat traffic patterns would be expected to occur, particularly with regard to commercial and recreational fishing vessels, the general nature and intensity of human uses within the SCSR would be unchanged by the proposed Project. Thus, impacts relative to airport hazards would be less than significant.

Airports in Southern California within 2 miles of SCSR:

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

1. Santa Barbara Municipal Airport
2. McIllelan-Palomar (Carlsbad)
3. San Diego International Lindbergh Field Airport
4. Los Angeles International
5. Imperial Beach OLF Ream Field (Navy)
6. Oceanside Municipal Airport
7. Point Mugu Naval Air Station (Navy)
8. Oxnard Airport
9. Santa Monica Municipal Airport

Private Ownership:

1. Catalina Airport
2. Santa Cruz Island Airport (The Nature Conservancy)
3. Santa Rosa Island (Channel Islands) Airstrip

Mitigation: No mitigation would be required.

Criterion HAZ-6: Be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project area

The regulatory changes proposed under the IPA would be limited to offshore areas within the SCSR, and no airstrips occur within the areas to be affected. The SCSR does not support any residents, and the proposed Project would not require workers. Therefore, impacts on workers, residents, or private airstrips would be less than significant.

Mitigation: No mitigation would be required.

Criterion HAZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan

The proposed MPAs would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed regulatory changes would not prohibit vessel transit through MPAs, and any emergency-related plans calling for sea evacuations or other marine components could be implemented without interference from the proposed MPAs. Therefore, impacts related to emergency response or evacuation plans would be less than significant.

Mitigation: No mitigation would be required.

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

Criterion HAZ-8: Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

The proposed regulatory changes would affect only marine areas, and therefore would not expose people or structures to significant risk or loss, injury or death involving wildland fires. There would be no impact.

Mitigation: No mitigation would be required.

Criterion HAZ-9: Have environmental effects which will result in substantial adverse effects on human beings, either directly or indirectly?

As discussed in Section 5.0 of this Draft EIR, adoption of the proposed regulatory changes would have the potential to displace existing consumptive uses away from areas where new or more stringent take regulations are proposed. 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 displaced from an area of acceptable water quality into such contaminated waters. The Office of Environmental Health and Hazard Assessment evaluates data pertaining to contaminant levels in seafood and prepares Fish Safe Guidelines that detail the species of fish and associated safe frequency of consumption (OEHHA 2009). Figures 6-13 through 6-15 illustrate safe eating guidelines for fish, and areas within the SCSR that are affected. All of the areas have a health advisory for PCBs and DDT. There are two levels (yellow and red zones) for fish consumption advisories; within the red zone the fish consumption guidelines are more restrictive. Displacement could occur from areas with no fish consumption guidelines to areas with fish consumption guidelines, or from areas located in “yellow” zones to “red” zones.

If an MPA designation would be modified (reduced or expanded area of the MPA, designation added, and designation removed) then it has the potential to have an effect on the quality of fish, shellfish, or kelp consumed. Consumptive uses could be displaced from an area with higher water quality to an area with lower water quality. Whether users choose to relocate to an area with equivalent water quality, lower quality, or cease engaging in their former consumptive uses cannot be predicted. For the purposes of this impact, displacement to areas of lower water quality is of concern only if the reduced water quality could result excess contaminant levels in the seafood or ocean vegetables harvested for consumption (i.e., result in contaminant levels that would limit the amount of seafood or sea vegetables that could be safely consumed).

Displacement of consumptive uses to an area with fish consumption guidelines would not necessarily result in adverse effects to human health. If the users comply with the consumption guidelines, then potential adverse effects from consuming fish from this area

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

would be considered acceptable, and therefore potential impacts would be less than significant. It is not possible to predict to what degree individuals would comply with the guidelines.

It is also difficult to predict the magnitude of the potential risk to consumers from relocation of these activities to areas with potentially lower water quality due to the number of variables including the amount of fish, shellfish and kelp consumed, the demographics of the consumer and other health related variables (e.g., age, sex, fishing mode, body weight, ethnicity, income), the degree of contamination (even within the same guideline zones), the type of chemicals contaminating the area, the parts of the fish consumed, the preparation of the fish for consumption (cleaning and cooking), the effectiveness of safe eating guidelines (OEHHA 2009), and if it is subsistence fishing (OEHHA 2001).

