Chapter 6.1

Land Use and Utilities

6.1 Land Use and Utilities

6.1.1 Introduction

This section describes the regulatory setting, environmental setting, and potential impacts of the Proposed Project related to land use and utilities. Data and information sources used to prepare this section include federal and state regulations, local plans and policies, the *Regional Profile of the North Coast Study Region: California-Oregon Border to Alder Creek* (MLPAI 2010a), and reference materials from the California State Lands Commission (SLC).

6.1.2 Regulatory Setting

The following section provides a description of the federal and state regulations associated with land use in and adjacent to the North Coast Study Region (Study Region). 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 Study Region. However, the coastline and tidal and submerged public lands are regulated by the California Coastal Commission (CCC) and SLC, respectively. CCC is responsible for administering the California Coastal Act (Coastal Act) and the federally approved California Coastal Management Program, pursuant to the Coastal Zone Management Act. Additionally, there are some federal and state regulations that include use of tidal and submerged lands.

Federal Laws, Regulations, and Policies

Coastal Zone Management Act of 1972

The purpose of the Coastal Zone Management Act (CZMA) (16 U.S. Code [USC] 1451–1464) is to preserve, protect, and restore or enhance the nation's coastal zones. Within the state of California, the CZMA is administered through the Coastal Act (see "State Laws, Regulations, and Policies" below).

National Park Act of August 19, 1916

The National Park Act of August 19, 1916 (16 USC 1 et seq.), also known as the Organic Act, created the National Parks Service (NPS) within the U. S. Department of the Interior. 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." In the vicinity of the Study Region, NPS manages the Redwood National Park and its 40 statute miles (mi) of coastline.

The Redwood National and State Parks Management Plan

Redwood National and State Parks consists of four units: Redwood National Park, which is a federal park under the jurisdiction of the NPS; and three state parks—Prairie Creek Redwoods State Park, Del Norte Coast Redwoods State Park, and Jedediah Smith Redwoods State Park (NPS 2000). The NPS General Management Plan (GMP) for Redwood National

Park was developed in conjunction with the California Department of Parks and Recreation (State Parks) and adopted by NPS in 2000. The NPS GMP identifies a marine management zone within the park property and provides guidelines for recreational activities that align with resource protection goals (NPS 2000).

The U.S. 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 on 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 Study Region includes the Humboldt Bay National Wildlife Refuge and the Castle Rock National Wildlife Refuge about 0.5 mi offshore from Crescent City.

The Humboldt Bay National Wildlife Refuge Complex Comprehensive Conservation Plan (CCP) was finalized and adopted in 2009. This CCP outlines the management direction and strategies for the Humboldt Bay and Castle Rock National Wildlife Refuges. Management activities are focused on conserving resources and their habitats and providing opportunities for compatible wildlife-dependent recreation, including wildlife observation, photography, education, interpretation, and hunting (USFWS 2009).

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. 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 located inland, BLM manages several adjacent, onshore public lands in the Study Region: South Split Cooperative Management Area, Samoa Dunes Recreation Area, Lost Coast Headlands, and King Range National Conservation Area. Additionally, BLM manages the California Coastal National Monument (CCNM) that encompasses more than 20,000 small islands, offshore rocks, reefs, and pinnacles exposed above mean high tide within 12 nautical miles of the coast statewide. Many of these islands, rocks, pinnacles, and exposed reefs occur within marine protected area (MPA) boundaries of the Proposed Project, and all of the proposed special closures are identified around named rock features that are also part of the CCNM. BLM has developed a resource management plan for the CCNM, which establishes the management framework, outlines goals and objectives, and identifies dozens of management actions needed to implement the plan. To effectively manage the CCNM, BLM has formed numerous partnerships with federal, tribal, state, and local entities (BLM 2011). BLM's management goals for CCNM emphasize protection of the biological, geological, aesthetic, and cultural resources of the rocks and islands. The goals of the CCNM align with the goals of the MLPA.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is the 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 hydrokinetic licensing. Regulations regarding licenses are found at 18 Code of Federal Regulations (CFR), Parts 4 and 5.

Bureau of Ocean Energy Management, Regulation and Enforcement

The Bureau of Ocean Energy Management, Regulation and Enforcement issues commercial leases for hydrokinetic projects. Regulations regarding these leases are available in 30 CFR, Part 285.

Submarine Cable Landing License Act

Underwater cables can provide communication cables for large geographic areas. Submarine cables are typically used by telecommunication companies to carry heavy communication traffic, rather than 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 of large holding tanks (Global Security 2011).

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 to avoid the risk of damage from 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. A description of federal regulations for United States undersea cables follows, which might be applicable to undersea cables off the California coast.

Pursuant to the Submarine Cable Landing License Act (47 USC 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 the 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[s] wholly within the continental United States."

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

Submerged Lands Act of 1953

The Submerged Lands Act of 1953 (43 USC 1301) grants states title to all submerged navigable lands within their boundaries. This includes navigable water ways, such as rivers, as well as marine waters within the states boundaries, which are generally three miles from the coastline.

State Laws, Regulations, and Policies

California Coastal Act

The Coastal Act (PRC, Section 30000 et seq.) was enacted by the California State Legislature in 1976 to provide long-term protection of California's 1,100-mi coastline for the benefit of current and future generations. The Coastal Act created a partnership between the State of California (State) (acting through the CCC) and local government to manage the conservation and development of coastal resources through a comprehensive planning and regulatory program. CCC implements Coastal Act policies that address such issues as public access and recreation, natural resource protection, agricultural operation, coastal development projects, port activities, and energy production. Development activities, including the construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either CCC or the local government (CCC 2011). 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 (see "Local Coastal Programs," below). Section 6.3, "Recreation, provides additional information about land use, such as land-based recreation, parks, and beaches.

Public Resources Code, Division 6, Sections 6001, et seq. (California State Lands Commission Tide and Submerged Lands)

Public Resources Code Division 6 gives SLC jurisdiction and management authority over all ungranted tide and submerged lands along the state's coastline, extending from the shoreline to 3 mi offshore, and the beds of navigable rivers, sloughs, lakes, and streams. SLC has certain residual and review authority for tide and submerged lands legislatively granted in trust to local jurisdictions (PRC, Sections 6301 and 6306). All tide and submerged lands, granted or ungranted, as well as navigable rivers, sloughs, etc., are impressed with the common law public trust, as discussed above.

SLC has the authority and responsibility to manage and protect the important natural and cultural resources on certain public lands within the state and the public's rights to access those lands. SLC's jurisdiction includes rivers, lakes, and coastal waters. SLC issues leases on sovereign lands for public trust purposes. Such leases generally fall into several categories: recreational, commercial, industrial, right-of-way, and salvage. Specific examples of such leases include private recreational piers, commercial marinas, yacht clubs, marine

terminals, industrial wharves, oil and gas pipelines, fiber-optic cables, outfalls, and bank stabilization (SLC 2011). Within the Study Region, SLC has issued permits for submarine utility cables and bridge maintenance. These are described below in section 6.1.3, "Environmental Setting."

Through the administration of the California Shipwreck and Historic Marine Resources Program, enacted by the State Legislature in 1989, SLC strives to protect the historical value and environmental integrity of shipwreck sites and historical submerged sites. See Chapter 5, "Cultural Resources," for more details about historical and cultural resources.

Warren-Alquist Act

In 1974, the Warren-Alquist State Energy Resources Conservation and Development Act created the California Energy Commission. This act required that, before constructing or modifying an electric generating plant, the California Energy 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 from becoming sites for facilities, unless the facilities would be consistent with the primary uses of such areas, and where there would be no substantial adverse impacts.

Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling

On May 4, 2010, the State Water Resources Control Board, the statewide policy-making and oversight body for the regional water quality control boards (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 applies to existing power plants that currently withdraw ocean and estuarine water using a single-pass system, also known as once-through cooling. Section 316(b) is implemented through National Pollutant Discharge Elimination System permits, issued by the RWQCBs.

In the Study Region, Pacific Gas and Electric Company (PG&E) operates a power plant in Humboldt Bay. The plant is located in the middle of Humboldt Bay, north of the proposed South Humboldt Bay State Marine Recreational Management Area (SMRMA). PG&E is also currently involved in decommissioning and removing an existing nuclear plant at the same site. In addition, they are replacing their fossil fuel plant with a more efficient one that will have a "closed-loop cooling system with negligible water usage, eliminating the need to use water from Humboldt Bay for once-through cooling" (PG&E 2011).

California Public Utilities Commission regulates investor-owned electric and gas utilities within the state of California, such as PG&E. Among its stated goals for energy regulation are establishing service standards and safety rules, authorizing utility rate changes, overseeing markets to inhibit anti-competitive activity, and enforcing the CEQA review requirements for utility construction.

Local Plans, Policies, Laws, and Regulations

Coastal counties adjacent to the Study Region manage and maintain county-owned public beaches and coastal parks. These parks include Clifford Kamph Memorial Park, Big Lagoon, Centerville Beach, Fields Landing Boat Ramp, Luffenholtz Beach, Mad River, Samoa Boat Ramp, and Moonstone Beach. Each is regulated by its county's general plan. Below is a discussion of additional local government regulations that are relevant to the Proposed Project.

Local Coastal Programs (LCPs)

When adopted by local governments and certified by CCC, Local Coastal Programs (LCPs) 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 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 Coastal Act goals and policies. CCC also hears appeals of local decisions in areas of an LCP designated as within CCC's appeal jurisdiction.

After an LCP has been approved, 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. CCC retains permanent coastal permit jurisdiction over development proposed on tidelands, submerged lands, and public trust lands, and CCC also acts on appeals from certain local government coastal permit decisions. CCC reviews and approves any amendments to previously certified local coastal programs. An LCP includes a land use plan (LUP), which may be the relevant portion of the local general plan, including any maps necessary to administer it, and the zoning ordinances, zoning district maps, and other legal instruments necessary to implement the LUP. Coastal Act policies are the standards by which the Commission evaluates the adequacy of LCPs. To ensure that coastal resources are effectively protected in light of changing circumstances, such as new information and changing development pressures and impacts, the Commission is required to review each certified LCP at least once every 5 years (CCC 2011). Within the Study Region, all three coastal counties have certified LCPs. In addition, the following cities have approved LCPs or LUPs: Crescent City in Del Norte County, Arcata, Eureka and Trinidad in Humboldt County, and Fort Bragg in Mendocino County (CCC 2010).

Humboldt Bay Harbor, Recreation and Conservation District

Humboldt Bay is the second largest estuary in California and contains the only deep-water port north of San Francisco Bay and south of Oregon. The Humboldt Bay Harbor, Recreation and Conservation District (Humboldt Bay District) is a special district created by the California State Legislature in 1970. The Humboldt Bay District has permit jurisdiction over all tide, submerged, and other lands in Humboldt Bay shoreward to mean higher high water

elevation. Its jurisdiction over the facilities in Humboldt Bay is subject to the regulations set forth in the Coastal Act. Many research programs are supported or underwritten by the Harbor District, including water quality monitoring, eelgrass studies, salmonid studies, ballast water exchange and exotic species surveys (see Chapter 4, "Biological Resources," for more information about the Humboldt Bay Initiative's Ecosystem Program). The Humboldt Bay District implements the Humboldt Bay Management Plan, which outlines the policy framework for port/harbor, recreation, and conservation activities. The plan identifies four different water-use classifications for Humboldt Bay, and includes designations for areas suitable for aquaculture activity (see Section 3.1, "Agricultural Resources," for more information regarding existing regulations and practices related to aquaculture). Uses overseen by the Humboldt Bay District include channel maintenance, dredging, shipping facilities, oil spill response, a commercial and recreational marina, eelgrass monitoring, invasive species control, mariculture (aquaculture) permits, and educational programs (Humboldt Bay Harbor Recreation and Conservation District 2007).

Applicable policies from the Humboldt Bay Management Plan to the Proposed Project are:

- HRS-1: Develop and implement a regulatory coordination process for projects around Humboldt Bay that are consistent with adopted plans.
- RA-2: Partnerships with other recreation providers.
- ROP-1: Recreation planning to be an ongoing and coordinated function.
- ROP-4: Future recreation areas to be reserved, as needed.
- RFA-1: Safe and appropriate public recreational access to and use of the Bay.
- RFA-3: Water-oriented recreation facilities; access for fishing and shellfish harvesting.
- RFA-5: Environmentally and culturally sensitive areas.
- RFA-6: Prevention of significant adverse environmental effects.
- RFA-7: Protection of recreational areas.
- CAE-2: Maintain, restore, and enhance aquatic ecosystem integrity.
- CAE-3: Protect and maintain environmentally sensitive habitat areas.
- CAE-4: Work cooperatively to develop and implement a restoration and enhancement plan for Humboldt Bay's aquatic ecosystems.
- CAS-1: Maintain biological diversity and important habitats throughout Humboldt Bay.
- CAS-2: Maintain and enhance conditions required by commercially important fish, invertebrate, and plant species.
- CAS-3: Maintain and enhance habitat for sensitive species.

Big River Program

In 2005, Mendocino Land Trust acquired the property along the Big River Estuary to preserve, restore, and manage estuarine, wetlands, aquatic, and wildlife habitat; provide

wildlife-oriented education and research; and allow public access for recreational uses compatible with estuarine, wetlands, aquatic, fish and wildlife habitat preservation and restoration. The Preliminary Plan is a strategic-level document to guide planning and management of the property's transition from industrial timberland to a public natural protected and recreation area. While the plan is not a park implementation or general plan, and has not being circulated for review under CEQA, public input regarding the plan and agency review of it aided State Parks in developing the plan as a framework for upholding the objectives of the property's acquisition.

6.1.3 Environmental Setting

Coastal Land Uses

The Study Region extends along the shoreline for approximately 517 mi.). A variety of uses occupy the adjacent lands, including agriculture, forestry operations, urban areas, ports and harbors, and open space. **Table 6.1-1** lists existing land uses that are adjacent to the Proposed Project.

Table 6.1-1. Existing Land Uses Inside and Adjacent to Proposed Marine Protected Areas, Proposed Options, and Special Closures

MPA/Special Closure Site	Land Use Sites within MPA/Special Closure Boundaries	Adjacent Land Uses	Jurisdiction
Pyramid Point SMCA	--	Pelican State Beach	State Parks
		Clifford Kamph Memorial Park and Beach	Del Norte County
Pyramid Point SMCA—Option	--	Prince Island: part of the California Coastal National Monument	BLM and Smith River Rancheria
		Indian Cemetery	Smith River Rancheria
Point St. George Reef Offshore SMCA	--	Saint George Reef Lighthouse	Saint George Reef Lighthouse Preservation Society
Southwest Seal Rock Special Closure	--	--	--
Castle Rock Special Closure	Humboldt Bay National Wildlife Refuge		USFWS
False Klamath Rock Special Closure	Redwood National Park	--	NPS
*Reading Rock SMR **and** Option*	--	--	--
*Reading Rock SMCA **and** Reading Rock Onshore SMCA Option*	--	Redwood National Park	NPS
Samoa SMCA	--	Humboldt Bay National Wildlife Refuge	USFWS

Table 6.1-1. Existing Land Uses Inside and Adjacent to Proposed Marine Protected Areas, Proposed Options, and Special Closures

MPA/Special Closure Site	Land Use Sites within MPA/Special Closure Boundaries	Adjacent Land Uses	Jurisdiction
		Manila Dunes	BLM
South Humboldt Bay SMRMA	--	Port of Humboldt	Various
		Humboldt Bay NWR	USFWS
South Humboldt Bay SMRMA—Option	Humboldt Bay NWR		USFWS
	--	Table Bluff Ecological Reserve	Department
		Table Bluff Rancheria	Wiyot Tribe
Sugarloaf Island Special Closure	California Coastal National Monument	--	BLM
South Cape Mendocino State Marine Reserve	California Coastal National Monument	--	BLM
Steamboat Rock Special Closure	California Coastal National Monument	--	BLM
Mattole Canyon SMR	--	--	--
Sea Lion Gulch SMR	--	King Range National Conservation Area	BLM
Big Flat SMCA	--	King Range National Conservation Area	BLM
Double Cone Rock SMCA	--	--	--
Rockport Rocks Special Closure	--	--	--
Vizcaino Rock Special Closure	California Coastal National Monument	--	BLM
Ten Mile SMR	California Coastal National Monument		BLM
		South Kibesillah Gulch Fishing Access	Department
		MacKerricher State Park	State Parks
Ten Mile Beach SMCA	--	MacKerricher State Park	State Parks
Ten Mile Beach SMCA—Option		Same as above	
Ten Mile Estuary SMCA	Bridge		Caltrans (leased from SLC)
		MacKerricher State Park	State Parks
MacKerricher SMCA	MacKerricher State Park: designated for the protection of historic shipwrecks		State Parks (leased from the SLC)
	MacKerricher SMCA (existing)		Commission
		Urban Area	Fort Bragg

Table 6.1-1. Existing Land Uses Inside and Adjacent to Proposed Marine Protected Areas, Proposed Options, and Special Closures

MPA/Special Closure Site	Land Use Sites within MPA/Special Closure Boundaries	Adjacent Land Uses	Jurisdiction
Point Cabrillo SMR	Point Cabrillo Light Station: designated for the protection of historic shipwrecks and cultural resources	--	State Parks (leased from SLC)
	Point Cabrillo SMCA (existing)		Commission
Russian Gulch SMCA	Russian Gulch State Park: designated for the protection of historic shipwrecks	--	State Parks (leased from SLC)
	Russian Gulch SMCA (existing)		Commission
Big River Estuary SMCA		Mendocino Headlands State Park	State Parks
		Big River Program	Mendocino Land Trust
	Communication cables		Pacific Telephone and Telegraph (leased from SLC)
Van Damme SMCA	Van Damme State Park: designated for the protection of historic shipwrecks		State Parks (leased from SLC)
	Van Damme SMCA (existing)		Commission
Navarro River Estuary SMCA		Navarro River Redwoods State Park	State Parks
	Bridge and Bank Stabilization		Caltrans (leased from SLC)

Notes: Caltrans = California Department of Transportation, Commission = California Fish and Game Commission, Department = California Department of Fish and Game, MPA = marine protected area, NPS = National Park Service, NWR = national wildlife refuge, SLC = California State Lands Commission, SMCA = state marine conservation area, SMR = state marine reserve, SMRMA = state marine recreational management area, State Parks = California Department of Parks and Recreation, USFWS = U.S. Fish and Wildlife Service

Source: North Coast MarineMap 2011

Wherever feasible, while still maintaining the goals of the MLPA, the MPAs of the Proposed Project were designed by the North Coast Regional Stakeholder Group to allow a 10-mi buffer from major ports. This general rule was included within the North Coast Regional Goals, Objectives, and Stakeholder Priorities (MLPAI 2010b) as Stakeholder Priority #3, which states, "To the greatest possible degree and where practicable, consider the safety and vitality of coastal communities when designing and siting MPAs by excluding areas around ports and harbors that provide fishing zones large enough to ensure vessel safety (For example, a good rule of thumb for safe fishing zones could be an area within ten miles from the point of interest, although this is not an exclusive value and could vary depending on the location, the needs of the user groups, and the needs to meet the MLPA)." Compared with the rest of California, the lands adjacent to the Study Region is sparsely populated

(**Table 6.1-2**). Consequently, many of the proposed MPAs abut state parks, wildlife refuges, and other undeveloped areas.

Table 6.1-2. Population by MLPA Region[a]

MLPA Region[a]	Population in 2010[b]
North Coast[c]	251,074[c]
North Central Coast[c]	1,629,363[c]
Central Coast	2,089.422
South Coast	6,928,863

Notes: MLPA = Marine Life Protection Act

[a] San Francisco Bay MLPA Region is not included in this table.

[b] These numbers include the entire population for the coastal counties in each region.

[c] Population calculations for North Coast and North Central Coast Regions both include all of Mendocino County, though that county is split between the two regions.

Source: U.S. Census 2010

State Lands Commission Leases

SLC currently has granted over 150 leases in the Study Region for land use activities, including underwater parks, beach driftwood collecting, marinas, bridges, docks, dredging, erosion control, public agency use, oil and gas extraction, research surveys, underwater utility cables, watchtowers, and restoration projects. The following discussion only focuses on existing SLC leases within the boundaries of the proposed MPAs.

Bridges

There are existing leases for the maintenance of bridges that cross over or are adjacent to these three proposed MPAs:

- **Ten Mile Estuary State Marine Conservation Area (SMCA):** The California Department of Transportation (Caltrans) obtained a lease in 1951 from SLC to build a two-lane bridge for State Route (SR) 1 over the Ten Mile River. In 2005, the lease was amended for its replacement with a new seismic retrofit bridge. The permit is for continuous use and includes the right to maintain the bridge. The new bridge is 40 feet wide and accommodates two lanes for automobiles and two 8-foot shoulders for pedestrians, bicyclists, and equestrians along its 1,380-foot span (SLC 2005).
- **Big River Estuary SMCA:** Caltrans was issued a lease in 1959 to construct and maintain a bridge on the western edge of this proposed MPA.
- **Navarro River SMCA:** Caltrans obtained a lease in 1991 to maintain bank protection in and along the Navarro River to protect SR 1 from recurrent landslides (SLC 1991).

Underwater Cables

The following lease for utility cables passes through one of the proposed MPAs:

- **Big River Estuary SMCA:** Pacific Telephone and Telegraph was issued a lease in 1981 for the construction and continuous maintenance of a buried submarine telephone duct and cables crossing through the Big River (SLC 1981).

Historical Artifacts

SLC issues leases to State Parks for the protection of underwater historical artifacts, such as shipwrecks and shell middens. In the Study Region, these sites are currently designated as Underwater Parks. The following proposed MPAs contain existing underwater parks (see also Chapter 5, "Cultural Resources." for more discussion about underwater historical artifacts):

- MacKerricher SMCA
- Point Cabrillo State Marine Reserve
- Russian Gulch SMCA
- Van Damme SMCA

Public Utility Infrastructure

Desalination Plants

Energy and water supply facilities, such as desalination plants, can involve the use of offshore utility lines even though they are primarily located on land. Desalination refers to the wide range of processes designed to remove salts from water. The process occurs by drawing in seawater or brackish water and producing a water stream with a low concentration of salt (the product stream) and another with a high concentration of remaining salts (the brine or concentrate). Most desalination technologies rely on either distillation or membranes to separate salts from the product water. Ultimately, the selection of a desalination process depends on site-specific conditions, including the salt content of the water, economics, the quality of water needed by the end user, and local environmental issues.

The interface of ocean and land in the Study Region, make it a suitable location for the siting of such facilities. However, there are no existing or planned desalination plants in operation in the vicinity of the Study Region.

Stormwater Drainage and Wastewater Treatment Facilities

Publicly owned treatment works (POTWs) collect wastewater from homes, commercial buildings, and industrial facilities, and transport it through a series of pipes to treatment plants. Wastewater treatment facilities remove 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 can also receive wastewater from industrial (nondomestic) users and stormwater runoff (combined storm-sewer systems).

Point sources are sites where treated wastewater or stormwater runoff enters the ocean waters. In the Study Region, six municipal water treatment plants, one power plant, and

three other permitted discharge sites release effluent (wastewater) into the ocean (**Table 6.1-3**). There are additional wastewater and power plant discharge sites along rivers that drain into the Study Region; however, since these discharges are not directly within the Study Region, they have not been included in Table 6.1-2 (MLPAI 2010a).

Table 6.1-3. Point Source Discharge Sites in the North Coast Study Region

Point Source	Effluent Type
Municipal Wastewater Treatment Facilities	
City of Crescent City Waste Water Treatment Works	Treated sanitary wastewater
City of Arcata Waste Water Treatment Plant	Treated sanitary wastewater
City of Eureka Elk River Water Treatment Plant	Treated sanitary wastewater
Shelter Cover Publicly Owned Treatment Works	Treated sanitary wastewater
Fort Bragg Waste Water Treatment Plant	Treated sanitary wastewater
Mendocino City Community Services District	Treated sanitary wastewater
Industrial Power Plants	
Humboldt Bay Power Plant	Cooling Water
Other Industrial Permitted Discharge Sites	
Sierra Pacific Industries Arcata Division	Lumber mill wastewater
California State University Humboldt Marine Lab	Marine lab waste seawater
Humboldt Bay Recreation District Fish Cleaning Station at Shelter Cove	Fish offal (wastewater from fish processing)

Source: MLPAI 2010a

Outfalls for untreated stormwater are another kind of point source within the Study Region. Stormwater outfalls are primarily located in the urbanized coastal areas of Fort Bragg and Eureka. For example, in the city of Eureka, there are 17 storm drain outfalls located on Humboldt Bay and the surrounding sloughs (MLPAI 2010a). More details regarding stormwater discharge are discussed in Section 3.4, "Water Quality."

Energy Generation Facilities

Energy and water supply facilities, such as desalination plants, can involve the use of offshore utility lines even though they are primarily located on land. Since there are no existing or planned desalination plants in operation in the Study Region, this discussion focuses on energy generation facilities. Offshore water-intake pipelines associated with power plants may rely on "once-through" cooling water systems that draw in offshore water and re-release effluent through a network of pipelines. As discussed in Chapter 4, "Biological Resources," such systems can affect aquatic organisms by thermal discharge effects, impingement, and entrainment.

Electric Generating Plants

In the central portion of Humboldt Bay, just south of Eureka, PG&E is currently constructing the Humboldt Bay Generating Station (HBGS) to replace the existing 50-year-old Humboldt Bay Power Plant. The HBGS will utilize a reciprocating engine-generator (air radiator

cooling system in a closed loop system, similar to an automobile cooling system) with a generating capacity of 163 megawatts. The newer technology will use an average of 2,400 gallons of water per day for cooling or other industrial purposes; this is a fraction of the water required for traditional combined-cycle turbine design. The new natural gas plant will eliminate the use of water from Humboldt Bay for once-through cooling (PG&E 2011).

Hydrokinetic Energy Projects

Hydrokinetic technologies produce renewable electricity by harnessing the energy that results from the motion of a body of water (kinetic energy). There are many types of water resources where generation of electricity from kinetic energy is possible. Capturing the energy contained in nearshore and offshore waves is thought to have the greatest energy production potential. In the Pacific Northwest, wave energy could produce 40–70 kilowatts per meter of western coastline. The technologies developed to generate energy from waves and currents, called hydrokinetic energy conversion devices, are generally categorized as either wave energy converters or rotating devices. Both categories utilize buoy and/or turbine technologies. Some of the environmental concerns associated with a full-scale array of hydrokinetic devices include fish strike or impingement, sediment disruption, noise, and the potential to hinder movements of aquatic species (MLPAI 2010a). Several developers have explored the possibility of establishing hydrokinetic energy facilities off the Mendocino County coast, near the City of Mendocino, and off the coast of Humboldt County, between Humboldt Bay and the Mad River. However, at this time there are no active or permitted projects in the Study Region (PFMC 2011).