The percentage of the entire SCSR that would be closed to consumptive uses compared to the area available for consumptive uses is small. Thus potential impacts of displacement of uses from open water areas (i.e., areas only accessible by boat) would be considered less than significant; users could travel to near-by open water areas to obtain the same or similar type of seafood or sea vegetables (kelp).

The continental shoreline (i.e., coastal shoreline not including islands) in the SCSR is approximately 647.6 miles long (1,063.2 square miles total area); approximately 311.3 miles (126.6 miles in the Red Zone and 184.7 miles in the Yellow Zone) of this shoreline are covered by fish consumption advisories. By area, 490.1 square miles of the SCSR are covered by fish consumption advisories; 163.5 square miles in the Red Zone and 326.6 square miles in the Yellow Zone. New or modified MPAs located along the continental coast would cover approximately 90 miles of shoreline, including 43.1 miles (3.2 miles in the Red Zone and 39.9 miles in the Yellow Zone) of shoreline with fish consumption advisories. By area, there would be 122.7 square miles of new or modified MPAs located within the continental portion of the regional study area and 59.0 square miles of these MPAs are located within fish consumption advisory areas (17.6 in the Red Zone and 41.4 square miles in the Yellow Zone). Of the total shoreline included in the new or modified MPAs in the IPA, approximately 43 miles would be located in areas with fish consumption advisories, and 47 miles would be located in areas that do not have fish consumption advisories. Thus, the IPA could potentially displace consumptive uses from approximately 14 percent of the shoreline without fish consumption advisories. The IPA could also displace consumptive uses from approximately 9 percent of the total area that is free of fish consumption advisories.

Mitigation: The state has issued Safe Eating Guidelines for Fish from Coastal Waters of Southern California: Ventura harbor to San Mateo Point (OEHHA 2009). The public has been notified through the Department website and in the written regulations books distributed to fisherman of these known risk. Should OEHHA notify the Department of further health

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

advisories, the Department will amend the information in the regulatory booklets and the website to reflect these changes.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.6 ENVIRONMENTAL JUSTICE

This section describes the existing social environment in the terrestrial lands adjacent to the south coast study region (SCSR) and assesses the potential environmental justice-related impacts of the proposed Integrated Preferred Alternative (IPA) and alternatives on Santa Barbara, Ventura, Los Angeles, Orange, and San Diego counties. The focus of this section is an analysis of environmental justice, which refers to the fair and equitable treatment of individuals regardless of ethnicity or income level in the development and implementation of environmental management policies and actions. Therefore, the key parameters addressed in this section are: 1) local demographics, including population and ethnicity, and 2) measures of social and economic well-being, including per capita income and poverty rates.

8.6.1 Regulatory Framework

8.6.1.1 Federal

Executive Order 12898, “*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*,” requires each federal agency to incorporate environmental justice into its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including social or economic effects, of its programs, policies, and activities on minority populations and low-income populations of the United States (Council on Environmental Quality 1997). As such, environmental justice is considered part of the National Environmental Protection Act (NEPA) review process, and is not required or considered by the California Environmental Quality Act (CEQA).

Section 4-4 of Executive Order 12898 specifically addresses some populations or groups who principally rely on fish and/or wildlife for their subsistence. The orientation of this section is toward identifying and providing guidance regarding health risks associated with those consumption patterns – particularly the consumption of pollutant-bearing fish or wildlife.

The U.S. Environmental Protection Agency’s (EPA) Office of Environmental Justice offers the following definition of environmental justice:

“The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.”

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

This definition and EPA policies provide guidance for other federal and state agencies in the implementation of environmental justice principles.

8.6.1.2 State

Under CEQA, purely economic or social changes resulting from a project are not treated as significant impacts on the environment. The CEQA Guidelines (14 CCR 15131) state:

“Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes. Economic or social effects of a project may be used to determine the significance of physical changes caused by the project.”

However the California Fish and Game Commission (Commission) and the California Department of Fish and Game (Department) are required to analyze environmental justice impacts from the activities that they undertake.

California law defines environmental justice as “the fair treatment of people of all races, cultures and income with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies” (Government Code Section 65040.12(e) and Public Resources Code Section 72000). The State of California Resources Agency (Resources Agency) has established a policy on environmental justice (Resources Agency 2003). This policy applies to all departments, boards, commissions, conservancies, and special programs of the Resources Agency including the Commission and the Department. The Resources Agency Environmental Justice Policy provides that the fair treatment of people of all races, cultures, and income shall be fully considered during the planning, decision-making, development and implementation of all Resources Agency programs, policies, and activities.

The intent of this policy is to ensure that the public – including minority and low-income populations – is informed of opportunities to participate in the development of all Resources Agency programs, policies, and activities, and that they are not discriminated against, treated unfairly, or caused to experience disproportionately high and adverse human health or environmental effects from environmental decisions. Both the Commission and Department are part of the Resources Agency and are subject to Resource agency policy and as such must consider environmental justice in their decision-making process for the proposed Project IPA and its alternatives.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

With respect to protecting public health in the consumption of fish and shellfish that may contain elevated levels of pollutants, the primary activities of the state are through the Office of Environmental Health and Hazard Assessment (OEHHA) of the California Environmental Protection Agency. OEHHA conducts studies of contaminant levels in and consumption of fish and shellfish, and publishes guidelines and advisories regarding consumption. OEHHA also conducts regular public outreach meetings and presentations to inform the fishing public and consumers of fish about the benefits of fish consumption and potential hazards of excess consumption of certain species in certain areas. OEHHA guidelines are presented as recommendations on the number of fish meals consumed during a period of time (e.g., up to two meals per week, or some other number). These vary depending on location and measured pollutant levels in fish and shellfish, and are also different for children and women of childbearing age and adult males. In Southern California, OEHHA has defined a “red zone” generally centered on Palos Verdes and extending north to Santa Monica and south to Huntington Beach, where their recommendations are most stringent. There are also two “yellow zones” where the recommendations are intermediate, and large areas (generally south of Orange County and north of Ventura Harbor) where there are no guidelines in place (OEHHA 2009). When necessary, OEHHA works directly with the Department to post fishing closures.

8.6.2 Environmental Setting

The following demographic overview of the SCSR residents will be used in this analysis of potential environmental justice-related impacts. The geographic scope of the information presented includes the counties of Santa Barbara, Ventura, Los Angeles, Orange, and San Diego. A number of surveys have also been conducted to identify fish and shellfish consumption by fishers in various racial, ethnic, and income groups. These surveys have been summarized by OEHHA (2001). These surveys were targeted to all people using various public fishing locations and addressed residents from the counties within the SCSR as listed above, as well as visitors from inland counties or other areas.

8.6.2.1 Population Trends and Projections

The five counties adjacent to the SCSR are highly urbanized, with population centers located in close proximity to the coast. As of 2000, Orange and Los Angeles counties have the greatest population densities. Densities in these counties exceed 3,607 and 2,344 people per square mile, respectively, and are approximately 3 to 24 times higher than other counties in the SCSR. Orange County has the least amount of land, while Los Angeles County has the most people. San Diego County has a similar population size to Orange County, but is similar in size to Los Angeles County. The major cities adjacent to the Pacific Ocean within the SCSR include: Los Angeles (3.7 million people), San Diego (1.3 million people), Long Beach (0.5 million people), Chula Vista (0.2 million people), Huntington Beach (0.2 million people), and Oxnard (0.2 million people) (Department 2009).

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

Population growth projection trends in these coastal counties (based on a demographic model that incorporates fertility, migration, and survival rates) indicate that Ventura County is expected to have the highest change in population growth over the next 50 years, followed closely by San Diego County. Los Angeles, Orange, and Santa Barbara counties are expected to have similar growth patterns, which include a population growth slightly greater than half that of Ventura and San Diego counties (see Table 8.6-1). Santa Barbara County, which has the smallest population and the lowest density, is expected to experience the least growth and population change between 2000 and 2050. Aside from Santa Barbara County, rapid growth is occurring in the counties where the average population density is currently the lowest (Department 2009).