Kelp Bed Leasing for Commercial Kelp Harvesting

Kelp and edible algae harvesting are activities conducted in the Study Region, permissible either through area leases and/or with a commercial license. Detailed information regarding these practices is included in Appendix B, "Consumptive Uses and Associated Socioeconomic Considerations in the Region." While kelp and algae harvesting in general is not a land use issue, the leasing of kelp beds grants excusive entitlement to harvest kelp in a specified lease area and therefore is described here. The following is a brief summary of this activity.

Administrative Kelp Leases

Commercial harvest of bull kelp or giant kelp in the Study Region is regulated by administrative kelp bed leases, issued by the Commission. Twelve administrative kelp bed areas are located in the Study Region; however, only three are available for lease. Harvesting on the remaining administrative kelp beds is prohibited because they are classified as closed. The three beds available for lease are identified as kelp beds 308, 309, and 312. Bed number 308 is located between the middle of the Ten Mile River mouth north to Point Delgada, at Shelter Cover. Bed number 309 runs from Point Delgada north to Point Mendocino. Bed number 312 extends from the middle of the Klamath River mouth to the California/Oregon border. These three beds can be harvested only if a harvester enters into a lease with the Commission; otherwise, kelp cannot be commercially harvested in these locations (MLPAI 2010a).

Currently, none of the three available beds are under a lease agreement; hence, this type of kelp harvesting does not currently occur in the Study Region. However, an average of 6 six wet tons of kelp per month was harvested from leased beds between 1995 and 2004 (MLPAI 2010a).

6.1.4 Impact Analysis

Methodology

Because of their function as MPAs, the proposed site designations are not currently served by and would have no effect on the provision of public utilities. However, implementation of the proposed MPA designations could result in potential conflicts involving land uses with existing or planned public utilities, including water treatment facilities, cable and communication utilities, and electric-generating projects involving the use of ocean currents or tides (e.g., hydrokinetic projects). Therefore, this analysis also considered the degree to which the MPA designations could conflict with such facilities in the Study Region. The restrictions associated with the various proposed MPAs were also evaluated for their potential for the MPA network to interfere or conflict with other land uses or land use plans or policies.

Criteria for Determining Significance

Based on significance criteria from Appendix G of the State CEQA Guidelines and professional expertise, the Proposed Project would have a significant impact related to land use if it would:

A. physically divide an established community;

B. create substantial conflicts or incompatibility with existing and planned future land uses within or adjacent to the project study area;

C. conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project study area; or

D. conflict with the provision of existing or proposed public utilities

The Proposed Project would not physically divide any established communities, as the Proposed Project would not directly affect terrestrial land use. Therefore, these impacts are not evaluated further.

Environmental Impacts

Impact LU-1: Conflict with Local Coastal Programs (Significance Criterion C)

All three counties near the Study Region have LCPs that have been certified by CCC. Crescent City, Arcata, Eureka, Trinidad, and Fort Bragg also have approved LCPs or land use plans. The LCPs were a planning tool of the NCRSG during design of the MPAs. The NCRSG included a representative from the CCC, who was responsible for raising any concerns from a CCC perspective, including conflict with LCPs. In addition, representatives from local governments formed a Local Agency Coastal Coordination Committee, independent of the

MLPA Initiative planning groups, to ensure local government interests were considered. The NCRSG preferred alternative received broad endorsement from local governments. Conflicts between the Proposed Project and LCPs were not raised during the project development process. Therefore, no impact would occur.

Level of Significance: *No Impact*

Impact LU-2: Conflict with the Humboldt Bay Management Plan (Significance Criteria B and C)

The proposed South Humboldt Bay SMRMA is within the area covered by the Humboldt Bay Management Plan. The Proposed Regulations for an area identified as a SMRMA would prevent any activity that would compromise the recreational values of the area. These regulations would be consistent with the recreation element policies described in the Humboldt Bay Management Plan, which includes RFA-7, "Protection of recreational areas." Therefore, the proposed South Humboldt Bay SMRMA would not affect the land uses designated in the Humboldt Bay Management Plan. Additionally, the same reasoning and conclusion would apply to the proposed Optional configuration of the South Humboldt Bay SMRMA. No impact would occur.

Level of Significance: *No Impact*

Impact LU-3: Conflict with California State Lands Commission Leases (Significance Criteria B and C)

SLC issues leases on California's sovereign lands for public trust purposes, including recreational, commercial, industrial, right-of-way, and salvage, as described above under "Regulatory Setting." Within the proposed MPAs, several locations have identified SLC leases, including permits for a bridge, shipwrecks/historical artifacts, scientific research and archeological surveys, and underwater cables (see "State Lands Commission Leases," above). Permit holders of SLC leases within the proposed MPAs would be allowed access for the activities specified within their permits, including for maintenance of underwater cables. However, the Proposed Project would restrict new leases from SLC within a proposed MPA without the approval of the Commission. Since no future leases are planned within a proposed MPA at this time, the land uses for which such a lease would be issued are currently unknown, and thus it would be speculation to make conclusions regarding the potential for conflicts or inconsistencies between future land uses and the allowed uses of the MPA. In addition, while future land leases from SLC would require the permission of the Commission, they would not be prevented outright. As a result, this impact would be less than significant.

Level of Significance: *Less than Significant*

Impact LU-4: Conflict with the California Coastal National Monument Resource Management Plan (Significance Criteria B and C)

Within the Study Region, BLM manages CCNM, which includes small islands, offshore rocks, reefs, and pinnacles above mean high tide along the entire California coastline, and overlaps with the Study Region of the Proposed Project. The primary management focus of CCNM is preservation and protection of the areas and associated habitat. The main objective of the proposed network of MPAs is similar: to protect, maintain, restore, enhance, and manage

marine resources. Implementation of MPAs created by the Proposed Project that surround or are adjacent to areas within the CCNM would be consistent with the objectives of BLM's management goals for implementation of the CCNM. The two programs would be complimentary. No impact would occur.

Level of Significance: *No Impact*

Impact LU-5: Conflict with Existing Adjacent Land Uses (Significance Criteria B)

The Study Region spans the coastline of three counties. A variety of land uses occupy the adjacent lands, including agriculture and forestry operations, urban areas, ports and harbors, recreational areas, and open space. The Proposed Project does not propose any new development or physical alterations within the Study Region. However, the proposed MPA designations could prevent future development or impede certain activities from taking place within the proposed MPA boundaries, which could conflict with existing land uses. For example, the Proposed Regulations could prevent the placement of any new developments within MPA boundaries, such as new ports or coastal land protection structures (i.e., seawalls). To the extent that such structures currently exist within the proposed boundaries, the Proposed Project would not restrict their operation or maintenance. Although new uses would not be permitted within MPA-designated areas, over 85% of the Study Region would remain available for development in accordance with local and regional regulations. In addition, the Proposed Project would provide resource protection and conservation consistent with the natural resource protection goals of the majority of the relevant regulating entities (e.g., CCC, SLC, State Parks). Since the Proposed Project would not affect existing land uses and sufficient area would remain for future development needs, any related impact would be less than significant.

Restrictions on consumptive activities in areas with existing land uses dedicated to such activity (i.e., boat launch sites near popular fishing areas) are also not anticipated to be significant. Recreational take activities from the shoreline of private land parcels adjacent to the MPAs that host recreational tourists, for example, the DeVillbis Ranch adjacent to the proposed Double Cone Rock SMCA, would be affected by the Proposed Project. However, only shore-based recreational take activities conducted on private lands would be affected. Recreational take of popular species, for example salmon (while trolling) and Dungeness crab, would be allowed within proposed SMCAs (in compliance with all federal and state fishing regulations), though most of these allowed activities are boat-based. Establishment of the Proposed Project would conflict with existing land use activities, including those conducted on private parcels adjacent to proposed MPAs. However, the conflict is not considered significant as recreational take activities within SMCAs would continue to be allowed, but limited by species and methods of take. Potential socioeconomic effects due to displaced recreational fishing as a result of the Proposed Project are discussed in Appendix B.

As previously noted, the total area proposed for MPA designation is limited in comparison to the area available for unrestricted activity. Furthermore, the shoreline span of proposed MPA boundaries averages 2.6 mi and regulations would allow for open passage of recreational and commercial traffic. Therefore, even if certain consumptive activities were not permitted in the immediate vicinity of an existing land use operating for that purpose, users would still be able to use the sites and traverse MPA boundaries to adjacent locations to conduct their activities. (Further discussion on the effects of the Proposed Project on

recreational activities is included in Section 6.3, "Recreation.") Impacts would be less than significant.

Level of Significance: *Less than Significant*

Impact LU-6: Conflict with Public Utility Infrastructure (Significance Criterion D)

As discussed under "Environmental Setting," above, infrastructure associated with public utilities may be present within proposed MPA boundaries. This includes underwater utility cables, as well as outfalls from stormwater drainage and wastewater treatment facilities. To the extent that such infrastructure is currently in place and permitted, operations would be allowed to continue according to federal and state regulations. However, under the Proposed Project, no new wastewater or stormwater outfalls, discharges, or lines of cable would be allowed to be constructed or installed within an MPA. This prohibition also extends to other types of facilities that do not currently exist in the Study Region though may be warranted by future demands, such as desalination plants that commonly include intakes for marine water and waste discharge outfall facilities. Thus, establishing a network of MPAs would limit the location of future utilities by restricting them to areas outside of MPAs. Because no new utility cables, wastewater or stormwater infrastructure, or desalination plants are currently planned within any of the proposed MPAs, and because abundant portions of coastline would remain open for siting such facilities, this impact would be less than significant.

Level of Significance: *Less than Significant*

Impact LU-7: Effects on Renewable Energy Development (Significance Criterion D)

While no permitted hydrokinetic projects are currently in development or operating in the Study Region, utilities and several developers have explored the possibility of establishing renewable energy generation hydrokinetic projects along the coast. Implementing the Proposed Project would preclude the development of hydrokinetic projects within the boundaries of an MPA. However, the proposed MPA network would cover 13% of the Study Region, and would not restrict the development of hydrokinetic projects in the remaining 87% of the Study Region. Establishment of renewable energy hydrokinetic projects would continue to be feasible in the Study Region, although they would still need to obtain any required federal, state, and local approvals. This impact would be less than significant.

Level of Significance: *Less than Significant*

Impact LU-8: Conflicts with Provision of Administrative Kelp Leases (Significance Criteria B and C)

Approximately half of the Study Region is closed to commercial kelp harvesting under existing regulations adopted by the Commission.. Three open areas are available for commercial kelp harvesting by lease only. No formal requests for a commercial kelp harvest lease have been made or are pending for these areas. **Table 6.1-4** lists the available kelp bed lease areas and proposed MPAs located within these areas.

Table 6.1-4. Available Kelp Harvest Leases and Overlapping Proposed Project MPAs

Kelp Bed Lease Number	Kelp Bed Lease Location	Overlapping Proposed Project MPAs
308	Middle of the Ten Mile River mouth north to Point Delgada, near Shelter Cover	Ten Mile SMR Double Cone Rock SMCA Double Cone Rock SMCA Option
309	Point Delgada to Cape Mendocino	South Cape Mendocino SMR Sea Lion Gulch SMR Sea Lion Gulch SMR Option Mattole Canyon SMR Big Flat SMCA
312	Middle of the Klamath River mouth to the California/Oregon border	Pyramid Point SMCA Pyramid Point SMCA Option

Notes: MPA = marine protected area, SMCA = state marine conservation area, SMR = state marine reserve
Source: North Coast MarineMap 2011

For the four state marine reserves (SMRs) listed in Table 6.1-4 (Ten Mile, South Cape Mendocino, Mattole Canyon, and Sea Lion Gulch SMRs), take of all living marine resources, including bull kelp and giant kelp, would be prohibited. For the three state marine conservation areas (SMCAs) listed (Double Cone Rock, Big Flat, and Pyramid Point), commercial harvesting of bull kelp and giant kelp also would be prohibited. In the SMCAs, take of some species would be allowed; however, no exemptions would be granted for kelp harvesting included in the Proposed Regulations. Future leases issued to commercial harvesters by the Department would not allow kelp harvesting within the SMRs and SMCAs listed in Table 6.1-4. Therefore, the Proposed Project would reduce the area that currently remains available for commercial kelp harvesting. However, portions of the existing leases would be available, and the Commission could open currently closed commercial kelp bed lease areas in the future, if it is found that those closed beds could support commercial harvest, to expand the area where kelp harvesting would be allowed. Considering that no currently active commercial kelp harvesters have submitted a formal request to lease any of the three available kelp bed areas, and because the net available area for kelp bed leases could increase in the future, this impact would be less than significant.

Level of Significance: *Less than Significant*

Chapter 6.2

Public Services and Law Enforcement

6.2 Public Services and Law Enforcement

6.2.1 Introduction

This section describes the existing setting and potential public services and law enforcement impacts of the Proposed Project and its alternatives. Specifically, it describes existing conditions within the North Coast Study Region (Study Region) related to public services, law enforcement, emergency services, and schools, as well as analyzes the potential impacts of the Proposed Project on public services and law enforcement. Data and information sources used to prepare this section include state and federal regulations, the *Regional Profile of the North Coast Study Region: California/Oregon Border to Alder Creek* (MLPAI 2010), the *MLPA Master Plan for Marine Protected Areas* (CDFG 2008), and other relevant reference material.

6.2.2 Regulatory Setting

State Statutes and Regulations

California Fish and Game Code Section 2853(b)(5) and Section 2853(c)(2)

Fish and Game Code Section 2853(b)(5) identifies adequate enforcement for marine protected areas (MPAs) as a goal; and Section 2853(c)(2) contemplates that the Proposed Project shall include specific management and enforcement measures.

6.2.3 Environmental Setting

Law Enforcement

California Department of Fish and Game

The Department's Law Enforcement Division (LED) protects California's natural resources and provides public safety through effective and responsive law enforcement, under marine resource management laws and regulations for an area encompassing approximately 1,100 miles of coastline and generally 3 nautical miles (nm) out to sea (the offshore boundaries or state waters line, per California Code of Regulations, Title 14 Section 632). Enforcement duties reflect all commercial and sport fishing statutes and regulations, all Fish and Game Code and California Code of Regulations, Title 14 restrictions, response to marine water pollution incidents, assistance in search and rescue, homeland security, general public safety, and law enforcement in the marine environment. In the inland environment, LED is also responsible for enforcement of all state and federal laws related to wildlife, inland pollution, habitat destruction, and general law enforcement duties, as needed. Personnel may travel extensively to assist other jurisdictions in these activities, as well.

General fishing regulations and specific MPA restrictions apply within MPAs. As with all activities for which the LED has responsibility, MPA enforcement will be prioritized according to operational needs, along with other factors that may affect coverage.

The Law Enforcement Division also provides enforcement of federal laws and regulations within state waters and in federal waters, under the Magnuson Stevens Fishery

Conservation and Management Act, the Endangered Species Act, and the Lacey Act (see Chapter 4, "Biological Resources," for a description of these regulations). Department enforcement patrols may extend into federal waters or the Exclusive Economic Zone (EEZ), generally defined as 3 to 200 nm from shore, where a significant portion of both commercial and recreational fishing effort, and subsequently enforcement effort, occurs (CDFG 2008).

Statewide, the Department has approximately 230 wardens in the field, responsible for a combination of both inland and marine patrol. The Department has 19 law enforcement positions assigned to coastal enforcement within the Study Region. These positions are designated as having a marine emphasis and would be the primary responders to the network of MPAs located in the Study Region, although other wardens in the region contribute to both inland and marine patrol to some degree. There are patrol skiffs ranging in size from 24 to 32 feet assigned to local ports and harbors in the Study Region. There are no aircraft located within the Study Region, but aircraft stationed in adjacent areas are available to respond.

The Department's enforcement program also works closely with the enforcement programs of many other agencies (including U.S. Coast Guard [USCG], U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration's National Marine Fisheries Service [NOAA Fisheries] and National Marine Sanctuaries, the National Park Service [NPS], and California Department of Parks and Recreation [State Parks]), on matters of mutual enforcement interest (**Table 6.2-1**). Although these programs often provide financial or logistical support, they do not provide significant staff resources statewide, especially for offshore patrols or patrols of areas not adjacent to their own facilities (CDFG 2008).

U.S. Coast Guard

USCG has substantial assets in the area, including various vessels from 25 to 87 feet. They have several rotor wing aircraft and may conduct fisheries patrols throughout the Study Region. USCG is the primary federal responder for marine pollution events. Both state and federal officers may conduct joint fisheries patrol activities alongside USCG personnel. However, the primary mission of USCG is related to emergency services and homeland security issues (see below under "Emergency Services").

NOAA has two special agent positions assigned to the Study Region. The primary responsibility of the special agents is investigation of federal fisheries and federal Endangered Species Act violations in the Study Region. NOAA special agents may assist state agencies in fisheries patrol and investigation of fisheries violations.

National Park Service

NPS provides additional support for law enforcement in the Study Region. One national park, Redwood National Park, is adjacent to the Study Region. The Redwood National and State Park (RNSP) (encompassing 133,000 acres) includes Del Norte Coast, Jedediah Smith, and Prairie Creek Redwoods State Parks. NPS collaborates regularly with the Department, USCG, and the county sheriff's department to achieve their enforcement goals. Although NPS does not have available resources for marine-based patrols, it assists USCG and the sheriff's department in their efforts in this area.

Table 6.2-1. Natural Resource Enforcement Agencies in California

Agency	Assets and Activities
Federal	
U.S. Coast Guard	The U.S. Coast Guard has a primary role in protecting natural resources under the Oil Pollution Act of 1990, the Rivers and Harbors Act of 1899, and the Marine Plastic Pollution and Control Act. The U.S. Coast Guard works directly with the Department's Office of Spill Prevention and Response on oil pollution incidents. It also provides limited support for state and federal fisheries regulation enforcement.
U.S. Fish and Wildlife Service	U.S. Fish and Wildlife Service agents and officers have the statutory authority to enforce the Marine Mammal Protection Act, the Endangered Species Act, and the Lacey Act (that combats trafficking in "illegal" wildlife, fish, and plants).
National Oceanic and Atmospheric Administration (NOAA) Fisheries and National Marine Sanctuaries	The California Department of Fish and Game has a Joint Enforcement Agreement with NOAA Fisheries and National Marine Sanctuaries. The NOAA agency provides funding to the state to enforce federal regulations in state waters, federal offshore waters, and locally in bays, estuaries, rivers and streams.
National Park Service	The National Park Service has enforcement personnel stationed at various federal parks along the California coast and at some of the off-shore islands.
State	
California Department of Fish and Game	The Department has law enforcement positions assigned throughout the Study Region. There are patrol skiffs, ranging in size from 24–32 feet, assigned to various ports in the Study Region.
California Department of Parks and Recreation (State Parks)	The California Department of Parks and Recreation manages approximately one-third of the state coastline and has law enforcement personnel stationed in park units throughout California, many with on-water patrol capability. These officers have the authority to enforce California Department of Fish and Game statutes.
Local	
Harbor Police, City Police, and Sheriffs	Local harbor districts and sheriff and police departments often employ peace officers to conduct on-water patrols within their jurisdictions.

Source: CDFG 2008

California Department of Parks and Recreation

State Parks manages approximately one-third of the California coastline, overseeing coastal wetlands, estuaries, beaches, and dune systems within state park system units (for more details about state parks in the Study Region, see Section 6.3, "Recreation"). Through State Lands Commission Leases, State Parks has the management authority over 15 underwater areas, although 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 Commission on any proposed restrictions related to the extraction of living marine resources (PRC, Section 6725).

State Parks provides law enforcement services within its park boundaries. Rangers are empowered to enforce state and federal regulations, and they generally stay within the jurisdictional boundaries of their parks. They also often collaborate with other agencies (county sheriffs, USCG, and NPS) to ensure full coverage of the coastline. California has 278 state parks (13 flank the coastline of the Study Region and a number of state reserves and state beaches. These recreational areas are described in Section 6.3, "Recreation."

A number of the coastal state parks are subject to closure because of budget cuts that began in September 2011, and they will remain closed until the overall economic situation allows them to reopen. Coastal state parks in the Study Region that are affected by budget cuts include Manchester State Park, Greenwood Creek, Jug Handle State Reserve, Westport-Union Landing (reduced service), Fort Humboldt State Historic Park, Del Norte Coast Redwoods State Park, and Point Cabrillo Light Station (State Parks 2011).

Local Law Enforcement

Enforcement services also are provided by local sheriff and police departments. In Mendocino County, the Fort Bragg County Sheriff's coast sector substation has 12 sheriffs on staff and one boat (available for emergencies, but it does not regularly patrol the coast). In Eureka, the Humboldt County Sheriff's Office has 27 officers on staff; two deputies are full-time staff for the Boating Unit. The boating program is funded by local boat taxes and registration revenue. The deputies enforce state and local boating regulations, lead boating safety education programs, inspect vessels, and perform search and rescue (County of Humboldt 2011). Del Norte County Sheriff's Office has a station in Crescent City with 16 active patrol staff; it has a special operations unit that administers a boating and waterways program and a search-and-rescue team (County of Del Norte 2011).

Regional and Local Parks

Regional and local parks employ law enforcement services within respective park boundaries. Similar to State Parks, local park rangers are empowered to enforce state and federal regulations, generally staying within the jurisdictional boundaries of their respective parks, and they often collaborate with other agencies as part of their law enforcement duties.

Emergency Services

USCG, the primary maritime law enforcement agency, currently provides emergency response within existing MPAs. Search and Rescue (SAR) is one of USCG's oldest missions. SAR response involves multi-mission stations, cutters, aircraft, and boats, linked by communications networks (U.S. Coast Guard 2011a). Emergency response services include distress monitoring, communications, provision of medical advice, initial medical assistance, and/or medical evacuation. USCG develops, establishes, operates, and maintains 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.

The four USCG stations adjacent to the Study Region are listed in **Table 6.2-2**. The primary mission of these stations in the Study Region is search and rescue. Rough ocean conditions and foggy weather lead to many life-threatening emergencies. Secondary missions for these stations include aerial support for aids to navigation, law enforcement, and marine environmental protection (U.S. Coast Guard 2011b). The four stations operate when surf is greater than 8 feet, which is 36 days or more per year on average.

Table 6.2-2. U.S. Coast Guard Stations in the North Coast Study Region

Name of Facility	Location
Boating Station	Crescent City
Air Station Humboldt Bay	Arcata-Eureka Airport, McKinleyville, Humboldt County
Station Humboldt Bay	Oceanside, on the north side of the mouth of Humboldt Bay
Station Noyo River	At the Noyo River Basin in Fort Bragg

Source: MLPAI 2010

Station Humboldt Bay is located along a treacherous navigation point, the site of many shipwrecks (U.S. Coast Guard 2011c). This station averages over 150 distress cases annually in and around Humboldt Bay (U.S. Coast Guard 2011b). Station Noyo River responds to maritime search-and-rescue emergencies and law enforcement calls in the Fort Bragg area. All along California's North Coast, USCG operates an 87-foot patrol boat that is housed at the Boating Station in Crescent City (U.S. Coast Guard 2011b). The Air Station in Humboldt County operates a command center that monitors for distress 24 hours a day and directs USCG boats and aircraft to respond to any maritime emergency, from the Mendocino/Sonoma county line to the California/Oregon border (U.S. Coast Guard 2011d).

Schools

No primary or secondary schools are located on or directly adjacent to the Study Region. Several universities, government, and nongovernmental organizations use the Study Region for research and educational purposes. This is discussed further in Section 6.4, "Research and Education."

6.2.4 Impact Analysis

Methodology

Potential impacts on public services were assessed qualitatively, based on the degree to which the establishment of MPAs could potentially disrupt or impact the provision of law enforcement and/or emergency response services. The analysis includes consideration of existing resources, response times, and service ratios.

Because the Proposed Project would not induce population growth or otherwise increase demand for educational facilities (i.e., schools, libraries), discussions related to provision of these services were not considered further. In addition, potential impacts on park facilities and other recreational opportunities are discussed in Chapter 6.3, "Recreation."

Criteria for Determining Significance

Appendix G of the State CEQA Guidelines states "Would the project result in [significant] adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services." Based on professional expertise, and removing the redundancy and ambiguity, we may re-phrase to significance criteria to state that the Proposed Project would have a significant impact on the environment if it would:

A. cause a substantial increase in the need for the construction of new or altered facilities in order to maintain acceptable public service ratios for response times, or other performance objectives, for police, fire, or emergency response in enforcing federal, state, and/or local laws and regulations.

Environmental Impacts

Impact PSU-1: Increased Demand for Law Enforcement Facilities (Significance Criteria A)

A significant increase in recreation, tourism, research, or fishing activities would not likely occur with implementation of the Proposed Project. Therefore, implementing the Proposed Project would not be expected to create a substantial increase, compared to existing conditions, in the demand for law enforcement or emergency services, such as U.S. Coast Guard search-and-rescue services. Both recreational and commercial consumptive use patterns may shift in response to creating MPAs, with anglers and vessel owners traveling to different locations not within MPAs. The increase in travel distance may affect the demand for or provision of emergency or law enforcement services overall within the North Coast Study Region by causing response to more remote areas of the coast.

It is recognized that the Proposed Project would place greater fishing and use restrictions within designated MPAs, and increase the geographic variation in regulations along the coastline of the Study Region. As described in Section 2.5, "Management, Enforcement, and Monitoring of MPAs," the Department's enforcement staff and federal and local agencies would be charged with enforcing the new MPA restrictions within the North Coast Study Region. It is reasonable to believe that creating a larger network of MPAs would increase the demand for enforcement of MPAs within the Study Region compared to existing conditions (3 MPAs). While technology advances, outreach and education, and improved efficiency are anticipated to support both compliance and enforcement, this is not anticipated to supplant enforcement personnel in the field. Because of existing budget constraints, it is unlikely that the Department or federal and local agencies would be able to provide additional staffing specifically to enforce MPA restrictions, unless and until new enforcement positions are provided by the State legislature or through federal or local

funding resources during annual budgeting processes. Allocating existing personnel to enforce new MPA regulations may cause delays in service, delays in response times, and create decreased law enforcement coverage for existing programs.