**TABLE 8.6-1
TOTAL POPULATION, PROJECTED GROWTH, AND POPULATION GROWTH,
IN COASTAL COUNTIES IN THE SCSR**

Coastal County	Total Population (2000)	Projected Population (2010)	% Projected Population Change (2000–2010)	Projected Population (2050)	% Projected Population Change (2000–2050)	People per Square Mile (2000)
Santa Barbara	401,115	434,497	8.3%	534,447	33.2%	145.9
Ventura	758,884	855,876	12.8%	1,229,737	62.0%	408.2
Los Angeles	9,578,960	10,514,663	9.8%	13,061,787	36.4%	2,344.10
Orange	2,863,834	3,227,836	12.7%	3,987,625	39.2%	3,607.50
San Diego	2,836,303	3,199,706	12.8%	4,508,728	59.0%	670

Source: Department 2009.

8.6.2.2 Ethnicity

In addition to population growth, ethnicity is also an important consideration for evaluating potential environmental justice-related effects. This issue is especially significant for the proposed Project and its alternatives because it deals with marine areas, which may disproportionately affect certain ethnicities that rely heavily on ocean-dependent income, or marine life diet. As shown in Table 8.6-2, the counties adjacent to the SCSR are very culturally diverse.

With the exception of Los Angeles County, the combined ethnic groups within each county represent about 50 percent of the population (or slightly greater). Within Los Angeles County, combined ethnic groups represent approximately 72.8 percent of the population. The average of combined ethnic groups for all counties adjacent to the SCSR is approximately 56.19 percent, which is approximately equal to, but slightly less than the state of California as a whole (57.4 percent).

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

**TABLE 8.6-2
RACE OR ETHNICITY BY STUDY AREA COUNTY**

County	White (Non- Hispanic/ Latino)	Black/ African American	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	Multi-race	Hispanic/ Latino
Santa Barbara	50.3%	1.8%	0.9%	4.6%	0.2%	3.5%	38.7%
Ventura	46.55%	1.80%	0.46%	7.09%	0.19%	1.80%	42.11%
Los Angeles	27.2%	8.8%	0.5%	12.9%	0.3%	3.0%	47.3%
Orange	45.7%	1.7%	0.5%	16.1%	0.3%	2.5%	33.2%
San Diego	49.30%	5.0%	0.8%	10.2%	0.5%	3.8%	30.4%
State	42.6%	6%	0.8%	12.1%	0.3%	2.1%	36.1%

Source: U.S. Census 2008.

In terms of the fishing population, several studies were reviewed by OEHHA and one that was considered to be reasonably representative of the Southern California was conducted in Santa Monica Bay. The distribution of fishers by race or ethnicity from that study, as reported by OEHHA (2003) is summarized in Table 8.6-3.

**TABLE 8.6-3
DISTRIBUTION OF ANGLERS BY ETHNIC GROUP**

Ethnic Group	No. in Group (% of Group)
White	217 (39.1)
Hispanic	137 (24.7)
Black	57 (10.3)
Asian	122 (22.0)
Other	14 (2.5)
All	555 (some non-responders)

Consumption rates of fish and shellfish vary among groups within the population depending on race or ethnicity, age, sex, fishing mode, region, and other variables. In very general terms within the Southern California region, fish consumption rates are higher for some Asian groups and Pacific Islanders, and whites, while they tend to be lower in Hispanic groups (OEHHA 2001).

Defining individuals or groups as subsistence fishers, meaning those for whom a substantial portion of their protein supply was from fish, is problematic in general and particularly so in Southern California. This is because the definition itself is narrative and does not provide a quantitative measure such as income level, frequency of fishing, or amount of fish

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

consumption. Anglers are not always willing to report income levels, and do not necessarily identify themselves as subsistence fishers. Some subpopulations who might be expected to be subsistence fishers have consumption rates that are in line with national averages for all people, while others with relatively higher consumption rates do not define themselves as subsistence fishers. In any event, studies identifying groups with extremely high fish consumption—true subsistence fishers—involve Native Americans in Alaska and the Pacific Northwest. For this reason, no attempt will be made in this Draft EIR to identify specific effects on subsistence fishers as a separate issue from effects on minority or low-income groups.

8.6.2.3 Income-related Measures of Social Well-being

Certain financial factors are widely used as economic indicators of social well-being. These include: per capita income, median household income, and poverty rates. Table 8.6-4 presents these data for each county adjacent to the SCSR, as well as for the state of California. In 2008, per capita income in the counties ranged from \$27,264 to \$34,550 (approximately 9.3 below and 15 percent above the state level of \$30,062) (Census 2008). The average per capita income for these counties was approximately \$31,066, slightly greater than that of the state.

**TABLE 8.6-4
INCOME AND POVERTY RATES BY COUNTY AND STATE**

County	Total Population	Per Capita Income (in 2008 Inflation- adjusted Dollars)	Median Household Income (1999 Dollars)	Poverty Rate (2008)
Santa Barbara	402,627	\$30,062	59,850	13.5%
Ventura	793,814	\$32,555	76,269	8.7%
Los Angeles	9,832,137	\$27,264	55,192	15.1%
Orange	2,985,995	\$34,550	75,176	9.5%
San Diego	2,965,943	\$30,898	63,727	11.7%
State of California	36,418,499	\$30,062	47,493	14.4%

Source: U.S. Census 2008.

Poverty rates represent the percentage of an area’s total population living at or below the poverty threshold established by the U.S. Census Bureau. Based on 2008 Census data, the poverty rate in the counties adjacent to the SCSR ranged from 8.7 to 15.1 percent, and averaged approximately 11.7 percent as compared to the median state poverty rate of 14.4 percent. Only Los Angeles County’s poverty rate of 15.1 percent exceeded that of the state. The median household income in all five counties exceeds that of the state by 16 to 58 percent (or an average of about 39 percent).

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

In a review of a fishing survey performed for Santa Monica Bay, OEHHA determined that fishers with the highest incomes also had the highest rate of fish consumption (when measured by the mean and high-level, or 95th percentile, values [OEHHA 2003]). Thus, with respect to potential contamination and health risks from fish consumption, all higher consuming fishers, including those with high incomes, may be subject to exposure to chemical contaminants.

8.6.2.4 Distribution of Fishing Modes

The Department conducts recreational fishing surveys and reports the results to the Commission. Data from the most recent survey is summarized below in Table 8.6-5.

**TABLE 8.6-5
ESTIMATED NUMBER OF ANGLER TRIPS IN 2007**

District	Fishing Mode				Total
	Man-made Structures	Beaches and Banks	Commercial Passenger Fishing Vessels	Private and Rental Boats	
South	1,144,114	611,388	201,947	215,826	2,173,275
Channel	197,230	155,321	34,817	24,643	412,011
Totals	1,341,344	766,709	236,764	240,469	2,585,286

The above tabulation indicates that within the Southern California region, over 81 percent of all fishing trips are conducted from man-made structures (e.g., piers) or from beaches and banks (Department 2008). There are about two dozen fishing piers along the coast within the proposed project area, from Goleta Beach Pier on the north to Imperial Beach Pier on the south. Some are more or less concentrated in densely developed shoreline areas—for example Santa Monica Pier, Venice Pier, Manhattan Beach Pier, Hermosa Beach Pier, and Redondo Beach Pier, within a 10-mile length of the coast north of the Palos Verde Peninsula. Others are located at greater distances from densely populated areas, where urban centers are separated by larger areas such as Camp Pendleton or the Point Mugu military installations. There are also many beaches, breakwaters, and other locations where shoreline fishing is popular and productive. To the extent that these free or very low-cost fishing modes might be used preferentially by low-income or other disadvantaged groups, they represent potential areas that may be affected by the project. These fishing locations are distributed along the entire coastline—some are located in the OEHHA “red zone,” some are located in the “yellow zones,” and some are located in clear areas where there are no OEHHA consumption guidelines.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

8.6.3 Impact Analysis

8.6.3.1 Methodology

Available data sources were reviewed to describe existing conditions in the five counties adjacent to the SCSR for population, ethnicity, and economic factors. These included information on the distribution of non-commercial fishing and data on fish consumption by various racial or ethnic groups. Current recommendations by OEHHA regarding fish consumption advisories, and where these advisories are located, were compared with locations proposed as SMCAs under this project. These data were used to evaluate whether the proposed Project IPA and alternatives would have the potential to result in disproportionately high and adverse impacts to minority population(s) and/or low-income populations, thus potentially creating an environmental justice-related impact.