The Department acknowledges the need for more fish and game wardens to render public services. The Department has advocated expansion of its warden enforcement force in order to more effectively detect and deter violations of the Fish and Game Code and its implementing regulations. Certainly, an increase in the number of wardens specifically to enforce MPA restrictions may improve the quality of resource protection intended by the Proposed Project and is therefore desirable to better achieve the long-term project goals. The effectiveness of the Proposed Project in reaching its objectives is certainly related to the degree of compliance with the MPA regulations, and greater effort spent on enforcement is generally agreed to increase compliance.

Regardless, even if funding for enforcement staff is increased and more positions are allocated, either through redirection of funds from elsewhere in the state or through budget allocation/legislative actions, enforcement staff in the North Coast Study Region work from their homes and vehicles rather than operating from a central facility. While the Department recognizes the increase in need for enforcement may be "substantial" from a programmatic standpoint, as the term is used in the context of the CEQA Guidelines, it would not by necessity result in the need for new or expanded facilities in order to accommodate increased enforcement or emergency response staff as a result of the Proposed Project. Therefore, for the purposes of this analysis, this impact is considered less than significant.

Level of Significance: *Less than Significant*

Chapter 6.3

Recreation

6.3 Recreation

6.3.1 Introduction

This section presents an overview of recreational activities in and adjacent to the North Coast Study Region (Study Region), and summarizes the overall federal, state, and local regulatory framework related to recreational use in the Study Region. It includes an analysis of the potential impacts of the Proposed Project on recreational resources.

Recreational activities within this section focus on nonconsumptive recreational uses (e.g., diving, wildlife viewing, and kayaking), trends, and hot spots for more popular consumptive recreational activities, such as abalone and urchin diving. Data and information sources used to prepare this section include federal, state, and local regulations, the *Regional Profile of the North Coast Study Region: California-Oregon Border to Alder Creek* (MLPAI 2010a), and other relevant reference material.

6.3.2 Regulatory Setting

Regulations pertaining specifically to recreational resources are described below. The Proposed Project would be solely within the open water below the mean high tide; therefore, the following land-based information is included for information purposes only.

Federal Regulations

National Park Act

The National Park Act of August 19, 1916 (16 U.S. Code 1 et seq.), also known as the Organic Act, created the National Parks Service (NPS) in the U.S. Department of the Interior. 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."

State Regulations

Public Trust Doctrine

The Public Trust Doctrine espouses 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 (California State Lands Commission n.d.). The Submerged Lands Act 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.[1] The California Supreme Court has interpreted the range of public interest values in these waterways to include general

[1] *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.

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.[2,3]

California Harbors and Navigation Code Recreational Boating Rules

Recreational boating rules in the California Harbors and Navigation Code, Section 660, 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.[4]

6.3.3 Environmental Setting

Recreational Facilities in the Study Region

State Parks

The California Department of Parks and Recreation (State Parks) manages nearly 30% of the state's coastal terrestrial lands and has been involved in the planning and implementation of underwater parks and reserves since 1960. Before the passage of the MLPA in 1999, 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 archeological and cultural artifacts (such as shipwrecks) are in the areas of the designated Underwater Parks. These parks are intended to provide opportunities for diving and underwater photography. Many of the planning elements and goals fundamental to the plan mirror those of the MLPA and the Marine Managed Areas Improvement Act.

Underwater Parks in the Study Region include MacKerricher State Park, Russian Gulch State Park, Point Cabrillo Light Station, and Van Damme State Park (State Parks 2011a).

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;
- preservation of scenic underwater resources;
- provision of a variety of nearshore recreational opportunities, such as nature observation, diving, underwater photography, fishing and boating; and
- provision of public education and interpretation of marine environments, including intertidal areas.

[2] 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.

[3] 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.

[4] Harbors and Navigation Code Section 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.

The annual number of visitors to each of the state parks adjacent to the Study Region is shown in **Table 6.3-1.** Mendocino Headlands State Park received the most visitors of all of the state parks, with 1,121,973 visitors in the 2007–2008 fiscal year. The second most-visited state park is MacKerricher State Park, with 947,441 visitors during the same period. The remaining nineteen state parks received substantially less visitors.

Table 6.3-1. Attendance at Coastal State Parks in the North Coast Study Region

California State Park	County	Total Attendance* (FY2007–2008)
Mendocino Headlands State Park	Mendocino	1,121,973
MacKerricher State Park	Mendocino	947,441
Prairie Creek Redwoods State Park Del Norte	Humboldt	231,223
Van Damme State Park	Mendocino	188,822
Westport-Union Landing State Beach[2]	Mendocino	156,292
Humboldt Lagoons State Park	Humboldt	149,381
Navarro River Redwoods State Park	Mendocino	137,874
Jug Handle State Natural Reserve[2]	Mendocino	136,261
Patrick's Point State Park	Humboldt	123,510
Del Norte Coast Redwoods State Park[2]	Del Norte	115,196
Greenwood State Beach[2]	Mendocino	83,174
Russian Gulch State Park	Mendocino	74,057
Manchester State Park[1,2]	Mendocino	71,805
Caspar Headlands State Beach	Mendocino	44,992
Trinidad State Beach	Humboldt	44,964
Caspar Headlands State Natural Reserve	Mendocino	36,226
Point Cabrillo Light Station[2]	Mendocino	35,953
Pelican State Beach	Del Norte	30,257
Tolowa Dunes State Park	Del Norte	25,807
Little River State Beach	Humboldt	13,342
Sinkyone Wilderness State Park	Humboldt/Mendocino	11,591

Notes:

* In addition to the state parks and beaches listed in this table, the North Coast Study Region is also home to a number of county and city beaches; therefore, total beach attendance is greater than the numbers reported in this table.

1 Manchester State Park extends out of the Study Region to the south.

2 These state parks have closed temporarily as of September 2011, as the result of budget cuts (State Parks 2011b).

Source: MLPAI 2010a

Revenues from user fees and concessions at state parks adjacent to the Study Region's coastline reached over $2.7 million during the 2007–2008 fiscal year (**Table 6.3-2**). MacKerricher, Prairie Creek Redwoods, and Patrick's Point State Parks were the greatest revenue-generators, together accounting for over half of the total revenue earned by state parks adjacent to the coast in the Study Region (MLPAI 2010a).

Table 6.3-2. Department of Parks and Recreation Revenue from Coastal State Parks in the North Coast Study Region

California State Park	County	Total Revenue (FY2007–2008)
MacKerricher State Park	Mendocino	$539,668
Patrick's Point State Park	Humboldt	$535,569
Prairie Creek Redwoods State Park	Del Norte/Humboldt	$413,746
Jedediah Smith Redwoods State Park	Del Norte	$334,288
Van Damme State Park	Mendocino	$331,488
Del Norte Coast Redwoods State Park[2]	Del Norte	$239,813
Russian Gulch State Park	Mendocino	$163,675
Westport-Union Landing State Beach[2]	Mendocino	$64,492
Manchester State Park[1,2]	Mendocino	$43,095
Navarro River Redwoods State Park	Mendocino	$36,414
Sinkyone Wilderness State Park	Humboldt/Mendocino	$31,323
Humboldt Lagoons State Park	Humboldt	$4,099
Caspar Headlands State Beach[3]	Mendocino	$0
Caspar Headlands State Natural Reserve[3]	Mendocino	$0
Jug Handle State Natural Reserve[2,3]	Mendocino	$0
Mendocino Headlands State Park[3]	Mendocino	$0
Point Cabrillo Light Station[2,3]	Mendocino	$0
Greenwood State Beach[2,3]	Mendocino	$0
Little River State Beach[3]	Humboldt	$0
Pelican State Beach[3]	Del Norte	$0
Tolowa Dunes State Park[3]	Del Norte	$0
Trinidad State Beach[3]	Humboldt	$0

Notes: FY = fiscal year

1 Manchester State Park extends out of the Study Region to the south.

2 These parks are subject to closure due to budget cuts.

3 Some state parks do not charge an entrance fee or a parking fee. Therefore, no revenue is 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.

Source: MLPAI 2010a

As of September 2011, a number of the coastal state parks were closed because of budget cuts, and they will remain closed until the fiscal climate improves. Coastal state parks in the Study Region that are impacted by budget cuts are Manchester State Park, Greenwood Creek, Jug Handle State Reserve, Westport-Union Landing (already reduced service), Fort Humboldt State Historic Park, Del Norte Coast Redwoods State Park, and Point Cabrillo Light Station (State Parks 2011b).

Coastal Beaches and Access Points

Parks operated by the state, individual counties, and some cities adjacent to the Study Region provide public beaches or coastal access points. **Table 6.3-3** summarizes public

facilities at these coastal beaches by county. There are a total of 33 coastal beaches with campgrounds, 66 locations which provide access to commonly used fishing sites, and 23 locations with boating facilities. For many coastal access points, the parking area abuts the beach, but in other locations a path or stairway must be taken to reach the coast (MLPAI 2010a). As noted previously, numbers for Mendocino County include the southernmost portion of the county, which is not part of the Study Region.

Table 6.3-3. Facilities at Coastal Beaches in the North Coast Study Region, by County

County	Campgrounds	Stairways to Beach	Paths to Beach	Biking Trails	Boating Facilities	Fishing Sites
Del Norte	6	4	16	1	5	21
Humboldt	16	3	18	0	14	28
Mendocino	11	2	14	1	4	17
Total	**33**	**9**	**48**	**2**	**23**	**66**

Source: MLPAI 2010a

Federally Managed Recreation Areas

NPS was established to conserve natural scenery, wildlife, and natural and historic objects. In addition, NPS provides for the management of these resources for future generations. NPS manages national parks, monuments, historic sites, and recreation areas by developing and implementing park management plans. Although its responsibilities are not specifically ocean or coastal oriented, NPS manages four coastal recreational parks in California. One of these, Redwood National Park and its 40 statute miles (mi) of wild coastline, is located within the Study Region.

NPS cooperatively manages the Redwood National and State Parks complex with the California State Parks agency. The Redwood National and State Parks complex has four units that encompass 133,000 acres: Redwood National Park, and three state parks—Prairie Creek Redwoods State Park, Del Norte Coast Redwoods State Park, and Jedediah Smith Redwoods State Park. Unlike some of the state parks associated with this complex, no fee is required for entry to Redwood National Park. Although hunting is prohibited in Redwood National Park, firearm possession is allowed in most locations, as are fishing and collecting activities with the appropriate permits and/or possession of valid licenses (i.e., California fishing license). The Redwood National and State Parks complex has four campgrounds facilities that can support up to 332 tents or RVs, over 200 mi of trails, five information centers, and nine designated backcountry camp areas available for park users. (NPS 2010)

The U.S. Bureau of Land Management (BLM) administers 262 million surface acres of America's public lands, located primarily in 12 western states. 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.

Although most of its lands are not located along the coast, BLM manages the California Coastal National Monument that encompasses more than 20,000 small islands, offshore rocks, reefs, and pinnacles exposed above mean high tide within 12 nautical miles of the coast statewide. The California Coastal National Monument is governed by a resource management plan (RMP) that establishes its management framework, outlining its goals and objectives, identifying dozens of management actions for implementation. To effectively manage its lands, BLM has formed numerous partnerships with Native American as well as federal, state, and local government entities (BLM 2011).

BLM's management goals for the California Coastal National Monument emphasize protection of the biological, geological, aesthetic, and cultural resources of its rocks and islands. Its RMP encourages recreational activities in the vicinity of the rocks and islands that do not disturb wildlife (such as wildlife viewing, photography, and painting). Camping, use of fire, off-road vehicle use, most forms of shooting, competitive events, and rock climbing are prohibited (BLM 2004).

Additionally, BLM manages several onshore public lands adjacent to the Study Region: South Split Cooperative Management Area, Samoa Dunes Recreation Area, Lost Coast Headlands, and King Range National Conservation Area. Of these, only the King Range National Conservation Area is specifically managed with an adopted resource management plan. The King Range RMP emphasizes protection of recreation and access, the primitive character of the area, and resource conservation. The remaining areas of public lands adjacent to the Study Region are managed under either the Arcata RMP or the Ukiah RMP, with similar goals of maintaining and improving the health of the landscape and ecosystems for the enjoyment of future generations. (BLM 2006)

BLM manages public lands adjacent to the coastline in the Study Region (see Section 6.1, "Land Use," for more details). These managed coastal lands draw an increasing number of visitors every year, and include the South Spit Cooperative Management Area (65,000 visitors in 2008–2009) and Samoa Dunes Recreation Area (190,000 visitors in 2008–2009) near Eureka, the Lost Coast Headlands (8,000 visitors in 2008–2009), and the King Range National Conservation Area (191,259 visitors in 2007–2008), also known as the "Lost Coast" because of limited access to the area (MLPAI 2010a).

Lighthouses

A number of lighthouses are also located in the vicinity of the Study Region (**Table 6.3-4**); several of which are open to the public and provide good locations for wildlife viewing. Some of the lighthouses are difficult to access. For example, the Punta Gorda lighthouse has a 3.5-mi trail leading to it from the nearest parking area (MLPAI 2010a).

Table 6.3-4. Lighthouses in the North Coast Study Region

Lighthouses	County	Open to the Public
St. George Reef	Del Norte	No
Battery Point	Del Norte	Yes
Trinidad Head	Humboldt	No*
North Spit	Humboldt	No longer standing
Table Bluff	Humboldt	Yes
Cape Mendocino	Humboldt	No
Punta Gorda	Humboldt	Yes
Point Cabrillo	Mendocino	No

Note:

* Tourists can visit a nearby replica of the Trinidad Head lighthouse.

Source: MLPAI 2010a

Facilities in the Vicinity of Proposed Marine Protected Areas

Table 6.3-5 identifies the recreational sites, such as park facilities and wildlife viewing locations (sea bird colonies, sea lion haul-outs and rookeries), located within and adjacent to proposed marine protected area (MPA) locations.

Table 6.3-5. Recreational Sites Within and Adjacent to Marine Protected Areas in the North Coast Study Area

Marine Protected Area (MPA)	Recreational Sites within MPA boundary	Adjacent Recreational Sites	Notes
Pyramid Point SMCA	Pelican State Beach (dive site), Cone Rock seabird colony	Pelican State Beach, Clifford Kamph Memorial Park	
Pyramid Point SMCA—option	All the above plus, Hunter Rock seabird colony	(same as above)	Southern boundary extension
Point St. George Reef Offshore SMCA	--	St. George Reef (California Sea lion, Steller sea lion haulout)	Offshore area
Reading Rock SMR and option	--	Reading Rock (seabird colony)	Offshore area
Reading Rock SMCA and Reading Rock Onshore SMCA option	California sea lion, Pacific Harbor seal, Steller sea lion haulouts	Pelican observation areas (Requa Rock and Redwood Creek Mouth), Orick Beach (fishing access); Prairie Creek Redwoods State Park	
Samoa SMCA	--	Na-Le'l Dunes Park/Reserve; Mad River Beach County Park [in proximity]	
South Humboldt Bay SMRMA	--	Pacific Harbor seal rookery and haulout, Table Bluff County Park	
South Humboldt Bay SMRMA—option	Pacific Harbor seal rookery and haulout	Humboldt Bay National Wildlife Refuge	Northern boundary extension

Table 6.3-5. Recreational Sites Within and Adjacent to Marine Protected Areas in the North Coast Study Area

Marine Protected Area (MPA)	Recreational Sites within MPA boundary	Adjacent Recreational Sites	Notes
South Cape Mendocino SMR	California sea lion, Pacific Harbor seal haulout, pelican observation area, and seabird colony (Steamboat Rock)	California sea lion, Pacific Harbor seal haulout, Steller sea lion rookery and haulout, Sugarloaf Island seabird colony	
Mattole Canyon SMR	--	California sea lion, Steller sea lion haulout, Pacific Harbor seal rookery and haulout, Three Brothers seabird colony, pelican observation area (Mattole River), Mattole River/Mattole River Beach (Dive site)	Offshore area
Sea Lion Gulch SMR	Steller sea lion haulout, Sea lion Rock, seabird colony	California sea lion haulout; King Range National Conservation Area	
Sea Lion Gulch SMR—option	All the above plus Pacific Harbor seal rookery and haulout, California sea lion haulout, Punta Gorda abalone catch area	(same as above)	Boundary extensions; take of all resources prohibited
Big Flat SMCA	Steller sea lion rookery and haulout, Pacific Harbor seal haulout	Pacific Harbor seal haulout, Big Flat Beach, King Rang National Conservation Area	
Double Cone Rock SMCA	Pelican observation area (Usal Rock, Soldier Frank Point), Pacific Harbor seal rookery and haulout, California sea lion, Steller sea lion haulout, Soldier Frank Point seabird colony	Usal Bay, Rockport Landing Rocks seabird colonies, pelican observation area (Rockport Landing Rocks); Siskyone Wilderness State Parks [in proximity]	
Double Cone Rock SMCA—option	(same as above)	(same as above)	Greater prohibitions on take methods
Ten Mile SMR	Strawberry Cove, Kibesillah Rock, Newport Rocks seabird colonies, pelican observation area (Kibesillah Rock, Newport Rocks), Kibesillah abalone catch area, Pacific Harbor seal rookery and haulout	Pacific Harbor Seal rookery and haul out, Kibesillah Gulch view area (visual access), Seaside Creek Beach (physical access); MacKerricher State Park	Take of all resources prohibited
Ten Mile Beach SMCA	--	MacKerricher State Park	
Ten Mile Beach SMCA—option	--	(same as above)	Southern boundary extension
Ten Mile Estuary SMCA	--	MacKerricher State Park	
MacKerricher SMCA	Pacific Harbor seal rookery and haulout, MacKerricher State Park (hand launch), MacKerricher abalone catch area, MacKerricher State Park and Glass Beach (dive site), Laguna Point (physical access), pelican observation area (Laguna Point), Glass Beach abalone catch area	MacKerricher State Park; Ward Avenue, Haul Road, Pudding Creek, Glass Beach (physical access areas), Pacific Harbor seal rookery and haulout	Take of all resources (except for kelp) allowed

Table 6.3-5. Recreational Sites Within and Adjacent to Marine Protected Areas in the North Coast Study Area

Marine Protected Area (MPA)	Recreational Sites within MPA boundary	Adjacent Recreational Sites	Notes
Point Cabrillo SMR	Pacific Harbor seal rookery and haulout	California sea lion, Pacific Harbor seal, Steller sea lion haulout, seabird colony (Casper Anchorage), Point Cabrillo Lighthouse State Historic Park, state park underwater lease (to protect historic wreck site of the Frolic) Caspar Headlands State Beach (in proximity)	Take of all resources prohibited
Russian Gulch SMCA	Russian Gulch abalone catch area, Russian Gulch State Park (Dive site)	Russian Gulch State Park	Take of all resources (except for kelp) allowed
Big River Estuary SMCA	--	Big River Beach (physical access); Mendocino Headlands State Park	
Big River Estuary SMCA—option	(same as above)	(same as above)	Option allows take of surfperch
Van Damme SMCA	Little River Port, Van Damme State Park (dive site)	Van Damme State Park; Dark Gulch (visual access), Van Damme Cove seabird colony	
Navarro River Estuary SMCA	--	Navarro River Redwoods State Park, Navarro River Beach (dive site), Navarro River abalone catch area, Navarro River spearfish competition site	
Navarro River Estuary SMCA—option	(no change)	(same as above)	Option allows take of salmonids

Notes: SMCA = state marine conservation area, SMR = state marine reserve, SMRMA = state marine recreational management area

Source: North Coast MarineMap 2011, MLPAI 2010b

Recreational Activities in the Study Region

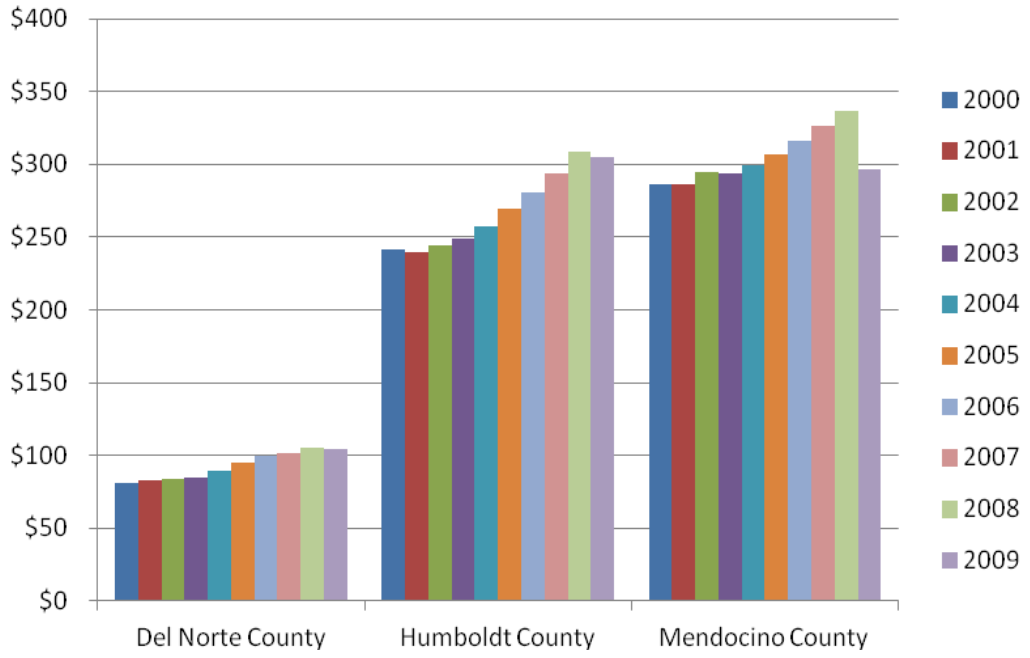
Recreationalists flock to beaches and accessible shores to partake in a variety of consumptive and nonconsumptive recreational activities. Approximately 517 mi of coastline in the Study Region offer not only intrinsic natural and aesthetic values, but also numerous recreational opportunities. This section primarily discusses nonconsumptive recreational activities (consumptive activities are discussed in Appendix B, "Characterization of Consumptive Uses and Associated Socioeconomic Considerations." Nonconsumptive uses of the coastal environment include beach-going, religious/ceremonial activities, swimming, surfing, sailing, kayaking, diving, wildlife viewing, photography, and other activities that do not involve the take or extraction of marine resources. As with consumptive uses, nonconsumptive uses generate revenue and jobs for local communities. Nonconsumptive users purchase boat trips for activities such as scuba diving or wildlife viewing, rent or buy equipment, and pay park fees. Restaurants, hotels, local retail shops, and gas stations all benefit from both consumptive and nonconsumptive coastal tourism. Additionally, the community as a whole benefits from the tax revenue that is generated by tourists (MLPAI 2010a).

Land-Based Recreational Activities

Tourism

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." **Figure 6.3-1** shows total travel spending (listed per North Coast county) from 2000 through 2009. Near the Study Region, Mendocino County showed the highest travel spending, generally increasing between 2000 and 2008 from $286 to $336 million, and then decreasing by almost 12% to $297 in 2009. Humboldt County closely followed, with a similar increase between 2000 and 2008; however, the decrease in Humboldt County was less in 2009, resulting in more travel spending than in Mendocino County. The numbers shown for Mendocino County include the southern portion of the county that is not part of the Study Region. Travel spending in Del Norte County remained more constant, and substantially below the travel spending in Mendocino and Humboldt counties, possibly because it has smaller towns, fewer tourist attractions, less favorable weather, and is more remote (Dean Runyan 2011).

Figure 6.3-1. Total Travel Spending, by County, 2000–2009



Note: Dollar amount is in millions of U.S. dollars
Source: Dean Runyan 2011

Wildlife Viewing

Watching marine and avian wildlife from shore is a popular activity in areas adjacent to the Study Region. Piers and many prominent points of land can be used to view whales and other cetaceans. Mendocino Headlands State Park and Pomo Bluffs Park in Fort Bragg, Crescent Beach Overlook, and Klamath Overlook are popular locations for watching migrating whales. Estuaries in the Study Region often are locations used for viewing resident and migrating waterfowl, seabirds, and shorebirds. Wildlife watching from shore

includes fish, too (MLPAI 2010a). As shown in Table 6.3-5, several areas provide opportunities for wildlife viewing, adjacent to and within areas proposed for MPA designation.

Festivals

Northern California's coastal communities also are host to a variety of music and art festivals and events, harbor festivals, whale festivals, and more throughout the year. These events draw tourists to the North Coast shores, while also building community identity and providing opportunities for educating visitors and residents alike about local resources, activities, and values (MLPAI 2010a).

Water-Based Recreation and Participation

Visitors in the Study Region enjoy both consumptive (e.g., diving for abalone) and nonconsumptive (e.g., surfing) water-based activities.

Tidepooling

Tide pool visitation is another popular recreational activity within the Study Region (**Table 6.3-6**). While tide pool visitation is a nonconsumptive activity in theory, careless tide pool visitors or great numbers of visitors can cause damage and disturb the habitat during their visit by trampling or handling tide pool species. (MLPAI 2010a)

Table 6.3-6. Tidepooling Sites in the North Coast Study Region

County	Tidepooling Location
Del Norte	Enderts Beach/Redwood National Park
	Wilson Creek Beach
	Del Norte Coast Redwoods State Park
Humboldt	Patrick's Point State Park
	Shelter Cove/Lost Coast Wilderness
Mendocino	MacKerricher State Park
	Glass Beach

Note:

* Tidepool locations were taken from *California Coastal Access Guide*, by the California Coastal Commission, and from the State Parks website. This table does not represent an exhaustive list of tide-pooling sites in the North Coast Study Region (MLPAI 2010a).

Source: MLPAI 2010a

Boating

Boating is a popular and economically important activity in the Study Region. Numerous bays, estuaries, and harbors provide protected waters that are conducive to boating. Boats also are used for whale watching activities in the offshore waters. The 25 most-used waterways (including freshwater waterways) include the Pacific Ocean, Humboldt Bay, Trinidad Harbor, and the Humboldt Lagoons. The Pacific Ocean is the most-used waterway in the Study Region, with 7.2% of all boaters in the region using this waterway. Public ports and marinas are listed in **Table 6.3-7**, and public boat launches and hoists are listed in

Table 6.3-8. Private marinas are not included in the tables, but several are found in the Study Region, including Johnny's Marine & RV Park, EZ Landing Marine & RV Park, and Dolphin Isle Marine & RV Park (MLPAI 2010a).