8.6.3.2 Criteria for Determining Significance

Under CEQA, socioeconomic effects are typically not addressed as an independent topic but may be used in the determination of significance related to other physical changes. Thus, there are no CEQA guidelines or “significance criteria” available to determine the potential for impacts related to socioeconomic effects or the need for subsequent mitigation.

In order to assess compliance of the project with federal guidance and Resources Agency policy, a general analysis for environmental justice was performed based on whether implementation of the proposed Project IPA or alternatives would have a disproportionate effect on minority or low-income populations. The particular issue at hand is whether the proposed SMCAs would tend to displace minority or low-income anglers into areas where health hazards might be incrementally higher relative to their current fishing locations and modes.

8.6.3.3 Environmental Effects

The proposed Project IPA and alternatives propose changes to existing MPA regulations which control commercial fishing, recreational fishing, and other consumptive activities, within defined areas along portions of the SCSR. The potential effects of these changes relative to minority or low-income groups within the project area are as follows:

- As discussed in Section 8.6.2.2, the average of combined ethnic groups for all counties adjacent to the SCSR is approximately 56.19 percent, which is approximately equal to, but slightly less than the state of California as a whole (57.4 percent). Thus, while there may be concentrations of ethnic groups in certain areas, the overall ethnic diversity in the area is similar to that of the state, and implementation of the proposed Project IPA or its alternatives is not expected to disproportionately affect minority groups as the region is viewed as a whole.

SOUTH COAST MARINE PROTECTED AREAS PROJECT DRAFT ENVIRONMENTAL IMPACT REPORT

- As discussed in Section 8.6.2.3, in general these coastal counties enjoy a higher standard of living that typically exceeds that of the state of California. The average household income for these counties is above that of the state by approximately 39 percent, and the poverty rate averaged 11.7 percent as compared to 14.4 percent for the state. Further, the average per capita income for these counties was approximately \$31,066, slightly greater than that of the state (\$30,062). Thus, implementation of the proposed Project IPA or alternatives is not expected to disproportionately affect low-income groups.
- Minority and low-income populations participate in extractive recreational and commercial take of fisheries in all five counties, as do other populations. Extraction of these marine resources in the SCSR occurs from facilities such as boats, man-made structures and piers, or from the shoreline itself, and as discussed in Section 5.0, the proposed Project IPA and alternatives will likely result in some displacement of these extractive activities. For example, implementation of the Upper Newport Bay and Crystal Cove SMCAs may displace pier fishing from these areas to nearby piers or shoreline locations to the north and south. The affected fishing points centered on Newport Bay are in the OEHHA “yellow zone” where there are guidelines related to maximum fish consumption to avoid unhealthy pollutant levels. There are available alternative fishing locations in both directions, but some facilities to the north are in the defined “red zone” where OEHHA guidelines recommend lower consumption amounts to avoid unhealthy intake of environmental pollutants. Locations to the south, however (including San Clemente Pier and Oceanside Pier) are free of current OEHHA recommendations. Thus, in response to such displacement, individuals may choose to redistribute their fishing to other available areas. Depending on the area chosen, and the presence of OEHHA recommendations, the choice may or may not involve a change in consumption habits. Access to these other areas and extractive facilities (such as piers or other structures and shorelines) is available to all populations throughout the SCSR. Thus, establishment of an MPA in a specific area may lead to an alteration in fishing behavior, but would not preclude continued fishing as a recreational activity or for consumption purposes. To the extent that there is any effect on the availability of fishing from specific points, it will be experienced by all groups and income levels using that particular point or fishing mode. For these reasons, the project is not expected to affect or restrict fishing activities for minority or low-income populations in a disproportionate manner when compared to other populations.
- In addition to commercial and recreational fishing, minority or low-income groups use beaches for recreation such as swimming, surfing, picnicking, and other activities. The proposed Project IPA and alternatives would not displace or affect these activities.

Based on the above considerations, the potential for environmental justice-related effects due to implementation of the proposed Project IPA or its alternatives is not expected to be significant and disproportional effects on minority or low-income populations are not anticipated to occur.