Table 6.3-7. Public Ports and Marinas

Ports and Marinas	County
Crescent City Harbor	Del Norte
Trinidad Harbor	Humboldt
Woodley Island Marina	Humboldt
Eureka Mooring Basin	Humboldt
Novo Harbor	Mendocino
Albion Flat	Mendocino

Source: MLPAI 2010a

Table 6.3-8. Public Boat Launch or Hoist Locations

Public Boat Launch or Hoist Locations	County
Smith River Fishing Access	Del Norte
Salmon Harbor RV Resort	Del Norte
Crescent City Harbor	Del Norte
Chart Room Marina	Del Norte
Trinidad Harbor	Humboldt
Stone Lagoon	Humboldt
Freshwater Lagoon	Humboldt
Mad River Beach County Park	Humboldt
Arcata Boat Ramp (Arcata Marsh)	Humboldt
Woodley Island Marina (hoist)	Humboldt
Eureka Mooring Basin	Humboldt
North Spit	Humboldt
Humboldt Bay National Wildlife Refuge	Humboldt
King Salmon Resort (hoist)	Humboldt
Fields Landing County Boat Launch	Humboldt
Smith River Fishing Access	Del Norte
Shelter Cove	Humboldt
MacKerricher State Park	Mendocino
Noyo Harbor District	Mendocino
Noyo Mooring Basin	Mendocino
Albion Flat	Mendocino
Schooners Landing Campground and Marina	Mendocino

Source: MLPAI 2010a

Nonconsumptive boat data is also collected by the Department's California Recreational Fisheries Survey (CRFS) program as supplemental data. The purpose of the CRFS is to

estimate total marine recreational finfish catch and effort in California. The CRFS includes interviews with anglers returning to public launch ramps approximately 8 days per month. The interviews are conducted at "primary" launch ramps that are most commonly used for fishing of managed species. Supplemental data, such as the number of private and rental boats that are not recreationally fishing for finfish, are collected. The goal of the CRFS is to produce marine recreational fishery-based data to inform management of recreational fisheries. Therefore, the survey may underestimate the percentage of nonconsumptive boat users because it focuses on public launch ramps where the majority of managed species are landed rather than a random sampling of public launch ramps. Eight primary launch ramps are surveyed in the Study Region, and all the surveys take place during daylight hours (MLPAI 2010a).

CRFS samplers intercepted 2,967 private and rental boats within Del Norte, Humboldt, and Mendocino counties in 2007. Del Norte County had the highest rate of boats that had fished for finfish recreationally (80%), and Mendocino County had the lowest rate (52%). Humboldt County had the highest percentage of commercial fishing vessels at approximately 9%. Mendocino County had the highest percentage of vessels not fishing (25%), while Del Norte and Humboldt counties each had approximately 10% of the vessels not fishing. See **Table 6.3-9** for a complete summary of the CRFS results for all counties in the Study Region, and a breakdown of the vessels not fishing, which includes enforcement vessels, research, boat maintenance, and other activities. Some activities may include consumptive uses other than fishing (MLPAI 2010a).

Table 6.3-9. Activities Using Private and Rental Boats from Primary[1] Public Launch Ramps in the North Coast Study Region, 2007[2]

	Del Norte		Humboldt		Mendocino	
	Vessels	Within County (%)	Vessels	Within County (%)	Vessels	Within County (%)
Fished recreationally for finfish	679	79.7	1,370	77.2	178	52.2
Intended to fish recreationally, but no gear in water	3	0.4	12	0.7	11	3.2
Recreational shellfish	57	6.7	58	3.3	63	18.5
Fished commercially	30	3.5	164	9.2	4	1.2
Total Vessels Fishing	**769**	**90.3**	**1,604**	**90.4**	**256**	**75.1**
Recreational cruising	23	2.7	41	2.3	16	4.7
Diving, nonconsumptive	0	-	2	0.1	0	-
Enforcement (public agency)	4	0.5	1	0.1	0	-
Boat maintenance	22	2.6	61	3.4	10	2.9
Research (public agency)	4	0.5	10	0.6	0	-
Whale watching	0	-	0	-	0	-
Other commercial activity	1	0.1	8	0.5	0	-
Removing boat from slip, no trip	15	1.8	15	0.8	38	11.1
Unidentified	14	1.6	32	1.8	19	5.6
Total Vessels Not Fishing	**83**	**9.7**	**170**	**9.6**	**85**	**24.9**
Total All Boats	**852**	**100**	**1,774**	**100**	**341**	**100**

Notes:

1 "Primary" launch ramps are defined as "those where the majority of the managed species, in any particular month, are landed" (PSMFC 2007).

2 The data include private and rental boats surveyed by the California Recreational Fisheries Survey in 2007.

Source: MLPAI 2010a

Overall, the number of registered vessels[5] has slowly increased in the Study Region, although a decrease of registered vessels has occurred in Del Norte County. **Table 6.3-10** illustrates the number of registered vessels according to the California Department of Motor Vehicles (CDMV 2009). The Study Region had approximately 13,760 registered vessels, of which 13,315 were pleasure vessels[6], as of December 31, 2008. The number of pleasure vessels has increased by 1,531, or about 11.5%, since 1991 (MLPAI 2010a).

Table 6.3-10. Registered* Vessels in the North Coast Study Area, 1991 and 2008

County	Registered Vessels, 1991	Pleasure Vessels, 1991	Registered Vessels, 2008	Pleasure Vessels, 2008
Del Norte	1,548	1,419	1,498	1,433
Humboldt	6,613	6,254	7,382	7,144
Mendocino	4,420	4,111	4,888	4,738

Note:

* Number of registered vessels in the North Coast Study Region as of December 31, 1991 and December 31, 2008.

Source: MLPAI 2010a

Kayaking

The North Coast is popular with both consumptive and nonconsumptive sea kayakers. Kayak rental shops are found throughout the Study Region. Some popular kayak routes are shown in **Table 6.3-11;** the majority of them are in Mendocino County (MLPAI 2010a). More details regarding consumptive kayaking are presented in Appendix B.

Table 6.3-11. Popular Kayak Routes in the North Coast Study Region

Route	County
Point St. George to Crescent City Harbor	Del Norte County
Humboldt Bay and area sloughs and lagoons	Humboldt County
Shelter Cove to Bear Harbor	Humboldt County
Bear Harbor to Usal Beach	Mendocino County
Russian Gulch to Point Cabrillo	Mendocino County
Big River	Mendocino County
Mendocino (city) Coast	Mendocino County
Van Damme State Beach	Mendocino County
Albion to Dark Gulch	Mendocino County
Navarro River Estuary	Mendocino County

Source: MLPAI 2010a

[5] A vessel is defined as any watercraft used or capable of use for transportation on water, except a seaplane on the water; a watercraft specifically designed to operate on a permanently fixed course, and the movement of which is guided by a mechanical device to which the watercraft is attached or controlled (e.g., a ferryboat); or a floating, stationary residential dwelling not designed to have power of its own, dependent for utilities from a source on shore, and which has a permanent sewage hookup on shore (CDMV 2009).

[6] Pleasure vessels are defined as motorized boats used for personal, family, and sometimes sportsmanlike recreation.

Scuba Diving

Scuba diving is a popular activity in the Study Region, especially along the Mendocino Coast. Scuba divers can be both consumptive and nonconsumptive users. About 20% of California's 1.5 million certified divers are "active," meaning they have dived within the past 12 months and plan to dive within the next year. California, which contributes an estimated 12% to the total national revenue generated by recreational scuba diving, generates approximately $180 million annually in revenue from diving; equipment sales produce an additional $60 million. Growth in the sector was estimated at 10–20% per year in the 1980s and 5–7% in the 1990s. Diving also fosters related business, such as underwater photography and art galleries, and produces direct and indirect revenue via services, art and photo sales, and facilities serving the region (MLPAI 2010a). Popular dive sites along the Study Region coastline are listed in **Table 6.3-12.**

Table 6.3-12. Popular Scuba Diving Sites in the North Coast Study Region

Scuba Diving Site	County	Scuba Diving Site	County
St. George's Reef	Del Norte	Nowhere Reef	Mendocino
High Bluff Beach	Del Norte	Navarro River Beach	Mendocino
Wilson Creek Beach	Del Norte	Bull Rock	Mendocino
Enderts Beach	Del Norte	Albion River Flats	Mendocino
Crescent Beach	Del Norte	Colby Reef	Mendocino
Crescent City Harbor	Del Norte	Van Damme State Park	Mendocino
Crescent City Beaches	Del Norte	Blow Hole	Mendocino
Battery Point Lighthouse	Del Norte	Jack Peters Gulch	Mendocino
King Range National Conservation Area	Humboldt	Russian Gulch State Park	Mendocino
Mattole River/Mattole River Beach	Humboldt	The Pipeline	Mendocino
Mattole Road beaches	Humboldt	The Bathrooms	Mendocino
Reading Rock	Humboldt	Caspar Bay	Mendocino
Cape Mendocino	Humboldt	Jug Handle State Reserve	Mendocino
Samoa Dunes Recreation Area/North Spit/North Jetty/South Jetty	Humboldt	Glass Beach	Mendocino
Trinidad State Beach	Humboldt	MacKerricher Beach State Park	Mendocino
Patrick's Point State Park	Humboldt	Usal Beach	Mendocino
Redwood National Park (40 miles of coast)	Humboldt	Mendocino Headlands	Mendocino

Source: MLPAI 2010a

Surfing

Approximately 1.1 million surfers live in California. Although the sport is most popular in southern California, many commonly used surfing spots are found in Humboldt and Mendocino counties (**Table 6.3-13**). Kite surfing, or kite boarding, also is a rapidly growing sport in California. Kite surfers prefer many of the same beaches as surfers, although they tend to be on the water when the weather is less ideal for surfers. South Beach in Crescent City is a popular location for kite surfers. Along with surfing and kite surfing, windsurfers also can be found in the Study Region. Humboldt Lagoons and Crescent City Harbor are popular spots for windsurfing. (MLPAI 2010a)

Table 6.3-13. Popular Surfing Locations in the North Coast Study Region

County	Surfing Location
Del Norte	Crescent City South Beach
Humboldt	Redwood Creek
	Trinidad State Beach
	Camel Rock
	Patrick's Point
	Moonstone
	Bunkers
	North Jetty
	Gale Point
	Deadman's
	Third Reef
	Harbor Entrance
	No Pass
Mendocino	Big River
	Blues
	Hare Creek
	Manchester Beach*
	Casper Cove

Note:

* Manchester Beach extends out of the Study Region to the south.

Source: MLPAI 2010a

6.3.4 Impact Analysis

Methodology

Impacts on recreational facilities and recreational activities were assessed by evaluating the potential change in use patterns or access resulting from the proposed MPA network relative to known areas of high recreational use. These potential changes were evaluated for their potential to impact existing recreational facilities and infrastructure or affect the ability for recreationalists to engage in their favored activities. In general, impacts on nonconsumptive activities such as wildlife viewing and surfing would be limited to potential increases in proposed MPA areas, while effects on consumptive activities would include potential exclusions of certain recreational activities. This section focuses mainly on the potential impacts of the Proposed Project on nonconsumptive recreation. Potential effects related to recreational fishing and other consumptive recreational activities are discussed in more detail in Appendix B and in other chapters of this EIR where secondary physical effects on the resource area could occur.

Criteria for Determining Significance

Based on significance criteria from Appendix G of the State CEQA Guidelines and professional expertise, the Proposed Project would have a significant impact on recreational resources if it would:

A. increase the use of coastal waters with MPAs or other recreational facilities such that substantial physical deterioration of coastal waters or other recreational facilities would occur or be accelerated;

B. include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse effect on the environment; or

C. decrease recreational opportunities.

Environmental Impacts

Impact REC-1: Physical Deterioration of Coastal Beaches/Waters and Recreational Facilities (Significance Criteria A and B)

As discussed in Section 6.3.3, "Environmental Setting," popular areas for recreational uses in the Study Region include its miles of coastline and parks, such as the Mendocino Headlands State Park, MacKerricher State Park, and Prairie Creek Redwoods State Park; popular boating areas, specifically Humboldt Bay, Trinidad Harbor and Humboldt Lagoons; dive sites, the majority of which are located in Mendocino County; and tidepooling sites such as Glass Beach and Patrick's Point State Park. If the establishment of the proposed MPAs results in a substantial shift of users to new locations that lack sufficient recreational facilities and infrastructure, the Proposed Project could result in potential impacts on coastal waters and beaches at these locations, as well as to facilities such as piers, boat launches, parking lots, and restrooms. Potential impacts would include physical deterioration resulting from overuse, such as trampling of coastal vegetation, overcrowding of beaches, and overuse of associated facilities.

Site Selection: The selection of recreational sites by recreational users primarily is based on the activity and the distance to a particular location. For example, individuals wishing to go tidepooling will seek out areas along the coast with abundant outcroppings of rock or other features amenable to tidepools, while boaters are likely to use a pier or launch facility. Although numerous potential locations may exist that are compatible with a desired activity (i.e., boat launch facilities in the Study Region), distance also limits selection. The greater the distance to a site, the less likely it is to be selected for use by an individual user.

Secondary factors also play a role in site selection for recreational use. Such factors include popularity of use, existing support facilities (i.e., bathrooms, parking lots), and the presence of perceived incompatible uses. In many cases, locations are popular because they provide useful amenities for recreational users. However, this may lead to a perceived sense of overcrowding at some locations, or a proximity to other activities such as commercial fishing vessels. To avoid these conflicts, some individuals purposefully seek out more secluded experiences in locations that may not offer amenities.

Changes in Site Selection and Uses: As shown in Table 6.3-5, three of the proposed MPAs (Point St. George Reef Offshore State Marine Conservation Area [SMCA], Reading Rock State

Marine Reserve [SMR], and Mattole Canyon SMR) are located offshore and would have the least impact on recreational distribution and facility usage. Recreational users would be likely to simply avoid these areas when venturing offshore for activities that would be restricted in those locations, and use patterns of shore-based facilities (e.g., beaches, lots, and launching areas) would not be likely to be affected.

In addition, four MPAs currently are established in the Study Region (MacKerricher, Point Cabrillo, Russian Gulch, and Van Damme). Although the Proposed Project would expand the extent of these MPAs, the only notable change in allowable uses would occur at Point Cabrillo, where the MPA designation would change from SMCA to SMR (no commercial or recreational take permitted). In the other three locations, the MPA designation would remain as an SMCA, without increasing existing take restrictions; otherwise, all other recreational activities would continue to be allowed. Therefore, the proposed changes for these three areas would not have a significant impact on existing recreational use patterns.

However, the proposed SMRs (Reading Rock SMR, South Cape Mendocino SMR, Mattole Canyon SMR, Sea Lion Gulch SMR, and Ten Mile SMR) would prohibit all activities involving take of marine resources. Likewise, the remaining proposed MPAs would impose restrictions that would reduce the level of marine take activities allowed. The reduced presence or absence of fishing vessel traffic in these areas potentially could encourage more recreational users to utilize these MPAs. Although the proposed South Cape Mendocino and Double Cone Rock MPAs would not be located near areas of existing recreational facilities, the physical remoteness of these areas likely would limit their recreational use. Because of the remote locations and difficulty of access, the Proposed Regulations at these two locations would not be likely to induce a substantial number of recreational users to or from the area, and the change in recreational use likely would be minimal.

As shown in Table 6.3-5, the vast majority of proposed MPAs would be located adjacent to or in proximity of existing national, state, or county park facilities. To the extent that additional users would recreate in these proposed MPA locations, existing facilities are already in place to serve visitors.

Overall, the creation of new MPAs is expected to result in only minor displacement of, and increase in, recreational users. The Proposed Project would not expand the amount of physical coastline available for public use or provide any new recreational features or attractions that would otherwise require additional support facilities. Although proposed restrictions may impede certain activities within MPA boundaries, the percentage of area affected by these regulations would be small compared to the overall Study Region. Because of the extensive network of existing recreational facilities and opportunities for unrestricted activity available in the Study Region, no additional facilities would be required.

In summary, implementation of the Proposed Project would neither cause substantial physical deterioration of coastal beaches or waters or other recreational facilities to occur or be accelerated, nor require the construction or expansion of recreational facilities. This would be a less-than-significant impact.

Changes in Site Selection and Uses at the Proposed Project Options: The regulation options proposed for the following designated areas would all result in similar, less-than-significant impacts. In general, none of the options proposes any increases in commercial take

allowances that could change recreation patterns, and any proposed boundary changes would be limited to those that would align with prominent landmarks to increase visibility of protected area zones. The following specify the various options and their anticipated impacts on physical deterioration of recreational facilities:

- Pyramid Point SMCA option: The extension of the southern boundary by 0.33 mi to the tip of Prince Island would help users more easily identify the boundary of this SMCA, using prominent landmarks. The presence of existing recreational facilities would be sufficient to accommodate any additional shifts in use patterns in this location. The impact would be less than significant.
- Reading Rock Onshore and Offshore SMCAs option: The change in provisions to allow certain methods for marine resources take to occur in offshore areas would not have an impact on recreational facilities. The Onshore provisions would increase recreational take opportunities. However, the impact would be less than significant.
- Reading Rock SMR option: The change in protection from SMR to SMCA with allowance of tribal take would allow the presence of fishing activity in the area. However, because commercial fishing and nontribal take would still not be permitted, no impact on recreational facilities would occur.
- South Humboldt Bay SMRMA option: The proposed boundaries are located within the Bay and not in the vicinity of prominent landmarks, making them difficult to discern. This option would extend the boundaries and would result in a greater area of protection. However, this option is not expected to change recreational uses in this location in a way that would impact existing facilities. Instead, the revised boundaries would make the protected area more visible for users. The impact would be less than significant.
- Sea Lion Gulch SMR option: Extension of the boundaries to align with prominent landmarks would make the boundaries more visible for users. Although the new boundaries would include an area identified as a popular abalone catch location, the proximity of the King Range National Conservation Area and associated facilities would accommodate any shift in recreational use to or from the area. The impact on recreational facilities resulting from this option would be less than significant.
- Double Cone Rock SMCA option: Revised regulations would allow for greater recreational marine take. In addition to salmon take, regulations would allow take of cabezon, rockfish, surfperch, surfsmelt, and abalone. Because this option would not change the proposed commercial activities at this location, the impact on recreational facilities would be less than significant.
- Ten Mile Beach SMCA option: The southern boundary would be extended to align with prominent landmarks, to make the boundaries more visible for users. The minor increase in protected area resulting from the southern boundary extension (0.75 mi) would have a less-than-significant impact on recreational facilities in this location.
- Big River Estuary SMCA option: Revised regulations would allow for additional recreational take of marine resources (surf perch). Because this option only would allow for the recreational take of one additional species and would not

change prohibitions on commercial activities at this location, the impact on recreational facilities would be less than significant.

- Navarro River SMCA option: Revised regulations would allow for additional recreational take of marine resources (salmonids). Because this option only would allow for the recreational take of additional species and would not change the prohibitions on commercial activities at this location, the impact on recreational facilities would be less than significant.

Level of Significance: *Less than Significant*

Impact REC-2: Decreased Recreational Opportunities (Significance Criterion C)

Overall, implementation of the proposed MPAs would have minor effects on recreational activities, as the vast majority of proposed protected areas would not prohibit recreation entirely. As noted in Impact REC-1, many proposed designations would place restrictions on recreational activities involving marine resource take. However, significant impacts on recreational opportunities are not anticipated because of the variation in proposed restrictions that would limit certain activities in certain locations, but would not completely restrict any single type of activity throughout the Study Region or within all MPA-designated areas. In addition, other existing recreational facilities would be sufficient and in proximity to accommodate displaced or additional users, and a relatively large area would remain for the various types of recreational use. Further discussion of effects associated with recreational fishing and species take is presented in Appendix B and in other chapters of this EIR where a physical effect on the environment could occur.

For all other forms of recreation that would not involve take of marine resources (i.e., kayaking, wildlife viewing, and surfing), the Proposed Project would have less-than-significant impact. As noted in Chapter 2, "Project Description," the only locations that would prohibit human activities would be the seven special closure areas; the remaining Study Region (including proposed MPA-designated locations) would remain open to such uses. The special closure locations and site-specific considerations are briefly identified below:

- Southwest Seal Rock Special Closure (year-round): presence of Steller sea lion, a threatened listed species under the federal Endangered Species Act (ESA) and a California Endangered Species Act (CESA) species of special concern. Closure enforces laws that prohibit disrupting marine mammals.
- Castle Rock Special Closure (year-round): identified as a marine bird-breeding hot spot. Includes presence of special-status bird species. Few human disturbance events have been recorded. The 300-foot restriction avoids the popular surfing breaks and boat travel lines that occur nearby (beyond 500 feet).
- False Klamath Rock Special Closure (year-round): identified as a marine bird-breeding hot spot. Includes the presence of special-status bird species. High use of area by commercial and recreational fishers, as well as by commercial kayak guides.
- Sugarloaf Island Special Closure (year-round): presence of Steller sea lion, a threatened, listed species under the ESA and a CSA species of special concern.

Also documented presence of bird species of special concern. Low potential for human use because of remoteness and difficulty of access.

- Steamboat Rock Special Closure (seasonal closure from March 1–August 31): identified as a marine bird-breeding hot spot. Remote location and difficult access; however, documented signs of disturbance have occurred during the summer.
- Rockport Rocks Special Closure (seasonal closure from March 1–August 31): identified as a marine bird-breeding hot spot. The private beach located here precludes public use.
- Vizcaino Rock Special Closure (seasonal closure from March 1–August 31): identified as a marine bird-breeding hot spot. Difficult to access by foot and rocky, uneven bottom limits large boat access. Adjacent use also is limited by a privately owned beach that does not permit open use.

As discussed, two of the special closure areas have been designated because of the documented presence or use by the Steller sea lion, a federally protected species. Disturbance of such species is prohibited by law, and therefore the implementation of closures at these locations would not represent a new restriction on recreational opportunities in the Study Region. The other closures have been designated based on identification of the location as a popular location for marine bird breeding. Many of these locations are in remote areas or are otherwise difficult to access because of physical barriers. Therefore, these closures would not have a significant impact on the overall availability of recreational opportunities in the Study Region.

Because these closures represent a very small percentage of the overall Study Region, recreational users would still have many options available, including within the boundaries of many of the MPAs. Furthermore, implementation of the protections of the Proposed Project would lead to an enhanced recreational experience because of the increase in diversity of wildlife and abundance of fish and invertebrates in the Study Region. Therefore, the proposed special closures would have a less-than-significant impact on recreational opportunities in the Study Region.

Changes in Recreational Opportunities at the Proposed Project MPA Options: As discussed in Impact REC-1, the proposed MPA options generally would be limited to boundary changes that would increase visibility of protected area zones and specific minor changes in take allowances. No substantial increases in restrictions are proposed (i.e., SMCA to SMR). Therefore, the Proposed Regulation options would all result in similar, less-than-significant impacts on recreational opportunity in the Study Region, as described below. Effects of Proposed Project options on recreational fishing and marine take activities are discussed in Appendix B and in other chapters of this EIR where a physical effect on the environment could occur.

- Pyramid Point SMCA option: The extension of the southern boundary by 0.33 mi to increase boundary visibility would be unlikely to result in perceptible recreational opportunities.
- Reading Rock Onshore and Offshore SMCAs option: The change in provisions for allowing certain methods for marine resources take to occur in offshore areas

would not have an impact on recreational facilities. The Onshore provisions would increase recreational take opportunities. However, the impact would be less than significant.

- Reading Rock SMR option: The change in MPA designation from SMR to SMCA with added allowance for tribal take would have no adverse impact on recreational opportunities.
- South Humboldt Bay SMRMA option: Although the proposed boundaries would increase visibility of the protected zone, the greater area of protection would reduce recreational take in this location. The impact on recreational opportunities would be slightly greater under this option. However, because of the proximity of other recreational facilities in the area, overall impacts would be less than significant.
- Sea Lion Gulch SMR option: Because the new boundary would include an area identified as a popular abalone catch location, the impact on recreational opportunities would be greater under this option. However, overall effects on recreational opportunities in this area would be less than significant because of the proximity of the King Range National Conservation Area and other nonrestricted areas.
- Double Cone Rock SMCA option: Revised regulations would allow for greater shore-based recreational marine take. In addition to salmon take, regulations would allow take of cabezon, rockfish, surfperch, surfsmelt, and abalone from shore only. Because this option would allow for the recreational take of additional species, the impact on recreational opportunities would be less than significant.
- Ten Mile Beach SMCA option: The extension of the protected area increase on boundary visibility would be unlikely to result in perceptible changes in recreational opportunities. The impact would be less than significant.
- Big River Estuary SMCA option: Revised regulations would allow for additional recreational take of marine resources (surf perch). Because this option would allow for the recreational take of additional species, the impact on recreational opportunities would be less than significant.
- Navarro River SMCA option: Revised regulations would allow for additional recreational take of marine resources (salmonids). Because this option would allow for the recreational take of additional species, the impact on recreational opportunities would be less than significant.

Level of Significance: *Less than Significant*

Chapter 6.4

Research and Education

6.4 Research and Education

6.4.1 Introduction

This section presents an overview of existing research and education activities in the North Coast Study Region (Study Region), as well as potential impacts related to the Proposed Project. This section is not a required evaluation topic in the State CEQA Guidelines; however, this evaluation is provided for information purposes. Academic institutions, tribes, government agencies, and nongovernmental organizations (NGOs) in northern California and surrounding areas contribute to marine research, education, and public outreach in the Study Region. Data and information sources used to prepare this section include federal, state, and local regulations, the *Regional Profile of the North Coast Study Region: California/Oregon Border to Alder Creek* (Regional Profile) (MLPAI 2010), and other relevant reference material.

6.4.2 Regulatory Setting

State Regulations

California Department of Fish and Game

Commission regulation (California Code of Regulations, Title 14, Section 650) authorizes the take or possession of marine plants or animals for scientific, educational, or propagation purposes with a permit issued by the Department. Scientific Collecting Permits may be issued to:

- employees of local, state, and federal agencies who take specimens in connection with their official duties;
- faculty, professional staff, college-level students of, or individuals hired by, public or private companies, educational institutions, zoological gardens or aquariums, in or out of state;
- individuals who take wildlife or marine plants for other permittees or pursuant to environmental protection documents required by law; and
- individuals who possess a valid federal Bird Marking and Salvage Permit. Holders of this federal permit are not required to obtain a state permit to take migratory birds, other than raptorial birds.

There are three types of Scientific Collecting Permits: resident, nonresident, and student. Resident and nonresident permits are valid for 2 years, and student permits are valid for 1 year. Each permit is reviewed and approved on a case-by-case basis. In some areas, such as in marine protected areas (MPAs), additional specific restrictions may be applied. Permit requestors must indicate on their application the following components:

- species and numbers to be collected
- collection locations
- collection methods/techniques

- purpose for collecting
- disposition of specimens

California Department of Parks and Recreation

The California Department of Parks and Recreation (State Parks) manages land along nearly 30% of the state's coastline and has been involved in the planning and implementation of underwater parks and reserves since 1960. Prior to the passage of the Marine Life Protection Act (MLPA), State Parks had established 14 marine managed areas statewide. In 1979, State Parks prepared its first Underwater Parks Master Plan and updated the plan in 1984. There are many archaeological and cultural artifacts, such as shipwrecks, in areas designated as Underwater Parks. These parks provide opportunities for diving and underwater photography. Many of the planning elements and goals fundamental to State Park's Underwater Parks Program mirror those of the MLPA and the Marine Managed Areas Improvement Act (State Parks 2008). Existing underwater parks in the Study Region include MacKerricher State Park, Point Cabrillo, Russian Gulch State Park, and Van Damme State Park (State Parks 2011).

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, and fishing and boating; and
- providing public education and interpretation of marine environments, including intertidal areas.

6.4.3 Environmental Setting

Scientific Research and Collecting in the North Coast Study Region

The scientific research within the Study Region is wide-ranging, including intertidal ecology, underwater archeological research, and studies of the pelagic zone and deep ocean. Some of the primary research marine laboratories and universities adjacent to the Study Region are listed below (MLPAI 2010).

- **Humboldt State University (HSU)** is the home of research institutes and training in marine biology, fisheries, and oceanography. The Northern California Institute of Marine Sciences, based at HSU, integrates research from biology, fisheries, and oceanography departments. The Ocean Observing Group at HSU gathers real-time and historical data on water quality and climate. Students enrolled in the Scientific Diving course have assisted the California State University Center for Integrative Coastal Observation, Research and Education

(CICORE, see below); Reef Check; and the Department with monitoring, surveying, and sampling efforts.

- **Telonicher Marine Laboratory** was established in 1965 and is located in Trinidad close to rocky shorelines, sandy beaches, mud flats, lagoons and estuaries, offshore kelp beds, and submarine canyons. The laboratory has specialized research equipment and a circulating seawater system to supply holding tanks and classrooms. The 90-foot R.V. Coral Sea, a 26-foot pontoon boat, and several smaller (12- to 24-foot) vessels support research and educational activities. For more information, visit the Laboratory's website: http://www.humboldt.edu/~marinelb/index.html.

- **California Cooperative Fish and Wildlife Research Unit** was established in 1966 and is one of 40 units established under the Federal Organic Act (also known as the National Park Service Organic Act) at universities throughout the United States. The research unit is a cooperative research and training program integrating resources from HSU, the Department, U.S. Department of the Interior, U.S. Geological Survey, Wildlife Management Institute, and U.S. Fish and Wildlife Service (USFWS). One of the primary purposes of the research unit is to train graduate students in fisheries and wildlife management through coursework and mentoring. For more information, refer to the Unit's website: http://www.humboldt.edu/~cuca/index.html.

- **California State University Center for Integrative Coastal Observation, Research and Education** was established in 2002 as an applied coastal research center distributed throughout California. CICORE is no longer funded but has been integrated into the Central and Northern California Ocean Observing System (CeNCOOS, see below). CICORE monitoring stations for temperature, salinity, dissolved oxygen, pH, turbidity, and chlorophyll were located in Humboldt Bay, in the northwest section of the Eureka waterfront, and at the Trinidad Pier. Long-term monitoring initiated by CICORE continues through CeNCOOS. For more information, access the following document: http://www.csc.noaa.gov/cots/accomp_reports/CICORE.pdf.

- **The Central and Northern California Ocean Observing System (CeNCOOS)** is a regional organization that coordinates ocean research in central and northern California, while implementing the national goals of the Integrated Ocean Observing System. CeNCOOS provides real-time links to ground observations, radar and satellite imagery, hydrologic prediction, precipitation maps, buoys, and wave predications. Water quality monitoring occurs in real time at Trinidad and Dock B in Eureka. Climate monitoring stations are located at Trinidad Head, Samoa, and Woodley Island. For more information, visit the CeNCOOS website: http://cencoos.humboldt.edu/.

- **Ocean Observing Group** at HSU (part of CeNCOOS) gathers real-time data on water quality and climate. The group has archived relevant historical data from the region and produced a queryable database with information about eelgrass

beds and fish abundance. Benthic and shoreline digital elevation maps of Humboldt Bay are also available. For access to these data and maps, visit here: http://www.calstate.edu/coast/coast_data_and_products/hsu_data.shtml.

- **North Coast Marine Information System** is a database of information about the northern California coast, developed by faculty from HSU. The system links to existing datasets and documents and provides an interface for mapping marine geographic information. For access to the database, visit here: http://www.humboldt.edu/~ncalmis/database.html#link.

- **Multi-Agency Rocky Intertidal Network (MARINe)** is a partnership of agencies, universities, and private groups focused on monitoring rocky intertidal habitat. MARINe monitoring sites in the Study Region are monitored by scientists affiliated with the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO, see below) with support from a variety of sources, including Redwood National Park; The Nature Conservancy; Bureau of Energy Management, Regulation, and Enforcement; and the Moore and Packard Foundations. For more information on MARINe's activities, visit their website: http://www.marine.gov/.

- The **University of California Sea Grant Extension** office, based in Eureka, California, incorporates university-based and applied research into management and education and outreach programs on coastal, estuarine, marsh, and marine resources. Sea Grant Extension has worked with an interagency team to prepare the Humboldt Bay Management Plan. Sea Grant Extension initiated the Humboldt Bay and Eel River Estuary Subtidal and Intertidal Habitat Goals Project to integrate information about bay and estuarine habitats and species of the Humboldt-Eel River estuary. For detailed information, visit here: http://www.csgc.ucsd.edu/EXTENSION/HumboldtBayEBM.

- **Sea Grant Extension Marine Advisory program in northern California (Del Norte County)** focuses on research and education about the salmon fishery. Sea Grant Extension completed extensive investigations of salmon, including a 20-year study of Chinook salmon spawning escapement on Mill Creek (a tributary to the Smith River), a survey of ocean sport salmon fishers in local rivers, and studies of potential economic impacts of salmon management on local industries.

- **Partnership for Interdisciplinary Studies of Coastal Oceans** (PISCO) is a large-scale interdisciplinary marine research program based at four academic institutions on the U.S. west coast. Ten monitoring sites were established in the Study Region between 1999 and 2004 and are part of a larger network extending from southeast Alaska to Baja California Sur, Mexico. PISCO scientists survey intertidal community structure using photo quadrats, counts and size frequency surveys, transects, mobile invertebrate quadrat counts, and recruitment studies. PISCO also conducts subtidal community surveys, oceanography monitoring, and a variety of experiments to investigate large-

scale, long-term ecological patterns and processes. For more information and data, visit the PISCO website:
http://www.piscoweb.org.

Additionally, government agencies and tribes sponsor, coordinate, and conduct scientific research, alone or in collaboration with other entities:

- **Redwood National and State Parks (NPS)** works with local researchers to study coastal and marine ecosystems in the park. Collaborators include faculty and graduate and senior students from HSU and other universities and colleges, high school students selected nationwide, the MARINe intertidal monitoring program, and PISCO. Topics for research include water quality; intertidal and beach habitats; Chinook, steelhead, coastal cutthroat, and black rockfish nursery habitats; effects of seasonal trawling and hook and line fishing; shorebird and seabird colonies; and pinniped haulouts. The MARINe intertidal monitoring program monitors three sites in the park, and PISCO has surveyed biodiversity at two sites. For more information, refer to this NPS website:
http://www.nps.gov/redw/index.htm.

- **Humboldt Bay National Wildlife Refuge** collaborates with many partners to conduct research and monitoring in the refuge. Partners include other USFWS offices, other state and federal agencies, the Wiyot Tribe, private landowners, the Humboldt County, and HSU faculty and students. Research priorities include study of seabirds and shorebirds, aquatic invertebrates, vegetation, and invasive species. For more information, visit the Refuge's web page:
http://www.fws.gov/humboldtbay/index.html.

- **National Marine Fisheries Service, Santa Cruz Lab** (formerly Tiburon), conducted subtidal abundance surveys for juvenile rockfish in kelp beds in the Study Region near the town of Albion in Mendocino County from 1983 to 2007. These surveys consisted of timed counts of juvenile rockfish. Divers also recorded additional information about adult fish and invertebrates observed during the surveys. For more information, visit the Southwest Fisheries Science Center, Santa Cruz Lab, website:
http://swfsc.noaa.gov/default1.aspx?Division=FED&id=554.

- **Del Norte County Fish and Game Advisory Commission** serves in an advisory capacity to the Board of Supervisors of Del Norte County in all matters concerning fish and game. The advisory commission coordinates efforts in habitat improvements, public awareness, and natural resource education. For more information, refer to the Del Norte County website:
http://www.dnco.org.

- **California Department of Fish and Game** is initiating a program to inventory, monitor and assess the distribution and abundance of priority species, habitats, and natural communities in California, bringing together many efforts to collect, compile, and disseminate information to assist decision makers in managing

California's marine region. For more information and links to the Department's seven regions (including the Northern Region), refer to this web page: http://www.dfg.ca.gov/regions/.

- **Cooperative Research and Assessment of Nearshore Ecosystems** (CRANE) is a California statewide monitoring program developed by the Department in cooperation with other research scientists. The program was implemented in 2004 but has not continued at all sites. For more information, visit here: http://www.dfg.ca.gov/marine/fir/crane.asp.

- **City of Arcata's Wastewater Treatment Facility, Marsh and Wildlife Sanctuary** is engaged in research activities to maximize treatment efficiency per unit cost. The facility partners with faculty and students at HSU to conduct research on wastewater treatment and effects of wastewater discharge. Through collaborative research with the university, the treatment facility has implemented innovations and technology to meet new and stricter water policies. Scientists also monitor environmental impacts of effluent discharged to habitats and species of Humboldt Bay. For more information, visit the HSU Environmental Resources Engineering web page: http://www.humboldt.edu/engineering/.

- **Humboldt Bay Harbor, Recreation and Conservation District** promotes commerce, fisheries, navigation, and recreational uses of the Humboldt Bay, and protects its natural resources. In 2007, the Harbor District established the Humboldt Bay Symposium to provide information on a variety of topics related to Humboldt Bay, including current scientific research, wetland restoration, maritime commerce developments, marine recreation activities, and other current Humboldt Bay-related events. The Harbor District also coordinates with other agencies (e.g., National Oceanic and Atmospheric Administration, U.S. Army Corps of Engineers, Humboldt Bay Shellfish Technical Advisory Committee, California Sea Grant) to gather and update information needed to manage natural resources and activities in Humboldt Bay. For example, the Harbor District and the Humboldt Bay Shellfish Technical Advisory Committee collaborate on collecting information on water quality in Humboldt Bay. Similarly, the Harbor District and collaborators developed a GIS database that includes physical and biological data from Humboldt Bay. For more information, visit the Harbor District's website: http://www.humboldtbay.org/gis/interactivemap.html.

- **The Yurok Tribe** operates several environmental programs that are recognized by the many federal, state, and local agencies and nonprofits. A recent agreement with the U.S. Department of the Interior acknowledges the Yurok Tribe's proficiency in the areas of science, data collection, research, and analysis of the Klamath River and watershed, the results of which inform policy. The tribe's Water Division monitors water quality in the lower Klamath River Watershed by collecting data at over 20 stations. The objectives for this long-term monitoring project are to establish baseline conditions, assess trends, provide flow regimes related to fisheries, and monitor restoration projects.

Furthermore, the Water Division is a leader in the Klamath Basin for sampling and reporting on the presence of *Microcystis aeruginosa*, a toxic blue-green algae that has undetermined impacts on animal species. The presence and levels of this algal toxin, as well as a host of other toxins of concern identified in Yurok riverine and coastal species of interest, are currently under study.

The Fisheries and Watershed Restoration Programs of the Yurok Tribe Environmental Program conduct large- and small-scale riparian and stream habitat restoration projects in the lower tributaries of the Klamath River. These projects seek to restore lands within Ancestral Territory that have been severely affected by resource extraction activities, such as timber removal and, as a consequence, invasive plants. These tribal departments work collaboratively with government agencies, such as Redwood National and State Parks, as well as Green Diamond Resource Company, a large private timber company. The purpose of these restoration projects is to increase channel and bank stability, increase sediment storage capacity, reduce sediment delivery, improve salmonid spawning and rearing, increase habitat complexity, and improve spawning gravel quality in an effort to restore fisheries populations of the Klamath Basin (CDFG 2010).

A number of NGOs also contribute to research in the region:

- **Reef Check California** works with volunteer divers to survey nearshore reefs to assess relative abundance and size distribution of target species, including fish, invertebrates, and algae, and evaluate changes over time. Reef Check works to conserve nearshore rocky reef ecosystems in California. Monitoring programs started in 2005. They educate and train volunteer divers to conduct surveys at 48 monitoring sites throughout the state, including three monitoring sites in the Study Region: Mendocino Headlands, Portuguese Beach, and Van Damme. They monitor sites twice a year. Divers assess density of selected invertebrates; seaweed and substrate; and the density, size, and identification of selected fish species along transects that are 30 meters long with a maximum depth of 18 meters. For detailed information on Reef Check's California sites, access this report (an appendix, large file size): http://www.reefcheck.org/PDFs/rcca2yr/RCCA_2yr_Report_App1.pdf.

- **Mendocino Abalone Watch** is a volunteer nonprofit association established to collaborate with and provide additional information to the Department. The Mendocino Abalone Watch's purpose is to enhance regulatory enforcement and protection of the abalone resource along the Mendocino County Coast. The Mendocino Abalone Watch has been designated as a Special Project of the Mendocino Endowment for Environmental Advocacy.

- **Marine Wildlife Care Center,** located on the HSU campus, was established in 1997 to care for oiled seabirds, and participates in the Oiled Wildlife Care Network of emergency response centers in the North Coast, from Point Arena to the California/Oregon border. The center was activated three times to care for oiled birds during emergencies in 1997, 1999, and 2006 (oiled marine mammals

are transported to the Northcoast Marine Mammal Center in Crescent City). During nonemergencies, the Marine Wildlife Care Center at HSU is used for classrooms and laboratories for the wildlife program. For more information, visit the Care Center's website:
http://www.humboldt.edu/mwcc/.

- **Northcoast Marine Mammal Center**, founded in 1983 and located in Crescent City, is a private nonprofit organization for rescue and rehabilitation of marine mammals. The marine mammal center was constructed with support from an Offshore Oil Mitigation Grant. It accommodates or assists stranded, sick, or injured seals, sea lions, dolphins, porpoises, and whales; provides emergency response for injured wildlife; participates in collection of data on marine mammals; and works to educate the public about marine mammals and their role in ocean ecosystems. For more information, visit the Center's website:
http://www.northcoastmmc.org.

Scientific Collecting Permits

The Department processes Scientific Collecting Permit applications, and they are recorded on a statewide basis. A Scientific Collecting Permit is required to take, collect, capture, mark, or salvage mammals, birds and their nests and eggs, reptiles, amphibians, fishes, and invertebrates for scientific, educational, and noncommercial purposes. The take of some animals also requires a Memorandum of Understanding or other additional authorization from the Department (CDFG 2011a). The total number of permits issued in California from 2002 through August 2011 has remained relatively consistent from year to year (**Table 6.4-1**). Through August 2011, the Marine Region issued 562 scientific collecting permits. The permit holder must notify the Department before collecting, carry a copy of the permit while in the field, and submit a Report of Specimens Collected or Salvaged within 30 days of permit expiration. The Department requires that detailed information be provided in the scientific collecting reports. These data include the organism's name (common and scientific); location (coordinates) where the organism was collected, including any marine protected areas, if applicable; date captured; number captured, including the sex of the organism, if possible; the method of take; and the name of the facility to which the organism was taken.

Table 6.4-1. Number of Scientific Collecting Permits Issued Statewide, 2002–2011*

Year	Number of Permits
2002	1218
2003	1306
2004	1706
2005	1717
2006	1802
2007	1922
2008	1545
2009	1669
2010	1342
2011	868*

Note: * As of August 30, 2011
Source: CDFG 2011b

Public Outreach and Education

Local, state, and federal agencies, colleges, and private institutions adjacent to the Study Region offer public outreach and education about coastal and marine ecosystems. Several educational institutions offer undergraduate and graduate education programs and degrees in marine science, management, and conservation, including HSU and College of the Redwoods. Marine research institutions, such as the Telonicher Marine Laboratory at HSU, provide opportunities for hands-on learning in the marine environment for students, teachers, and the public. State and federal agencies, including Redwood National and State Parks, provide opportunities for public education, K-12 education, and teacher and volunteer docent training. Public education is also offered through private institutions, such as the Ocean World Aquarium in Crescent City.

State Parks manages four Underwater Parks in the Study Region: MacKerricher State Park, Point Cabrillo; Russian Gulch State Park, and Van Damme State Park (State Parks 2011). The objectives of State Marine Parks are to protect natural resources, provide recreational opportunities (especially near metropolitan areas), and enhance public education of marine environments (also see Chapter 5, "Cultural Resources"). State Parks encourages the establishment of marine parks immediately offshore of terrestrial parks whenever feasible (State Parks 2008). Close proximity to land-based parks increases the provision of easy public access and facilities, such as showers and restrooms (State Parks 2011).

6.4.4 Impact Analysis

Methodology

The MLPA Master Plan (CDFG 2008) mandates monitoring to gauge the performance of an MPA in relation to its objectives, so research would not only be allowed but would be

encouraged. The Master Plan supports the possibility of collaborations between the Department and other ongoing monitoring activities. Several academic institutions and affiliates operate marine biology and ecology facilities in the vicinity of the Study Region and regularly conduct research in California's waters off the North Coast (see "Environmental Setting," above).

This evaluation addresses whether the Proposed Project would affect any of the existing or future research activities conducted in the Study Region. Potential effects were assessed by evaluating the potential change or conflicts with research and education use patterns resulting from the proposed MPA network. Potential impacts were analyzed based on available data and information compiled in the Regional Profile (MLPAI 2010), other relevant literature, and MarineMap, a Web-based mapping tool.

Criteria for Determining Significance

Based on significance criteria from Appendix G of the State CEQA Guidelines and professional expertise, the Proposed Project would have a significant impact on research and education-oriented resources if it would:

A. include scientific or educational facilities or require the construction or expansion of scientific or educational facilities that might have an adverse effect on the environment; or

B. decrease research and educational opportunities. Basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource, are categorically exempt under CEQA (PRC, Sections 21083 and 21087).

Environmental Impacts

Impact RES-1: Effects on Scientific Research or Educational Facilities (Significance Criterion A)

The Proposed Project does not include construction of structures or facilities to support scientific research or education opportunities. While ongoing monitoring, research, and education activities are an integral component of the goals of the Proposed Project, the future increase in research and education activities directly resulting from implementation of the Proposed Project is not anticipated to be significant enough to require construction of new or expansion of existing scientific or educational facilities. A wide range of existing facilities and organizations that conduct scientific research and education exist adjacent to the Study Region. Those existing structures and facilities are expected to adequately support future research and education opportunities resulting from the Proposed Project. Therefore, the Proposed Project would have a less-than-significant impact on research and educational facilities.

Level of Significance: *Less than Significant*

Impact RES-2: Effects on Scientific Research or Educational Opportunities (Significance Criterion B)

All of the protected areas included in the Proposed Project are within 20 miles of a marine research institution, public education facility, and/or existing monitoring site (e.g., PISCO, Reef Check, National Marine Fisheries Service). Scientific and educational opportunities would be improved by the presence of MPAs near research institutions and existing monitoring sites. The following is a list of MPAs in the Proposed Project that are adjacent to existing monitoring sites or educational institutions:

- Castle Rock Special Closure
- False Klamath Rock Special Closure
- Samoa State Marine Conservation Area (SMCA)
- South Humboldt Bay Estuary State Marine Recreational Management Area (SMRMA)
- Mattole Canyon State Marine Reserve (SMR)
- Ten Mile SMR
- MacKerricher SMCA
- Point Cabrillo SMR
- Russian Gulch SMCA
- Big River Estuary SMCA
- Navarro River Estuary SMCA

In addition, one of the goals of the MLPA is to improve educational and study opportunities provided by marine ecosystems (Goal 3; see Chapter 2, "Project Description"). Several of the Proposed Project MPAs were chosen in part for their ability to support this goal, either because of unique features, ease of access for researchers, existing educational facilities, or robust baseline data from already established monitoring programs, as follows (MLPAI 2011):

- South Humboldt Bay SMRMA—Numerous coastal access points would allow for research and long-term monitoring.
- South Cape Mendocino SMR—Designed to capture a wide range of biodiversity habitats, this SMR would protect seabird and pinniped colonies, and provide research opportunities.
- Mattole Canyon SMR—This MPA offers a variety of diverse habitats, including upwelling zones, submarine canyons, offshore reef structures; it also would improve research opportunities with regard to marine ecosystems subject to minimal human impacts.
- Ten Mile SMR—This MPA is close to Fort Bragg, with numerous coastal access points that would allow for research and long-term monitoring.

- MacKerricher SMCA—Intended to meet Goal 3 of the MLPA, based on existing public educational facilities (including a visitor center), this MPA is part of State Parks' Underwater Parks Program.
- Point Cabrillo SMR—This MPA is designed to protect biodiversity and provide a continuation of Goal 3 opportunities. The rapid depth drop-off close to shore, as well as the presence of urchin, abalone, kelp and other marine species, would provide unique underwater features that have been studied by the Department for over 20 years.
- Russian Gulch SMCA—This MPA is intended to meet Goal 3 of the MLPA, based on existing public educational facilities, and is part of State Parks' Underwater Parks Program.
- Big River Estuary SMCA—Numerous coastal access points would allow for research and long-term monitoring.
- Van Damme SMCA—This MPA is intended to meet Goal 3 of the MLPA, based on existing public educational facilities, including a visitor center, and is part of State Parks' Underwater Parks Program.
- Navarro River Estuary SMCA—Numerous coastal access points would allow for research and long-term monitoring.

Research opportunities are not limited to the MPAs listed above. The MLPA specifically allows permitted scientific activities. The Department may allow research, restoration, and monitoring in areas designated for protection on a case-by-case basis, so long as the area is maintained "to the extent practicable in an undisturbed and unpolluted state" while allowing "managed enjoyment and study" by the public (CDFG 2008).

Additionally, the MPA management plan includes strategies for education and outreach to help people enrich their understanding and appreciation of MPAs; impart the knowledge and science of ocean and coastal resources, and the role of MPAs to targeted audiences; and provide basic information on a broad scale to the general public. Educational activities might include organized field trips by K–12 classes or presentations to organizations (CDFG 2008).

Establishment of an MPA network would enhance research studies because human consumptive uses within these areas would be prohibited or limited, thereby removing one variable that could affect the outcome of the research study. Furthermore, the proximity of many of the Proposed Project MPAs to established monitoring sites would allow for both a baseline of data to determine change over time and comparison with nonprotected areas of similar habitat. These factors would provide enhanced opportunities for existing research and educational activities.

Overall, the Proposed Project would have no adverse impact on research and educational opportunities.

Level of Significance: *No Adverse Impact*

Chapter 6.5

Vessel Traffic and Hazards

6.5 Vessel Traffic and Hazards

6.5.1 Introduction

This section presents an overview of vessel traffic in the North Coast Study Region (Study Region), and potential impacts related to these social resources that could arise from implementation of the Proposed Project. Additionally, it describes the disposal of dredging material, oil spills, and the transport of hazardous materials. Reflecting the overall international, federal, state, and local regulatory framework for vessel traffic and the related oceanic hazards and hazardous materials that would affect implementation of a marine protected area (presented in Appendix B), this section analyzes the potential impacts of the Proposed Project on vessel traffic. Data and information sources used to prepare this section include federal, state, and local regulations, the *Regional Profile of the North Coast Study Region: California/Oregon Border to Alder Creek* (MLPAI 2010a), and other relevant reference material.

6.5.2 Regulatory Setting

International Shipping Laws and Regulations

The International Maritime Organization (IMO) is a United Nations specialized agency with responsibility for the safety and security of shipping and the prevention of marine pollution by ships. IMO maintains a comprehensive regulatory framework for shipping that includes safety, environmental concerns, legal matters, technical cooperation, maritime security, and the efficiency of shipping. IMO regulations 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 (CDFG 2010).

MARPOL 73/78 is the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 ("MARPOL" is short for marine pollution and 73/78 is short for the years 1973 and 1978). MARPOL 73/78 is the principal environmental convention established by the IMO for preventing marine pollution by ships from operational or accidental causes. Regulation 26 of Annex I and regulation 16 of Annex II of MARPOL 73/78 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, in accordance with guidelines developed by IMO. 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 (CDFG 2010).

Federal Laws, Regulations, and Policies

Federal regulatory oversight includes zones of different activities and restrictions, as well as international navigational rules for vessel movement. These include Danger Areas, Regulated Navigational Areas, Disposal and Dumping Areas, and Navigational Rules for Avoiding Collisions at Sea. Additionally, a number of federal laws regulate marine hazardous sites and cleanup of hazardous materials. Regulations to implement these laws

pertaining to vessels are contained primarily in the Code of Federal Regulations (CFR), Title 33 (Navigation and Navigable Waters), Title 40 (Protection of Environment), and Title 46 (Shipping). Key federal laws addressing vessel traffic, oil pollution, and other oceanic hazards and hazardous materials are discussed next.

Danger Areas

According to charting definitions (U.S. Department of Commerce 1997), a danger area is "…a specified area above, below or within which there may exist potential danger from military, civil, natural or manmade sources. A danger area may be categorized as a prohibited area, exercise area, firing area, or missile test area."

Regulated Navigational Areas

A regulated navigation area (RNA) is a region of water where the local district commander has the authority to regulate vessels deemed to be hazardous or facing hazardous conditions. RNAs are defined by the U.S. Coast Guard (USCG). They can incorporate a variety of subregions such as Safety Zones, Defense Areas, Security Zones, and Regulated Areas (U.S. Department of Commerce 1997). Within an RNA, 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 a 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 two 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 (CDFG 2009).

Disposal and Dumping Areas

Nondiscretionary disposal and dumping of toxic wastes are no longer allowed. Disposal and dumping areas have been established for various purposes for the disposal of dredged materials. These sites may be hazards to navigation. There are three primary types: 1) the dumping areas established by U.S. Environmental Protection Agency (USEPA), 2) the dumping areas established by the U.S. Navy, and 3) the spoil, disposal and dumping grounds established by the U.S. Army Corps of Engineers (CDFG 2009).

International Rules Act

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 nations that have ratified the treaty are bound to the rules. Because the U.S. has ratified this treaty, all U.S.-flagged vessels must adhere to these Rules where applicable.

The COLREGS include rules on steering and sailing, lookout, 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 USCG. These Rules are applicable on waters outside of established navigational lines of demarcation. The lines are called COLREGS Demarcation Lines and delineate those waters on which mariners must comply with inland and international rules. COLREGS Demarcation lines are contained in 33 CFR 80, the Navigation Rules manual (CDFG 2009).

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC Section 6901 et seq.) is a USEPA-administered law that gives USEPA the authority to control the generation, transportation, treatment, storage, and disposal of hazardous waste, as well as the management of nonhazardous 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 USEPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program (CDFG 2010).

Oil Pollution Act

The OPA was signed into law in August 1990 (U.S. House of Representatives [H.R.], Public Law 101–380). The OPA established provisions that expanded 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 $1 billion 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 requires the federal government 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. Owners or operators of vessels that pose a serious threat to the environment must prepare their own facility response plans.

USEPA is responsible for the National Contingency Plan and acts as the lead agency in response to an onshore spill. USEPA also regulates disposal of recovered oil and is responsible for developing regulations for spill prevention, control, and countermeasure plans. USCG is responsible for federal contingency planning and acts as a co-chair with the Department in the Port Area Committees for Contingency Planning (CDFG 2010).

Clean Water Act

The Clean Water Act (CWA) is the primary federal law governing water pollution in the U.S. 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 (CDFG 2010). Further information regarding CWA is available in Section 3.4, "Water Quality."

National Pollutant Discharge Elimination System Permit Program

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. 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 that a written spill prevention, control, and countermeasures plan be prepared for facilities that store or treat oil that could leak into navigable waters (CDFG 2010).

Act to Prevent Pollution from Ships

The Act to Prevent Pollution from Ships (33 USC Sections 1905–1915) applies to all U.S.-flagged ships and to all foreign-flagged vessels operating in navigable waters of the U.S. or while at port under U.S. jurisdiction. USCG has primary responsibility to prescribe and enforce regulations necessary to implement this Act in these waters (CDFG 2010).

Refuse Act of 1899

The Refuse Act of 1899 is a federal statute governing the use of waterways and is administered by the U.S. 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, to control debris that obstructs navigation (CDFG 2010).

U.S. Coast Guard Regulations

USCG, under 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), and operation of the National Response Center for spill response, and is the lead agency for offshore spill response. USCG implemented a revised vessel boarding program in 1994, designed to identify and eliminate substandard ships from U.S. waters. USCG also is responsible for reviewing marine terminal operations manuals and issuing letters of adequacy on approval (CDFG 2010).

USCG has issued voluntary guidelines for all vessels with ballast tanks operating on waters of the U.S. These guidelines include provisions to: avoid ballast operations in or near sensitive areas (marine preserves, parks, and reefs); avoid taking on ballast water in areas that may contain contaminants; minimize discharge in coastal and internal waters; and dispose of substances in accordance with federal, state, and local regulations (USGS 2011).

National Oceanic and Atmospheric Administration

The 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 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 (CDFG 2010).

State Laws, Regulations, and Policies

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. State regulatory oversight includes implementation of the Oil Spill Prevention and Response Act (OSPRA).

Lempert-Keene-Seastrand Oil Spill Prevention and Response Act

The California State Legislature enacted OSPRA (Senate Bill [SB] 2040; Statutes of 1990, Chapter 1248) at Government Code, Section 8670.1 et seq. The goals of OSPRA are to improve the prevention, removal, abatement, response, containment, and clean up and mitigation of oil spills in the marine waters of California. The Act (SB 2040) created harbor safety committees for the major harbors 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 legislation also established the California Office of Spill Prevention and Response, to provide protection of natural resources from oil and other deleterious materials through prevention, preparation, response, and restoration.

Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is administered by the California Environmental Protection Agency's 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 in landfills. Hazardous waste is tracked from the point of generation to the point of disposal or treatment, using hazardous waste manifests. The manifests must list a description of the waste, its intended destination, and regulatory information about the waste.

California Coastal Act of 1976

The California Coastal Act of 1976 (Coastal Act; PRC, 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 as the state's coastal management, regulatory, and permitting agency for all development within California's coastal zone.

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

State Lands Commission

The California State Lands Commission's (SLC's) Lands Division is responsible for leases of land or mineral rights on state lands, which includes submerged lands out to 3 statute miles (mi) from shore; SLC's Marine Facilities Division regulates offshore moorings and onshore terminals used in petroleum transfer. The primary focus of their regulations is preventing oil spills, through testing and regulation of pipelines in these facilities. The Marine Facilities 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.

Local Plans, Policies, Laws, and Regulations

Humboldt Bay Harbor, Recreation and Conservation District

The Humboldt Bay Harbor Recreation and Conservation District is a special district created by the California State Legislature in 1970. The Harbor District is a countywide agency with permit jurisdiction over all tide, submerged, and other lands, including all of Humboldt Bay, granted to the District. The District oversees the Woodley Island Marina and any port development projects, including dredging and other transportation improvement projects. Many other programs are supported or underwritten by the Harbor District, including ballast water exchange and oil spill response (Humboldt Bay Harbor Recreation, and Conservation District 2007).

6.5.3 Environmental Setting

Major considerations for the environmental setting include the locations of major ports and other transportation nodes, types, and numbers of commercial and recreational vessels, and their associated movement in and around the Study Region. A detailed discussion of commercial fishing (including commercially harvested species, fishing port complexes and associated landings in and adjacent to the Study Region, and commercial fishing industry trends), recreational fishing (including recreational fishing modes, recreationally harvested species, and recreational fishing industry trends), species harvested jointly by commercial and recreational fisheries, and existing fishing closure zones, is presented in Appendix B, "Characterization of Consumptive Uses and Associated Socioeconomic Considerations in the Region," and thus is not repeated here. Furthermore, Appendix B discusses boat-based fishing modes (including recreational fishing modes and commercial passenger fishing vessel [CPFVs], and others) and shore-based modes. This section discusses vessel counts in the Study Region, the California Recreational Fisheries Survey, dredging, and oil spills.

Vessel Counts in the North Coast Study Region

Overall, the number of registered vessels has been slowly increasing in the Study Region, although a decrease has occurred for registered vessels in Del Norte County. According to the California Department of Motor Vehicles, as of December 31, 2008, the Study Region had approximately 13,760 registered vessels, of which 13,315 were pleasure vessels (MLPAI 2010a). The number of pleasure vessels increased by 1,531, or about 11.5%, between 1991 and 2008 (**Table 6.5-1**).

Table 6.5-1. Registered Vessels in 1991 and 2008

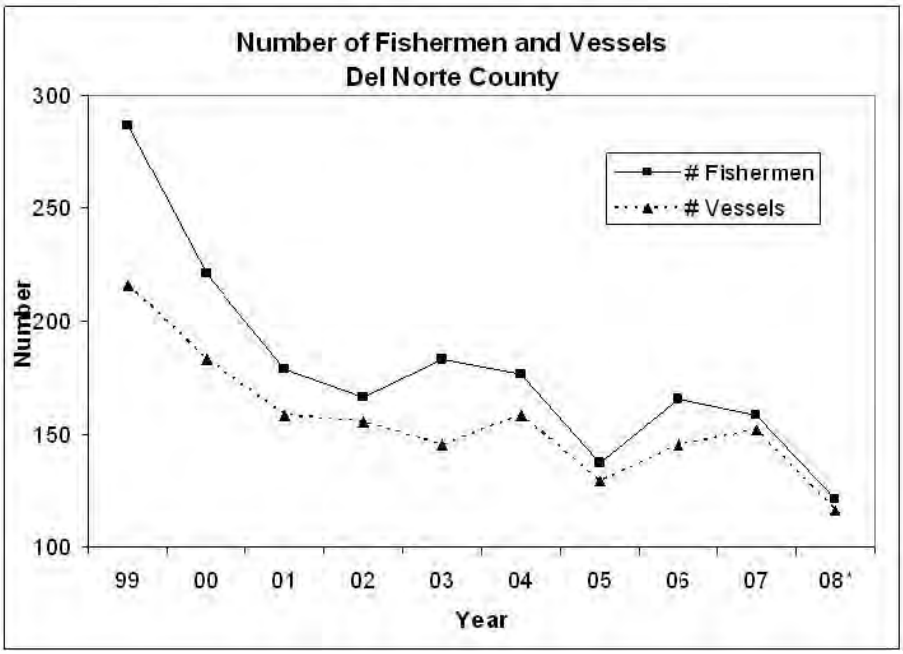
County	Total Number of Registered Vessels, 1991	Total Number of Pleasure Vessels, 1991	Total Number of Registered Vessels, 2008	Total Number of Pleasure Vessels, 2008
Del Norte	1,549	1,419	1,498	1,433
Humboldt	6,613	6,254	7,382	7,144
Mendocino	4,420	4,111	4,888	4,738

Source: MLPAI 2010a

Commercial Fishermen and Vessels

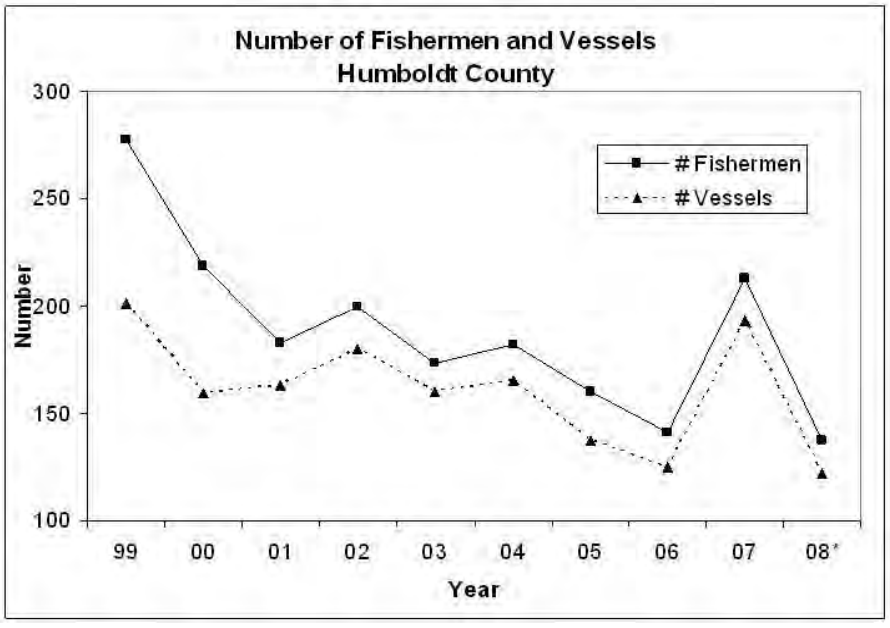
Fishing port complexes and regional fishing vessel traffic information is detailed in Appendix B, "Characterization of Consumptive Uses and Associated Socioeconomic Considerations in the Region." As described, the overall number of commercial fishermen and vessels in the Study Region has declined for the period from 1999 through 2008 (see Figure B-1 in Appendix B). The total number of fishermen and vessels by county are shown in **Figures 6.5-1** through **6.5-3** (MLPAI 2010a).

Figure 6.5-1. Numbers of Commercial Fishermen and Vessels for Del Norte County, 1999–2008



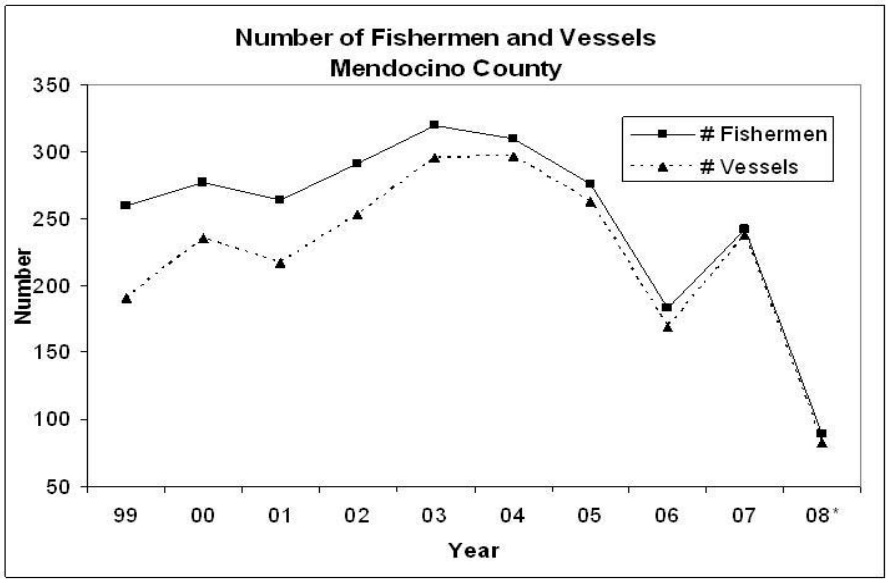
Source: MLPAI 2010a

Figure 6.5-2. Numbers of Commercial Fishermen and Vessels for Humboldt County, 1999–2008



Source: MLPAI 2010a

Figure 6.5-3. Numbers of Commercial Fishermen and Vessels for Mendocino County, 1999–2008



Source: MLPAI 2010a

Boat-Based Recreational Fishing Modes

Commercial Passenger Fishing Vessels

CPFVs, also known as 'party boats,' are crewed vessels that carry recreational anglers to ocean fishing locations for a fee. CPFVs are generally limited by travel time, and can be characterized by trip duration (extended day, half day) or by target (e.g., bottomfishing, crab, or albacore). CPFVs in the Study Region fish in nearshore waters and bays of the mainland coast, as well as offshore. The majority of CPFVs cater to anglers using hook-and-line gear and trap (for Dungeness crab), though a small proportion of trips engage consumptive diving (MLPAI 2010a).

In recent years, approximately 20 CPFVs are known to operate out of ports in all three north coast counties. Passenger capacity ranges in size from four to 49 persons, with an average passenger load of 10 persons per trip (CFIS 2009 as cited in MLPAI 2010a).

Private and Rental Boats

Privately owned vessels and rental boats (typically rented without a crew) include kayaks, skiffs, and large motor boats. Areas fished by these types of boats vary by vessel type and size, but are similar to those fished by CPFVs. The majority of fishing is conducted by hook-and-line, but crabbing by trap and consumptive diving are also popular forms of fishing from private boats (MLPAI 2010a).

Kayaks

Fishing conducted from kayaks is also considered part of the private and rental boat fishery. Areas fished include nearshore coastal waters, bays, and tidally influenced river mouths. Finfish target species include bottomfishes, salmon, and halibut. Abalone and crab may also be targeted by kayakers engaging in freediving or hoopnetting. Important kayaking areas within the Study Region include Humboldt Bay and Trinidad (MLPAI 2010a).

California Recreational Fisheries Survey

The California Recreational Fisheries Survey (CRFS) conducts interviews with anglers returning to public launch ramps. These interviews represent a sample of the total number of anglers. Anecdotal information collected includes the distribution of recreational, commercial, and nonconsumption trips taken by surveyed vessels (**Table 6.5-2**). CRFS samplers intercepted a total of 2,967 private and rental boats within Del Norte, Humboldt, and Mendocino Counties in 2007. The most surveys took place in Humboldt County, and the fewest took place in Mendocino County. Del Norte County had the highest rate of boats that had fished for finfish recreationally (80%), and Mendocino County had the lowest rate (52%). Humboldt County had the highest percentage of commercial fishing or nonfinfish vessels, at approximately 9%. Mendocino County had the highest percentage of vessels not fishing (25%), and Del Norte and Humboldt Counties had about the same percentage of vessels not fishing, approximately 10% (MLPAI 2010a).

Table 6.5-2. Activities Using Private and Rental Boats from Public Launch Ramps, 2007

	Del Norte		Mendocino		Humboldt	
	Number of Vessels	Within County (%)	Number of Vessels	Within County (%)	Number of Vessels	Within County (%)
Fished recreationally for finfish	679	79.7	1370	77.2	178	52.2
Intended to fish recreationally, but no gear in water	3	0.4	12	0.7	11	3.2
Recreational shellfish	57	6.7	58	3.3	63	18.5
Fished commercially	30	3.5	164	9.2	4	1.2
Total Vessels Fishing	769	90.3	1604	90.4	256	75.1
Recreational cruising	23	2.7	41	2.3	16	4.7
Burial at sea	0	-	0	-	0	-
Bird watching	0	-	0	-	0	-
Diving, nonconsumptive	0	-	2	0.1	0	-
Enforcement (public agency)	4	0.5	1	0.1	2	0.6
Hunting, gun	0	-	0	-	0	-
Boat maintenance	22	2.6	61	3.4	10	2.9
Research (public agency)	4	0.5	10	0.6	0	-
Whale watching	0	-	0	-	0	-
Other commercial activity	1	0.1	8	0.5	0	-
Removing boat from slip, no trip	15	1.8	15	0.8	38	11.1
Unidentified	14	1.6	32	1.8	19	5.6

Table 6.5-2. Activities Using Private and Rental Boats from Public Launch Ramps, 2007

	Del Norte		Mendocino		Humboldt	
	Number of Vessels	Within County (%)	Number of Vessels	Within County (%)	Number of Vessels	Within County (%)
Total Vessels Not Fishing	83	9.7	170	9.6	85	24.9
Total All Boats	852	100	1774	100	341	100

Note: Table shows private and rental boats surveyed by the California Recreational Fisheries Survey in 2007.

Source: MLPAI 2010a

Note that the goal of the CRFS is to produce marine recreational fishery-based data to inform management of recreational fisheries and, therefore, may underestimate the percentage of nonconsumptive boat users because it focuses on public launch ramps where the majority of managed species are landed, rather than taking a random sampling at public launch ramps. Eight primary launch ramps were surveyed in the Study Region, and all surveys took place during daylight hours (MLPAI 2010a).

Recreational Boat-Based Fishing Effort

Effort is a measure of the time anglers spend fishing, and can be quantified by the number of trips taken by anglers. Recreational boat-based fishing effort differs seasonally in the Study Region (**Table 6.5-3**). According to CRFS estimates and CPFV Logbook statistics, an average of over 78,000 marine angler vessel trips annually were taken out of the counties of Mendocino, Humboldt, and Del Norte in recent years. In 2008, there was a significant drop in effort, most likely a result of the closed salmon season that year.

Table 6.5-3. Estimated Annual Recreational Angler Boat Trips in North Coast Marine Waters for CPFVs and Private Boats from 2005 to 2008

Mode	Average Annual Angler Trips
CPFV	12,218
Private boat	66,585

Note: CDFG = California Department of Fish and Game (in note below), CPFV = commercial passenger fishing vessel, CRFS = California Recreational Fisheries Survey (in note below)

Sources: CPFV fishing activity logbooks submitted to CDFG by CPFV operators were used for the estimates of CPFV effort; CRFS data extracted from the RecFIN database (http://www.recfin.org/forms/est2004.html) for trips in all waters of RecFIN "Wine and Redwood" Districts, which span Mendocino, Humboldt, and Del Norte counties.

Dredging

Dredging is an excavation activity in which large equipment removes underwater sediment It is done either to deepen channels in waterways and ports to keep them navigable, or because the matter removed is wanted elsewhere, such as for beach nourishment. Potential

environmental consequences are associated with dredging that include general disturbance to aquatic ecosystems, reduction in population and biodiversity of benthic communities, mortality of fish species, loss of spawning areas, and damage or loss of habitat. These impacts affect both the area where material is removed and the area where it is deposited.

Humboldt Open Ocean Dredged Site (HOODS) was established in 1995 as a permanent ocean dredge material disposal site for Humboldt Bay and the North Coast. HOODS is located 3.5 mi offshore of Eureka, beyond state waters, and thus beyond the Study Region (MLPAI 2011). The impacts of dredge material removal and deposition can be minimized with proper management plans. Northern California has a regional dredging team that develops dredge material management plans, which include efforts to minimize ecological impacts. In addition, dredge activities are regulated under Section 401 of the Clean Water Act and under the State Water Resources Control Board's Water Quality Order (MLPAI 2010a).

Oil Spills

Humboldt Bay is a deep water port used for commercial purposes in addition to fishing, such as the shipment of petroleum product, timber, and other goods. Large marine vessels contain hazardous materials, including diesel fuel and lubricants as well as any substances that may be in transport. The largest and most troublesome spills occur from oil tankers, which carry two types of petroleum product—unrefined oil and refined product.

Unrefined, or 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 1–4% by weight, and hydrogen sulfide concentrations can reach 150 parts per million. 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 can result in the release of flammable and/or toxic vapors, including propane, butane, pentane, benzene, and hydrogen sulfide. Refined oil includes a huge number of petrochemical products, such as gasoline.

The largest oil spill in Humboldt Bay occurred in November 1997, when the *M/V Kure* collided with a loading dock, spilling 4,500 gallons of fuel into the Bay. Saltmarsh and mudflat habitat was exposed to oil. Oil was carried out of the bay and detected over 17 mi north of the initial spill location. An estimated 3,950 water birds died; many other species and recreational use of the Bay were impacted (CDFG 2011a).

The most recent major vessel accident occurred in September 1999, when 2,000 gallons of intermediate fuel oil spilled from the *M/V Stuyvesant* into the Pacific Ocean near the Humboldt Bay entrance. Approximately 2,405 water birds died, and fish, shrimp, and recreational use of beaches were impacted (CDFG 2011a). Both spills damaged natural resources in and around Humboldt Bay, and a number of oiled birds were found 50 mi north of the spills on Redwood National and State Park beaches (MLPAI 2010a).

All three counties adjacent to the Study Region and also Humboldt Bay have contingency plans prepared for key sensitive sites (CDFG 2011b). The plans include detailed maps of

sensitive sites within each region, resources of concern, and logistics for emergency response.

6.5.4 Impact Analysis

Methodology

Effects on vessel traffic and hazards were qualitatively assessed, based on the degree to which the establishment of MPAs could potentially disrupt or impact the vessel traffic within the Study Region. The analysis includes consideration of existing resources and traffic patterns, as well as vessel density increases and the location of MPAs. Disruption of vessel traffic primarily is based on evaluating potential increases in vessel densities that result from vessel displacement. Expected overall vessel density increases are quantified, and based on the spatial distribution of MPAs, an assessment is provided of the extent to which possible density increases could occur. Based on this information, potential impacts on existing vessel traffic patterns and marine navigation, and effects related to ocean hazards are considered.

Fishing vessel activity is not uniformly distributed. It is based on habitat, preference, and a variety of other factors. Thus, fishing activity occurs not in proportion to the size (area) of the MPA, but in proportion to the amount of fishing that occurred in the area now designated as an MPA. For the purposes of this EIR, it is assumed that the same amount of fishing pressure in the Study Region would occur after the establishment of MPAs as under baseline conditions; as such, the amount of fishing vessel activity outside the MPA would increase in proportion to the amount of fishing vessel activity that occurred in the area prohibited by the MPAs. That is, the fishing vessel activity that used to occur inside what is now an MPA would be distributed outside the MPA in the remaining, nonprotected area. As described in Chapter 4 "Biological Resources," assuming that fishing vessel activity is evenly distributed throughout the entire Study Region, this can be calculated by assuming that if R is the fraction of total area prohibited by MPAs within the Study Region, fishing vessel activity outside the MPAs would increase by a factor 1/(1–R). In reality, fishing activity is not evenly distributed, and so this only provides a general estimate. Similarly, while this methodology is useful for estimating increased vessel activity outside of the MPAs, there is no method for estimating increased nonconsumptive recreational vessel activity within the MPAs.

As protection areas for underwater habitats, the proposed MPAs would not increase risk of public hazards resulting from wildfires or changes to emergency response and evacuation plans (refer to Chapter 1, section 1.4 "Topics Dismissed from Detailed Analysis"). The Proposed Project also would not interfere with existing, or require additional, dredging activities; and thus these topics are not discussed further. However, because implementation of the proposed MPA designations could result in changes in vessel traffic or density that could increase risks of spills involving hazardous materials (e.g., collisions, increased use of fuels or lubricants), potential impacts associated with vessels that transport or utilize hazardous materials are included in this analysis of vessel traffic impacts.

Criteria for Determining Significance

Based on significance criteria from Appendix G of the State CEQA Guidelines and professional expertise, the Proposed Project would have a significant impact on vessel traffic resources and potential hazards if it would:

A. result in substantial disruption of existing vessel traffic patterns and marine navigation;

B. substantially increase oceanic hazards, in particular because of changes in vessel traffic concentration (i.e., accident conditions); or

C. substantially increase risks or exposure to hazardous materials.

Environmental Impacts

Impact VT-1: Increase in Oceanic Hazards from Increased Vessel Density (Significance Criteria A and B)

The Proposed Project would establish restrictions on allowable activities in proposed MPAs, which likely would alter vessel activities in these areas. Although vessel transit would be freely allowed through MPAs, the Proposed Project could result in changes in vessel densities within and adjacent to proposed MPA boundaries. In response to restrictions within MPAs, commercial and recreational fishing vessels would go elsewhere to fish in unrestricted areas, and consequently may increase vessel density traffic in some areas compared to existing conditions. Nonconsumptive users may be drawn to newly protected resources within MPA boundaries (i.e., scientific researchers, divers), resulting in increased density of nonfishing vessel traffic.

Under the Proposed Project, the proposed MPAs cover a combined 13.3% of the Study Region. Using the methodology discussed above, fishing vessel activity outside of the MPAs within the Study Region are expected to increase by 1/(1–0.133) = 1.153. That is, assuming the same amount and duration of vessels activity occurs in the remaining 86.7% of the Study Region, overall fishing vessel density in the Study Region is expected to increase by 15.3% compared to conditions before the implementation of MPA restrictions. This estimate assumes that all fishing vessels would continue fishing in the Study Region and would not stop fishing all together. As proposed MPAs are located sporadically throughout the Study Region, changes in vessel densities would not be uniform across the entire region, but likely would be somewhat variable. Because the overall increase in vessel density of 15.3% would represent only a slight increase in overall density, and because this increase would be distributed throughout the region, vessel density increases resulting from the Proposed Project would not be considered substantial.

Increased density of vessel traffic could potentially lead to increased oceanic hazards, including collisions, by having more boats operating in a smaller area. Vessel operators would still be required to abide by the applicable navigational rules for vessel operations in the Study Region. These rules would apply to vessel transit throughout the Study Region (both within and beyond MPA boundaries) and would place responsibility for safe vessel operation on individuals. Because of this, and the fact that increased concentrations of vessels would not be dramatic, potential impacts related to vessel density and oceanic hazards are not expected to noticeably increase from implementation of the Proposed

Project. In addition, the Proposed Project MPAs were intentionally designed to be located away from port entry/exit points, through application of the following stakeholder priority during the design process "...consider the safety and vitality of coastal communities when designing and siting MPAs by excluding areas around ports and harbors that provide fishing zones large enough to ensure vessel safety..." (MLPAI 2010b). Increased concentrations of vessels would therefore be minimized, or avoided altogether, at port entry/exit transit routes (see Chapter 2, section 2.2 "Project Goals and Regional Objectives").

The Proposed Project options would result in similar findings. The minor boundary changes in the Pyramid Point State Marine Conservation Area (SMCA), Ten Mile Beach SMCA, South Humboldt Bay State Marine Recreational Management Area (SMRMA), and Sea Lion Gulch State Marine Reserve (SMR) would not result in discernible differences in vehicle densities or oceanic hazards because these would be implemented to ensure visibility of area boundaries. Similarly, the optional change to the Reading Rock SMR would have no effect on vessel density because it would only add the addition of noncommercial take by Native American tribes. The options for Double Cone Rock SMCA, Big River Estuary SMCA, and Navarro River SMCA would include allowances for additional recreational take of some species, thereby resulting in a slightly reduced density for fishing vessels outside these area boundaries, compared with the Proposed Project.

A less-than-significant impact would occur to ocean hazards from increased vessel density.

Level of Significance: *Less than Significant*

Impact VT-2: Disruption of Existing Vessel Traffic Patterns and Marine Navigation (Significance Criteria A and B)

Regulated navigation areas (discussed above in section 6.5.2) in the Study Region would not be altered by the proposed network of MPA designations. This would include any established commercial vessel traffic separation schemes and vessel traffic services. Furthermore, all local, state, and international rules for navigation would remain in effect, and no changes in operation would occur to existing ports or harbors, including the major facilities located within the Fort Bragg or Eureka port complexes. Therefore, under the Proposed Project, disruption of existing marine navigation would be limited to the extent that vessels would travel in different directions and/or distances to and from ports in response to restrictions related to the proposed MPAs. In addition, as MPAs are designed to be located away from port entry/exit points, increased concentrations of vessels would be minimized, or avoided altogether, at port entry/exit transit routes. As discussed above, effects on vessel travel distances are expected to be minimal.

As discussed in Impact VT-1, the Proposed Project likely would result in increased vessel densities relocating from MPA areas. Effects on vessel travel distances are expected to be limited because the Proposed Regulations would not restrict access for transiting through MPA boundaries. In addition, as proposed MPAs would be located sporadically throughout the Study Region, changes in vessel densities would not be uniform across the entire region, but likely would be somewhat variable. In areas where vessel traffic densities increased, vessel traffic patterns would be slightly altered if impediments or reductions in vessel speed were necessary to ensure navigational safety.

The only exception to unimpeded vessel transit would occur in the vicinity of special closures, as proposed under the Proposed Project. In areas designated for special closure, human activities, including vessels, would ordinarily be prohibited. These areas would include rock formations and other isolated landforms that normally would be avoided by vessels on their way to or from ports. However, the proposed special closures are small areas adjacent to rocks (300 feet away from any shoreline rock) and do not interfere with transit corridors. Furthermore, emergency situations and foul weather may necessitate transit or anchoring within the special closure boundaries, which is allowed under the Proposed Project. Such actions undertaken in these situations to preserve vessel and crew safety would be allowed, under federal law.

Under the Proposed Project, the MPAs would not prohibit transit within protected areas, commercial fishing vessels would travel only slightly longer distances, and vessel densities would be increased to a limited extent at any location. In addition, regulated navigation areas would remain unchanged.

Therefore, the impact on existing marine routes, vessel traffic patterns, and navigation resulting from the Proposed Project would be less than significant.

Level of Significance: *Less than Significant*

Impact VT-3: Create a Significant Risk to the Public or the Environment from Increased Spills of Hazardous Materials (Significance Criterion C)

Establishing a network of MPAs in the Study Region would not conflict with any existing regulations established to control, prevent, or remediate hazardous material disposal or spills. This also would extend to established water quality standards and regulations for the prevention of pollution, as discussed in Section 3.4, "Water Quality." However, secondary impacts may result from the displacement of fishing vessels and activities in the vicinity of individual MPAs.

As identified above, and in Chapter 4, "Biological Resources," and Section 3.4, "Water Quality," potential direct impacts resulting from fishing displacement may include increased travel times and vessel densities, and abandonment of vessels because of economic hardship. These effects could indirectly result in greater exposure to hazardous materials caused by an increased use of petroleum and other materials for vessels transiting longer distances to unrestricted fishing areas, spills associated with collisions in crowded areas, and leaked petroleum and other hazardous materials from vessel abandonment.

Effects of potential shifts in consumptive activity and vessel abandonment are anticipated to be less than significant, as described in previous chapters. The design of the MPA network has included extensive community input concerning the placement of MPAs in relation to popular fishing areas, to avoid substantial displacement effects. Because open passage through MPA boundaries would be permitted, the likely increased distances of travel for fishing vessels would be equivalent to the alongshore span of any individual MPA (representing an additional 0.9–4.9 mi traveled). This slight increase in transit distance would not require substantial increases in use or on-boat storage of fuels, lubricants, or other hazardous materials to service vessels. Furthermore, standard regulations concerning safe vessel navigation, handling, and use of hazardous materials, and spill response requirements would continue to be enforced in the Study Region.

The minor changes in boundary and take restrictions described for the proposed options would have similar nominal effects on risks associated with accidental spills of hazardous materials in the Study Region.

Overall, the Proposed Project's potential impact on accidental hazardous material exposure would be less than significant.

Level of Significance: *Less than Significant*

Impact VT-4: Effects on Dredging and Disposal, and Ballast Discharges (Significance Criterion C)

Dredging, disposal, and ballast discharge activities associated with vessel transportation may occur at ports, docks, and other locations in or adjacent to the Study Region. Potential hazards associated with these activities would include disturbance of contaminated soils from dredging and introduction of contaminated material and water from ballast discharge and material disposal. Ballast water also may play a role in the spread of invasive species, although as described in Chapter 4, "Biological Resources," this impact would be less than significant.

The Proposed Project would not increase dredging, disposal, or ballast operations in the Study Region, although proposed MPA designations may result in changes to the overall area where these activities may be conducted. The Project would have no effect on existing disposal or dumping activities in the Study Region, as the proposed MPA network does not include known disposal areas (CDFG 2009). Additionally, to the extent that dredging or discharge activities are currently permitted within proposed MPA boundaries, they are allowed to continue in accordance with federal, state, and local agency authorizations and regulations, whose jurisdiction cannot be pre-empted through designation of MPAs by the Commission. However, under the Proposed Project, no new activities permitted by other state, federal, or local entities would be allowed in any SMR, and would only be allowed in any SMCA if a specific authorization for take associated with those activities were added by the Commission in a future action (refer to Chapter 1 for definitions of MPA designations). Therefore, under the Proposed Project, no new dredging or disposal of hazardous materials would be allowed within an MPA, and all ballast discharge operations would be prohibited in these areas[1]. Development of other types of new facilities would be prohibited, such as new desalination plants, utility cables, and stormwater or wastewater infrastructure that would propose to extend within the boundaries of an MPA (see Section 6.1, "Land Use and Utilities"). Thus, establishing a network of MPAs would limit ballast operations and the siting of future dredging and disposal locations by restricting them to areas outside of MPAs. However, the proposed MPA network would cover approximately 13% of the Study Region and would not restrict such activities in the remaining 87% of the Study Region. Establishment of new dredging or disposal locations would continue to be feasible in the Study Region, although they would still need to obtain any required federal, state, and local approvals.

The optional regulations for the South Humboldt Bay SMRMA would allow existing maintenance dredging and similar habitat restoration activities to continue occurring under

[1] Further information regarding ballast discharge operations can be reviewed in the Commission's South Coast MPA regulations file (Office of Administrative Law File ID# 2011-1101-04SR). Files are available online at: http://www.fgc.ca.gov/regulations/2010/#632sc.

current required federal, state, or local permits. Therefore, this option would provide no change in existing dredging activities.

Because of the overall area that would remain available for operations under the Proposed Project, this impact would be less than significant.

Level of Significance: *Less than Significant*

Chapter 6.6

Environmental Justice

6.6 Environmental Justice

6.6.1 Introduction

This section describes the existing social environment in the terrestrial lands adjacent to the North Coast Study Region (Study Region) and assesses the potential environmental justice-related impacts of the Proposed Project on residents of the counties nearest or adjacent to the Study Region, specifically Del Norte, Humboldt, and Mendocino. This analysis is limited to the Study Region and does not extend to counties adjacent to these three because it is presumed that only local communities would be affected, and not people traveling from areas farther away than these three counties. "Environmental justice" 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; 2) measures of social and economic well-being, including per capita income and poverty rates; and 3) access and opportunity for involvement in the process.

6.6.2 Regulatory Setting

Federal Laws, Regulations, and Policies

Executive Order (EO) 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 to be considered under CEQA.

Section 4-4 of EO 12898 recognizes that some populations rely primarily on subsistence consumption of fish and wildlife, and need to be made aware of the risks associated with that consumption. Section 4-4 states the need to provide guidelines for the consumption of pollutant-bearing fish and wildlife, so that those guidelines can be considered during the development of regulations.

The U.S. Environmental Protection Agency's (USEPA's) 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."

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

State Laws, Regulations, and Policies

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

> 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, in light of substantial public concern expressed regarding this issue in relationship to the Proposed Project, the Commission and the Department have elected to analyze environmental justice impacts in this EIR. This analysis also supports the Environmental Justice Policy of the California Natural Resources Agency (Resources Agency), described below.

California Code

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" (California Government Code, Section 65040.12(e); PRC, Section 72000).

Environmental Justice Policy of the California Natural Resources Agency

In 2003, the Resources Agency established a policy regarding environmental justice that applies to all departments, boards, commissions, conservancies, and special programs of the Resources Agency, including the Commission and the Department. The Environmental Justice Policy of the Resources Agency 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 (Resources Agency 2003).

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 these populations are not discriminated against, treated unfairly, or caused to experience disproportionately high and adverse human health or environmental effects from environmental decisions. As stated in the policy, the Resources Agency is committed to incorporating environmental justice in its processes, decisions, and programs by making reasonable efforts toward:

1. identifying relevant populations that might be adversely affected by programs or projects submitted by outside parties, as appropriate;
2. seeking out and consulting with community groups and leaders to encourage communication and collaboration prior to taking actions that may have an impact on the environment, environmental laws or policies;
3. broadly distributing public information, in multiple languages if appropriate, to encourage participation in public processes;
4. ensuring that public documents and notices relating to environmental issues that may have an impact on human health are concise, understandable, and readily accessible to the public, printed in multiple languages if appropriate;
5. holding required public meetings, hearings, and workshops at times and in locations that encourage meaningful public participation by members of affected communities;
6. working in conjunction with other federal, state, regional, and local agencies to ensure consideration of disproportionate impacts on relevant populations;
7. fostering broad access to existing and proposed data sets and technology to better identify, analyze, and respond to environmental justice issues; and
8. providing appropriate training to staff on environmental justice issues so that recognition and consideration of such issues are incorporated into daily program activities.

Both the Commission and the Department, as part of the Resources Agency, are subject to this policy and must consider environmental justice in their decision-making process for the Proposed Project.

Office of Environmental Health and Hazard Assessment (OEHHA) of the California EPA

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 (Cal/EPA). OEHHA conducts studies of contaminant levels in and consumption of fish and shellfish, and publishes guidelines and advisories regarding consumption. OEHHA 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. When necessary, OEHHA works directly with the Department to post fishing closures. OEHHA has no fish advisories, beyond the general guidelines, in place along the north coast (OEHHA 2007). Therefore, displacement of minority or low-income groups' subsistence fishing activities into areas with a potentially higher health hazard would not occur within the Study Region, and it is considered unlikely that such groups would be displaced outside of

the Study Region to a location where such hazards exist. For these reasons, this impact has not been evaluated as an environmental justice concern.

6.6.3 Environmental Setting

The following demographic overview of north coast residents will be used in this analysis of potential environmental justice-related impacts. The geographic scope of the information presented includes the counties of Del Norte, Humboldt, and Mendocino. Only the portion of Mendocino County north of Alder Creek and, where possible, information is limited to that portion of the county adjacent to the Study Region.

Population Trends and Projections

The three counties adjacent to the Study Region are sparsely populated, compared with California's other coastal counties. Also, unlike the rest of California's coast, the major cities in the north are situated further inland, such as Redding in landlocked Shasta County. Eureka, in Humboldt County, is the largest city adjacent to the Study Region, with a population of roughly 25,400 (U.S. Census Bureau 2011). Humboldt County has a total population of 134,623 (U.S. Census Bureau 2011). The northern California coast is relatively rural with many small, often isolated, communities. Other population centers near the Study Region include Arcata and McKinleyville, both in Humboldt County, Crescent City in Del Norte County, and Fort Bragg in Mendocino County. Mendocino County's major city, Ukiah, lies inland from the coast. Reservations and rancherias are also located throughout these three counties and are home to a number of federally and non-federally recognized tribes and tribal communities that maintain strong cultural connections to the marine environment.

Population-growth projection trends in these coastal counties (based on a demographic model that incorporates fertility, migration, and survival rates) indicate that Del Norte County, which has the lowest population, is expected to have the highest change in population growth over the next 40 years (see **Table 6.6-1**). Mendocino County is expected to increase by over 50%, while Humboldt County's population is expected to increase by 13%.

Table 6.6-1. Population, Population Change, and Density in the North Coast Study Region

Coastal County	Total Population (2010)	Projected Population (2050)	% Projected Population Change (2010–2050)	Population Density in 2010 (people/mi^2)
Del Norte	28,610	56,218	96.5%	29
Humboldt	134,623	152,333	13.2%	38
Mendocino	87,841	134,358	53.0%	25

Note: mi^2 = square statute miles
Source: US Census Bureau 2011

Ethnicity

In addition to population growth, ethnicity is an important consideration for evaluating potential environmental justice-related effects. It is particularly important to consider for projects in marine areas, which may disproportionately affect certain ethnicities that rely heavily on a marine life diet or ocean-dependent income. As shown in **Table 6.6-2**, while the counties adjacent to the Study Region are primarily non-Hispanic white populations, there is some important cultural diversity.

Table 6.6-2. Population Percentages by Race or Ethnicity in the North Coast Study Region

County	White (Non-Hispanic/ Latino)	Black/ African American	Native American/ Alaska Native*	Asian	Native Hawaiian/ Pacific Islander	Hispanic/ Latino	Multi-Race
Del Norte	64.70%	3.50%	7.80%	3.40%	0.10%	17.80%	4.50%
Humboldt	77.20%	1.10%	5.70%	2.20%	0.30%	9.80%	5.30%
Mendocino	68.60%	0.70%	4.90%	1.70%	0.10%	22.20%	4.50%

Note:

* These percentages include all tribes near the North Coast Study Region, federally and non-federally recognized.

Source: US Census Bureau 2011

Native American Tribes and Tribal Communities

The Native American population near the Study Region is comprised of more than 20 federally recognized tribes and other non-federally recognized tribal communities and Indian people. Chapter 5, "Cultural Resources," lists all the federally recognized tribes near the Study Region that submitted factual records of past and current tribal take of marine resources to the Commission. The Study Region is unique in that many tribal representatives continue to live in their ancestral homelands and practice age-old cultural traditions. Their identities as Indigenous Peoples continue to be intimately linked to the ocean, beaches, rivers, estuaries, bays, lagoons, and their associated plants and animals, rocks, landforms, and climatic and seasonal patterns (MLPAI 2010a). (See also Chapter 5 for further details on tribes near the Study Region.)

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 6.6-3** presents these data for each county nearest or adjacent to the Study Region, the major coastal city within each county, and the state of California. In 2009, per capita income in the counties ranged from $19,016 to $24,101, well below the state average of $29,020 (US Census 2011). The average median household income for these counties is also significantly lower than the state average.

Table 6.6-3. Income and Poverty Rates by County, Major Cities, and State

County, City, or State	Total Population (2010)	Per Capita Income (2009 dollars)	Median Household Income (2009 dollars)	Poverty Rate (%)
Del Norte	28,610	19,016	38,252	23.1
Crescent City	7,643	9,383	26,167	31.1
Humboldt	134,623	23,496	35,985	19.0
City of Eureka	27,191	22,569	32,673	21.9
Mendocino	87,841	24,101	41,488	17.5
City of Fort Bragg	7,273	17,513	32,564	25.5
State of California	37,253,956	29,020	58,925	14.2

Source: US Census 2011

All three counties have high poverty rates. 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 2010 census data, the poverty rate in the counties adjacent to the Study Region ranged from 17.5% to 23.1%, and averaged approximately 19.9% as compared with the median state poverty rate of 14.2%.

Subsistence Fishing

The general concept of a "subsistence fisher" groups ethnically diverse peoples with different fishing access, preferences, and use of different water bodies (and commonly excludes Caucasian, middle-income, and upper-income consumers). Cal/EPA considers subsistence fishers to be people who rely on noncommercial fish as a major source of protein. Subsistence fishers tend to consume noncommercial fish and/or shellfish at higher rates than other fishing populations, and for a greater percentage of the year, owing to cultural and/or economic factors. Quantifying the number of individuals or groups of subsistence fishers in an area is problematic. This is because quantitative measures of subsistence fisher groups, such as income level, frequency of fishing, or amount of fish consumption, is difficult to attain; anglers, tribes, and tribal communities are not always willing to share this information (Cal/EPA 2001). Although subsistence fishing may not be properly characterized as "recreational" because of its purpose, the activity nevertheless occurs under the auspices of a sport fishing license.

Fishermen employ different methods of access to fish, or fishing modes, and target a variety of marine resources. According to data collected by the Department's California Recreational Fisheries Surveys conducted between 2005 and 2008, 76 finfish species, including Chinook salmon, smelt, surf perch, and greenling, were harvested within state waters by recreational fishermen in the Study Region (MLPAI 2010a). Also important to subsistence fishers in the Study Region are the harvest of invertebrates, such as red abalone, Dungeness crab, rock scallops, various species of clams, and, in some years, Humboldt squid. Subsistence fishers primarily fish from the beaches and banks, and from human-made structures, such as piers, jetties, breakwaters, docks, and other fishable

structures. Fishermen are not required to have a fishing license when fishing from a public structure. Fishing licenses are required for all other fishing modes, such as from a boat or a private structure. These free or low-cost fishing modes are likely preferred by low-income or other disadvantaged groups near the Study Region.

Native American Tribes and Tribal Communities

North coast tribes and tribal communities gather and harvest a variety of species throughout the Study Region. Tribes and tribal communities use a variety of traditional and modern methods of take[1], not only for traditional subsistence, but also for medicinal, spiritual, and ceremonial purposes. During the MLPA Initiative planning process, the MLPA Initiative and the Department conducted extensive outreach to tribes and tribal communities near the Study Region to solicit information in an effort to attain an understanding of the tribal take activities—including subsistence fishing, and current and historic target species, modes of harvesting, and locations—conducted by the tribes and tribal communities. Chapters 2 and 5 describe the outreach activities conducted, as well as the Commission's request, subsequent to the MLPA Initiative planning process, to federally recognized tribes to submit "Factual Records" of historic and current tribal take in specific geographies other than SMRs, within the Study Region. The Commission received six Factual Records representing 24 federally recognized north coast tribes and tribal communities near the Study Region. The Factual Records included descriptions of historical and ongoing ceremonial, religious, and subsistence gathering and harvesting practices and are part of the official record for the Proposed Project.

As described in Appendix B, "Consumptive Uses and Associated Socioeconomic Considerations in the Region," tribal take was included in the recreational statistics evaluated in the analysis. However, the potential for misunderstanding exists here. Although tribes and tribal communities may practice certain methods of take and/or seek certain species that are similar or identical to those practiced and/or sought in the recreational activities of the general population, and though they are required to possess a sport fishing license as required in the Fish and Game Code, it is recognized that tribes and tribal communities do not consider their use of marine resources as recreational. For tribes and tribal communities, these activities serve purposes of cultural fulfillment and traditional subsistence. Moreover, each tribe and tribal community adheres to their own unique cultural and traditional practices.

[1] Some tribes and tribal communities have raised concern about the term 'Tribal take' used in the proposed regulations. Based on information received by tribal members, to completely encompass the full range of traditional cultural extractive activities of California Indian Tribes in this area, it is necessary to understand that, to members of the north coast tribes and tribal communities, the term "tribal take" includes gathering, harvesting and fishing for cultural and religious purposes as well as for subsistence. Pursuant to tribal culture, all three terms must be used because each conveys specific and unique kinds of activities that cannot be adequately encompassed by a single term. Under state statute, the term "take" is clear and, combined with the allowed uses defined in the MPA specific regulations, unambiguous. In Fish and Game Code Section 86, "Take" means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill. The California Code of Regulations Title 14 Section 1.80 defines "Take" as hunt, pursue, catch, capture or kill fish, amphibians, reptiles, mollusks, crustaceans or invertebrates or attempting to do so.

Opportunity for Involvement in the MLPA Planning Process

The development and planning process for the Proposed Project encouraged public involvement throughout the entire process, especially involvement by tribes, tribal communities, and isolated communities. The MLPA Initiative made every effort to include as many members of the community as possible for each of the open houses and planning and support workshops held throughout the development process. Additionally, community participants were provided training to access MarineMap (an online map database). To accommodate varying work schedules, workshops and trainings were held during different times of the day and MLPA Initiative staff held office hours via telephone several times during the planning process.

Table 6.6-4 lists the dates of all meetings that were held under each round of development. Owing to the nature of the roads in the north coast, travel time between these cities can be significant. Therefore, during the planning process, remote meeting locations were held to allow the public to attend and participate in meetings without having to travel too far. Meetings were generally held in Fort Bragg, Eureka, and Crescent City. However, for participants who could not attend, the public was able to participate in and watch meetings via webcast on the Internet. The following two sections highlight efforts to specifically involve the isolated communities of Petrolia and Shelter Cover, as well as tribes and tribal communities, in the planning process.

Table 6.6-4. Public Meetings, Workshops, Tribal Outreach Meetings, and Trainings Sponsored During the MLPA Planning Process

Meeting	Major Topic	Meeting Dates	Location
Outreach to Tribes and Tribal Communities:			
Meeting with Yurok Tribal Representatives	MLPA Process Information	7/22/2009	Klamath
Tribal Informational Session	Introduction to MLPA planning process	8/27/2009	Eureka
Tribal Coalition Meeting	MLPA Process Information	10/29/2009	Eureka
SAT Tribal Work Group	MPAs and tribal take, tribal science	1/20/2010	Eureka
Meeting with Yurok and Resighini Tribes	MLPA Process and State Authority	2/22-23/2010	Klamath
SAT Tribal Work Group	MPAs and tribal take, tribal science	3/16/2010	Eureka
Tribal Meeting	MLPA Process	4/9/2010	Sacramento
SAT Tribal Work Group	MPAs and tribal take, tribal science	6/29/2010	Eureka
SAT Tribal Work Group	MPAs and tribal take, tribal science	10/13/2010	Eureka
Strategic Partnership Coalition	MLPA Process and State Authority	10/20/2010	Blue Lake
Tribal Meeting	Tribal ID card requirements discussion for the regulation	11/9/2011	Klamath
Meeting with Inter Tribal Sinkyone Wilderness Council	Tribal ID card requirements discussion for the regulation	11/10/2011	Teleconference
MLPA Planning Process Public Meetings			
Public Workshop	Ecotrust Workshop	6/22/2009	Eureka
Public Workshop	Ecotrust Workshop	6/23/2009	Fort Bragg
Public Workshop	Ecotrust Workshop	7/2/2009	Crescent City
Public Open House	Introduction to MLPA planning process	7/20/2009	Eureka

Table 6.6-4. Public Meetings, Workshops, Tribal Outreach Meetings, and Trainings Sponsored During the MLPA Planning Process

Meeting	Major Topic	Meeting Dates	Location
Public Open House	Introduction to MLPA planning process	7/21/2009	Fort Bragg
Public Open House	Introduction to MLPA planning process	7/22/2009	Crescent City
Data Outreach Meeting	Introduction to MLPA data collection process	7/23/2009	Eureka
MPA Planning Workshop	Assist community with MPA proposals	9/29/2009	Eureka
North Coast Public Workshop II	Assist community with MPA proposals	10/27/2009	Fort Bragg
North Coast Public Workshop II	Assist community with MPA proposals	10/28/2009	Eureka
North Coast Public Workshop II	Assist community with MPA proposals	10/29/2009	Crescent City
SAT	Develop science guidance	10/30/2009	Eureka
Public Workshop	MarineMap Training and Instruction	11/3-5/2009	Teleconference/ Webinar
North Coast Public Workshop III	Assist community with MPA proposals	11/17/2009	Eureka
BRTF	Field trip	11/18/2009	Eureka
BRTF	Initial BRTF meeting on the north coast	11/18-19/2009	Eureka
SAT	Develop science guidance	12/16-17/2009	Eureka
Public Workshop	External MPA Array support workshop	1/11/2010	Fort Bragg
Public Workshop	External MPA Array support workshop	1/12/2010	Eureka
Public Workshop	External MPA Array support workshop	1/13/2010	Crescent City
BRTF	Field trip	1/13/2010	Crescent City
BRTF	Provide guidance to the SAT/NCRSG on planning process	1/13-14/2010	Crescent City
SAT	Review and discussion of evaluation methods for North Coast planning process	1/20-21/2010	Eureka
SIG Meeting	NCSR status update	1/26/2010	Teleconference
NCRSG	Field trip	2/8/2010	Eureka
NCRSG	Begin discussion and guidance for MPA proposal development	2/8-9/2010	Eureka
SAT	Review and adopt evaluation methods and responses to science questions	2/11/2010	Teleconference/ Webinar
NCRSG	Develop the NCRSG recommendations to the BRTF regarding tribal uses	2/25/2010	Teleconference
BRTF	Receive policy direction from previous study regions	3/1-2/2010	Fort Bragg
BRTF	Field trip	3/2/2010	Fort Bragg to Mendocino area
Public Workshop	MarineMap Training Session	3/10 & 15/2010	Teleconference/ Webinar
SAT	Review and adopt SAT evaluations of the north coast existing MPAs and external MPA arrays	3/16-18/2010	Eureka
BRTF	Policy direction for the north coast related to tribal and tribal community uses of marine resources	3/18/2010	Teleconference/ Webinar
Public Workshop	Introduction to the Marine Life Protection Act	3/22/2010	Petrolia
NCRSG	Begin discussion and guidance for MPA proposal development	3/24-25/2010	Crescent City

Table 6.6-4. Public Meetings, Workshops, Tribal Outreach Meetings, and Trainings Sponsored During the MLPA Planning Process

Meeting	Major Topic	Meeting Dates	Location
Public Open House	Potluck meeting to introduce public to the NCRSG	4/19/2010	Caspar
NCRSG	RSG Work Session	4/20-21/2010	Fort Bragg
BRTF	Additional policy direction for the north coast regarding tribal uses of marine resources	5/3-4/2010	Crescent City
Public Open House	Introduction to MLPA Planning Process	5/5/2010	Briceland
SAT	Review and adopt Science Guidance for Designing MPAs to Inform Adaptive Management	5/12/2010	Teleconference/ Webinar
BRTF	Discuss the Decision-making Context for Tribal Uses of Marine Resources in State Waters	5/17/2010	Teleconference/ Webinar
NCRSG	RSG Work Session	5/19/2010	Crescent City
NCRSG	Presentations of Round 2 draft proposals	5/20/2010	Crescent City
SIG Meeting	NCSR status update	6/25/2010	Teleconference
SAT	SAT evaluations of the North Coast Regional Stakeholder Group (NCRSG) Round 2 MPA proposals	6/29-30/2010	Eureka
Summer Public Open House	Solicit Feedback on Round 2 MPA Proposals	7/6/2010	Fort Bragg
Summer Public Open House	Solicit Feedback on Round 2 MPA Proposals	7/7/2010	Briceland
Summer Public Open House	Solicit Feedback on Round 2 MPA Proposals	7/7/2010	Eureka
Summer Public Open House	Solicit Feedback on Round 2 MPA Proposals	7/8/2010	Orick
Summer Public Open House	Solicit Feedback on Round 2 MPA Proposals	7/8/2010	Eureka
BRTF	Discussion and guidance for MPA proposals in development	7/21-22/2010	Fort Bragg
SAT	SAT evaluation results for habitat representation, habitat replication, marine protected area (MPA) size and MPA spacing	7/28/2010	Teleconference/ Webinar
NCRSG	Discussion and guidance for MPA proposal development	7/29-30/2010	Fort Bragg
SIG Meeting	NCSR status update	8/10/2010	Teleconference
MLPA Initiative	Marine Life Protection Act Information Session	8/29/2010	Shelter Cove
NCRSG	Complete Round 3 NCRSG MPA Proposal; confirm boundaries, designation types, and regulations	8/30-31/10	Fortuna
SIG Meeting	NCSR status update	10/11/2010	Teleconference
SAT	Review and Potentially adopt the SAT evaluation of the Round 3 NCRSG MPA Proposal	10/13-14/2010	Eureka
BRTF	Receive the Round 3 NCRSG MPA proposal and evaluations; Discuss and develop NCSR recommendations for MPAs and special closures	10/25-26/2010	Fortuna
SAT	Receive overview of motion adopted by the BRTF	11/17/2010	Teleconference/ Webinar
BRTF	Provide guidance to the SAT/NCRSG on planning process	11/15-19/2010	Eureka

Table 6.6-4. Public Meetings, Workshops, Tribal Outreach Meetings, and Trainings Sponsored During the MLPA Planning Process

Meeting	Major Topic	Meeting Dates	Location
MLPA Initiative	Office Hours for the Public	11/30/2010	Teleconference
MLPA Initiative	Office Hours for the Public	12/2/2010	Teleconference
BRTF	Review recommendations and adopt additional recommendations for the NCSR	12/9/2010	Teleconference/ Webinar
SAT	Review and adopt the SAT evaluation of MPA proposals forwarded by the BRTF	1/13/2011	Teleconference/ Webinar
Joint BRTF and Commission	The BRTF presents MPA recommendations to the Commission	2/2/2011	Sacramento

Notes: BRTF = Blue Ribbon Task Force, Commission = California Fish and Game Commission, MLPA = Marine Life Protection Act, MPA = marine protected area, NCRSG = North Coast Regional Stakeholder Group, NCSR = North Coast Study Region, RSG = Regional Stakeholder Group, SAT = Science Advisory Team, SIG = Statewide Interests Group

Source: Data compiled by Horizon Water and Environment in 2011

Petrolia and Shelter Cove Communities

The communities of Petrolia and Shelter Cove are located along the portion of coast known as the Lost Coast. As the name suggests, these communities, among others, are isolated and hard to reach. The remote nature of these communities increases the travel time and cost for community members to travel to meetings and remain informed and involved in planning processes. Many residents of these communities reported themselves to be subsistence fishers, relying on marine resources for both food and livelihoods. There may be other communities with residents who would describe themselves as subsistence fishers, as well.

Early in the development phases of marine protected area (MPA) arrays, members of the Petrolia and Shelter Cove communities expressed concern about proposed state marine reserves (SMRs), particularly with regard to the potential restrictions on their subsistence practices that would be affected. In response to community concerns, the Department and MLPA Initiative staff traveled to Petrolia in March 2010 to meet with community members and seek their fuller involvement in the process. During the next round of MPA planning, in August 2010, the Department and MLPA Initiative staff also traveled to Shelter Cove to receive community input on the planning process.

The Petrolia and Shelter Cove communities organized and developed alternative MPAs that met the MLPA guidelines while avoiding areas where they harvest living marine resources. Residents from Petrolia and Shelter Cove presented these alternative MPAs to the North Coast Regional Stakeholder Group (NCRSG), and remained actively involved throughout the entire proposal development. The MPAs developed by the Petrolia and Shelter Cove communities closely resemble the MPAs included in the Proposed Project. It should be noted, however, that these communities have expressed concern that boundary changes of any distance developed after the MLPA Initiative planning process may affect their harvest areas. Specifically, the boundary option provided for Sea Lion Gulch SMR (Boundary Option 2) may enclose some of the area identified as a harvest area for the Petrolia community, which the NCRSG-proposed boundaries (Boundary Option 1) were designed to avoid, though the amount of the harvest area covered is unknown.

Native American Tribes and Tribal Communities

In recognition of the subsistence fishing and cultural practices conducted by tribes and tribal communities, MLPA Initiative staff began outreach efforts early in the planning process (starting in August 2009). As a result, the MPA development process for the Study Region had more outreach to and involvement by tribes and tribal communities than any of the previous MLPA study regions.

Throughout the MLPA Initiative planning process, tribal representatives were actively involved and participated with community groups to develop MPA arrays and served on several MLPA Initiative groups. Seven tribal representatives, representing some of the federally and non-federally recognized tribes and tribal communities near the Study Region, served on the NCRSG and some also served on the Blue Ribbon Task Force (BRTF), Statewide Interests Group, and the NCRSG special closures workgroup. In previous study regions, no more than two tribal representatives ever served on MPA development groups. The Elk Valley Rancheria generously hosted several meetings of the BRTF and the NCRSG. The BRTF and MLPA Initiative staff visited many areas throughout the Study Region, including stops to visit tribes and tribal communities. Additionally, the SAT created a special working group to address tribal issues related to science guidelines, which met regularly in Eureka.

Many tribal representatives attended MLPA Initiative meetings and participated in public comment periods. At the meeting at Elk Valley Rancheria on January 13th and 14th, 2010, a panel made up of tribal representatives provided the BRTF with several hours of public testimony. Tribes and tribal communities were invited to provide information for the *Regional Profile of the North Coast Study Region: California-Oregon Border to Alder Creek.* (Regional Profile) (MLPAI 2010a). Eleven tribes and tribal communities provided information that was compiled verbatim in Appendix E to the Regional Profile (MLPAI 2010b). Despite the large number of representatives from tribes and tribal communities who participated in MPA working groups, not all tribes were represented during the MLPA Initiative process. It is noted that tribes and tribal communities prefer to speak only for their own tribal group, and will not speak on behalf of another tribal group without express permission.

After the Commission selected a preferred alternative for the MPA arrays, tribes and tribal communities continued to work together with the Commission to establish a mutually acceptable approach for tribal take. With tribal input, the Commission arrived at "Tribal Gathering Option 1," included in the Proposed Project. Tribal Gathering Option 1 applies to federally recognized tribes that have submitted a "Factual Record" with sufficient documentation confirming current or historical use in specified geographies to the Commission. Beyond implementation, the Commission shall continue to "permit elected officials and other representatives of tribal governments to provide meaningful input into the development of legislation, regulations, rules, and policies on matters that may affect tribal communities" (EO B-10-11).

6.6.4 Impact Analysis

Methodology

To determine whether the Proposed Project could result in disproportionately adverse effects on disadvantaged populations, demographic information was gathered on Del Norte, Humboldt, and Mendocino Counties, including population, ethnicity, and economic factors, and information on noncommercial fishing activities, such as subsistence fishing conducted by tribes and tribal communities. These data were evaluated in light of the restrictions proposed under the Proposed Project, to evaluate whether the Proposed Project would have the potential to result in disproportionately adverse impacts on minority populations[2] and/or low-income populations[3], thus potentially creating an environmental justice-related impact.

Note that this analysis addresses noncommercial subsistence fishing. Effects on commercial harvesting (e.g., commercial seaweed harvesting) activities are not related to the issue of environmental justice and therefore are not discussed in this section. Appendix B, "Consumptive Uses and Associated Socioeconomic Considerations in the Region," discusses commercial fishing and harvesting activities in the Study Region.

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.

To assess compliance of the Proposed Project with the Resources Agency's Environmental Justice Policy, a general analysis for environmental justice was performed based on whether implementation of the Proposed Project would have a disproportionate effect[4] that would substantially and adversely affect minority or low-income populations.

Environmental Effects

Impact EJ-1: Reduced Subsistence Take Opportunities for Tribes and Tribal Communities

Tribes and tribal communities are considered a minority group within the population adjacent to the Study Region. The focus of this discussion is on subsistence take practices conducted by these tribes and tribal communities. Potential impacts on tribal cultural practices are discussed in Chapter 5, "Cultural Resources." The Proposed Project has identified different requirements based on whether a tribe is federally or non-federally

[2] Minority populations are defined as individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic (BLM 2002).

[3] The U.S. Census Bureau defines a low-income population in an affected area as one with an annual household income of 80% or less of the median household income of the general population (BLM2002).

[4] A disproportionate effect is defined as an effect that is predominantly borne, more severe, or of a greater magnitude in areas with environmental justice populations than in other areas.

recognized. The discussion below discusses potential impacts on these groups of tribes separately.

Table 6.6-5 shows the proposed MPAs and regulations where opportunities for subsistence take (i.e., where beaches and public access sites are present) would be affected. As previously mentioned, the proposed MPAs would not encompass piers, docks, or other human-made structures commonly used for subsistence fishing. Recreational take includes subsistence fishing, gathering, and harvesting activities and thus apply to all recreational and subsistence fishers (exceptions for specific federally recognized tribes apply; see description below). Subsistence fishers are presumed to not utilize motorized transportation to catch food for consumption because of the high cost of owning and maintaining these vehicles. Therefore, the focus of this impact discussion relates to shore-based take activities and thus proposed MPAs that are offshore (Point St. George Reef Offshore State Marine Conservation Area [SMCA], Reading Rock SMR, and the Mattole Canyon SMR) are not considered in this discussion. Existing shore-based take restrictions are also shown in the Table 6.6-5. In addition, subsistence fishing activities from human-made structures would not be affected by the Proposed Project, as none of the proposed MPAs encompass piers, docks, jetties or other human-made structures used for subsistence fishing.

Table 6.6-5. Proposed Marine Protected Areas and Shore Fishing Restrictions

Proposed MPAs with Opportunities for Subsistence Fishing	Existing Shore Fishing Restrictions	Proposed Restrictions and Recreational Take Exceptions
Pyramid Point SMCA	Existing recreational salmon fishing closure	Take of surf smelt allowed; all other take prohibited*
Pyramid Point SMCA Option		*Boundary expansion to the south. Same take restrictions.**
Reading Rock SMCA (onshore)		Take of salmon, surf smelt, Dungeness crab allowed; all other take prohibited*
Reading Rock Onshore SMCA Option		*Modified list of approved take methods. Same species take restrictions. **
Reading Rock SMR (offshore)		Would not apply to shore fishing activities. No take allowed.
Reading Rock Offshore SMCA Option		*Would not apply to shore fishing activities.* *Take exemption for federally recognized tribes only. ** *No take allowed for anyone else.*
Samoa SMCA		Take of salmon, surf smelt, Dungeness crab allowed; all other take prohibited*
South Humboldt Bay SMRMA		Take of waterfowl allowed; all other take prohibited*
South Humboldt Bay SMRMA Option		*Boundary expansion. Same take restrictions. **
South Cape Mendocino SMR		No take allowed
Sea Lion Gulch SMR		No take allowed
Sea Lion Gulch SMR Option		*Boundary adjustment. Same take restrictions.*
Big Flat SMCA		Take of salmon and Dungeness crab allowed; all other take prohibited*
Double Cone Rock SMCA		Take of salmon and Dungeness crab allowed; all other take prohibited*
Double Cone Rock SMCA Option		*Take of salmon, Dungeness crab, cabezon, rockfish, surfperch, surf smelt, and abalone allowed; all other*

Table 6.6-5. Proposed Marine Protected Areas and Shore Fishing Restrictions

Proposed MPAs with Opportunities for Subsistence Fishing	Existing Shore Fishing Restrictions	Proposed Restrictions and Recreational Take Exceptions
		*take prohibited**
Ten Mile SMR		No take allowed
Ten Mile Beach SMCA		Take of Dungeness crab allowed; all other take prohibited*
Ten Mile Beach SMCA Option		*Boundary expansion. Same take restrictions. **
Ten Mile Estuary SMCA		Take of waterfowl allowed; all other take prohibited*
MacKerricher SMCA	Recreational take of only red abalone, chiones, clams, cockles, rock scallops, native oysters, crabs, lobster, ghost shrimp, sea urchins, mussels, marine worms, and finfish; and the commercial take of only algae (except giant kelp and bull kelp), crabs, ghost shrimp, jackknife clams, sea urchins, squid, worms, and finfish Take of all other species is prohibited.	All take allowed, except for bull kelp and giant kelp
Point Cabrillo SMR	All recreational take prohibited	No take allowed
Russian Gulch SMCA	Recreational take of only red abalone, chiones, clams, cockles, rock scallops, native oysters, crabs, lobster, ghost shrimp, sea urchins, mussels, marine worms, and finfish; and the commercial take of only algae (except giant kelp and bull kelp), crabs, ghost shrimp, jackknife clams, sea urchins, worms and finfish	All take allowed, except for bull kelp and giant kelp
Big River Estuary SMCA		Take of Dungeness crab allowed; all other take prohibited*
Big River Estuary SMCA Option		*Take of surfperch and Dungeness crab allowed; all other take prohibited*
Van Damme SMCA	Recreational take of only red abalone, chiones, clams, cockles, rock scallops, native oysters, crabs, lobster, ghost shrimp, sea urchins, mussels, marine worms, and finfish; and the commercial take of only algae (except giant kelp and bull kelp), crabs, ghost shrimp, jackknife clams, sea urchins, worms and finfish	All take allowed, except for bull kelp and giant kelp
Navarro River SMCA		Take of waterfowl allowed; all other take prohibited*
Navarro River SMCA Option		*Take of salmon and waterfowl allowed; all other take prohibited**

Table 6.6-5. Proposed Marine Protected Areas and Shore Fishing Restrictions

Proposed MPAs with Opportunities for Subsistence Fishing	Existing Shore Fishing Restrictions	Proposed Restrictions and Recreational Take Exceptions

Notes: MPA = marine protected area, SMCA = state marine conservation area, SMR = state marine reserve, SMRMA = state marine recreational management area

* Specific federally recognized tribes are proposed to be exempt from proposed take regulations at this SMCA or SMRMA. See Table 2-1, in Chapter 2 of this document, for specified tribes and details.

Source: MLPAI 2011 (MarineMap Data)

Federally Recognized Tribes

As stated in Chapter 2, "Project Description," specific federally recognized tribes are proposed to be exempt from MPA take restrictions in specific areas designated as SMCAs and the South Humboldt Bay State Marine Recreational Management Area (SMRMA). Federally recognized tribes would not be exempted from the proposed special closures (Southwest Seal, Castle, False Klamath, Steamboat, Rockport Rocks, Vizcaino Rocks, and Sugarloaf Island), which apply to all people. In other words, subsistence take practices of federally recognized tribes would have the potential to be adversely affected by a subset of the Proposed Project, specifically SMRs and special closures.

The proposed SMRs include Reading Rock, South Cape Mendocino, Mattole Canyon, Sea Lion Gulch, Ten Mile, and Point Cabrillo. The total area where tribal take would be prohibited would be approximately 52 square statute miles (mi^2) or 5% of the total Study Region, noninclusive of the special closures.

Proposed special closures would also prohibit tribal take. Southwest Seal Rock, Castle Rock, and Sugarloaf Island would be closed to all take year-round. Seasonal closures from March 1 to August 31 are proposed for False Klamath Rock, Steamboat Rock, Rockport Rocks, and Vizcaino Rock. The special closures encompass 300 square feet around each rock.

As described in the "opportunity for public involvement" discussion above, members of tribes and tribal communities were heavily involved throughout the MLPA planning process for the Proposed Project. The MPA locations and restrictions included in the Proposed Project were identified with direct input from the majority of the tribes and tribal communities near the Study Region. The purpose of this collaborative effort was to avoid areas important for spiritual, cultural, or religious tribal activities, so that access and noncommercial take of marine resources for subsistence and cultural practices would not be affected. Additionally, members of federally recognized tribes participated in the special closures workgroup during the MLPA planning process.

Exclusion of 5% of the total Study Region and year-round closures around three offshore rocks constitutes a small area, compared with the remaining area that would be available for subsistence take practices of federally recognized tribes. Moreover, the restrictions on the federally recognized tribes would be less than those that would apply to all other groups. Therefore, the Proposed Project would not create a disproportionately adverse impact on subsistence take practices of federally recognized tribes. This impact would be less than significant.

Non-Federally Recognized Tribal Communities

Non-federally recognized tribes, tribal communities, or Indian peoples not affiliated with a federally recognized tribe would not be exempted from the proposed SMCA and SMRMA regulations, and thus could be adversely affected by these restrictions under the Proposed Project. This subgroup of Indian peoples comprises less than 1% of the total tribal community in proximity to the Study Region.

Non-federally recognized tribal community members, including spouses and relatives of federally and non-federally recognized tribes, would be required to adhere to take regulations within MPAs of the Proposed Project. The same Proposed Regulations would apply to any subsistence fisher in the Study Region, regardless of ethnicity. Indian peoples of non-federally recognized tribes would be disproportionately affected compared with members of the specific federally recognized tribes exempted by the Commission. However, given that the tribal community (federally and non-federally recognized) constitutes a small percentage of the total population near the Study Region, this does not represent a disproportionate impact on non-federally recognized tribes or tribal communities compared with the population near the Study Region as a whole.

Although it is recognized that one tribe or tribal community does not speak on the behalf of another tribe or tribal community, the current and historic cultural and subsistence practices of the tribes and tribal communities adjacent to the Study Region were submitted by various tribes and tribal communities to the MLPA Initiative. Their submissions were provided represented and incorporated into Appendix E of the Regional Profile (MLPAI 2010b), and into the Proposed Project to the greatest extent feasible. Further discussion on Commission and Department outreach to the federally and non-federally recognized tribal community is provided in Chapter 5, "Cultural Resources."

The Proposed Project was designed with significant input from tribes and tribal communities specifically to avoid areas important for spiritual, cultural, or religious tribal activities. Though not all of the non-federally recognized tribal community participated in the development process, equal outreach to and opportunities for participation by all Indian peoples near the Study Region was conducted throughout the development process.

The Proposed Project would not significantly or disproportionately affect the non-federally recognized tribal community. This smaller tribal community was involved in the MLPA development process and targeted outreach was conducted specifically to incorporate their input. In addition, the same restrictions would apply to the vast majority (over 99%) of the population in proximity to the Study Region. There would be ample locations near the proposed MPA areas that would allow take activities to occur. Additionally, as discussed further in Impact EJ-2, many of the proposed MPAs would allow recreational take of popularly consumed species, such as salmon and Dungeness crab. Therefore, the Proposed Project would not create a disproportionately adverse impact on subsistence take practices of non-federally recognized tribe or tribal communities. This impact would be less than significant.

Proposed MPA Options

The Proposed MPA Options are listed above in Table 6.6-5. Each is briefly discussed below.

The proposed Pyramid Point SMCA Option would move the southern boundary of the MPA to the northern tip of Prince Island, in an area adjacent to Smith River Rancheria land. The Smith River Rancheria owns Prince Island. The Optional MPA boundary would not encompass or interfere directly with this tribally owned island. Because this Optional MPA is proposed as an SMCA, and not an SMR, tribal take activities would be allowed for federally recognized tribes, including the Smith River Rancheria. Therefore, there would be no impact on practices or subsistence take activities conducted by federally recognized tribes at Prince Island or by the five tribes that are authorized to take within the Pyramid Point MPA. However, the southern boundary adjustment in this Option would slightly expand the no-take area for the non-federally recognized tribal community and other subsistence fishers. Under this Option, recreational take of surf smelt would be allowed, but take of all other marine resources would be prohibited. The proposed Pyramid Point SMCA would cover less than 3 statute miles (mi) of shoreline and the proposed Option would slightly expand this area by approximately 0.5 mi of shoreline. This would therefore affect a small portion of subsistence fishers in the Study Region. This Option would not significantly or disproportionately affect environmental justice populations residing near the Study Region.

The proposed Option for the offshore Reading Rock MPA would change take restrictions from the SMR level to an SMCA. This Option would allow an exemption for tribal take activities for specific federally recognized tribes, such as the Yurok Tribe. As detailed in Table 2-1 (in Chapter 2, "Project Description"), unlike other SMCAs, this Option would prohibit all take of marine resources except by members of the exempted federally recognized tribes. Non-federally recognized tribes and tribal communities and all other commercial or recreational fishermen would be prohibited from taking marine resources within this area. The boundary for this offshore MPA would not change under this Option. The offshore Reading Rock SMR covers 9.57 mi^2. This Option would result in the continuation of subsistence take opportunities for specific federally recognized tribes, but overall would affect a small area and a small portion of subsistence fishers in the Study Region. This Option would not significantly or disproportionately affect environmental justice populations near the Study Region.

The proposed boundary expansion Option for the South Humboldt Bay SMRMA would not affect subsistence fishing opportunities for specific federally recognized tribes. The expanded SMRMA would exclude subsistence fishing opportunities for the non-federally recognized tribal community and other subsistence fishers. However, this area has limited access for shore fishing and is primarily accessible by boat. The majority of the south Humboldt Bay and other areas of Humboldt Bay would remain available for subsistence fishing activities. This Option would not significantly or disproportionately affect environmental justice populations near the Study Region.

The proposed boundary Option for the Sea Lion Gulch SMR would create a slightly larger overall area of restricted recreational take as the whole SMR would slide to the north: the northern boundary would be moved approximately 1 mile northward, and the southern boundary would be moved approximately 0.5 mile northward, for a net increase in 0.5 mile of coastline and 1.5 square miles of ocean area. The same restrictions and impacts on subsistence fishers would apply. It would reduce the area enclosed in the southern 0.5 mile of coastline (and 1.5 square miles of ocean area), while enlarging the area enclosed in the northern mile of coastline (and 3 square miles of ocean area). This proposed SMCA is in the

Lost Coast, which is remote and less populated, with limited public access points, although the area may be accessed by residents of small communities (e.g., Petrolia). The northern boundary extension in this Option would overlap with shore fishing areas identified by the Petrolia community, although the proportion of their total fishing area which would be affected is unclear.

The Optional regulations for the Double Cone Rock SMCA would include an expanded list of approved species for recreational and subsistence take. These include cabezon, rockfish, surfperch, surf smelt, and abalone, by using specified methods of take. This Option would provide additional subsistence take opportunities for the non-federally recognized tribal community and other subsistence fishers; there would be no change for federally recognized tribes.

The Optional Ten Mile Beach SMCA would expand the southern boundary southward to include the entire beach at the mouth of the Ten Mile River. This expansion would be more restrictive for fishing conducted by shore-based subsistence fishers, and the non-federally recognized tribal community, and by boat-based fishers who travel to this area primarily from Shelter Cove. There would be no change for federally recognized tribes.

The proposed Optional Big River Estuary SMCA would add surfperch to the list of approved species that can be recreationally fished from shore. Subsistence fishers would have improved opportunities for take under this Option.

The Navarro River SMCA Option would add salmon to the approved list of species that can be recreationally fished. Subsistence fishers would have improved opportunities for take under this Option.

The proposed MPA Options would alter subsistence take opportunities (some would be less restrictive, others more restrictive) for local subsistence fishers who utilize those areas. However, overall, there would not be significant or disproportionate impacts on the subsistence fishing or tribal community as a result of these Options.

Level of Significance: *Less than Significant*

Impact EJ-2: Reduced Subsistence Fishing Opportunities for Non-Tribal Minority and Low-income Groups, and Isolated Communities

As shown in Table 6.6-3, the poverty rate for all three counties adjacent to the Study Region is much higher than the rest of the state. Therefore, it can be assumed that the majority of the population in proximity to the study area is considered low-income.

Minority groups (non-tribal) adjacent to the Study Region are shown in Table 6.6-2. The largest of the minority groups near the Study Region is the Latino community, which comprises 22% of the population in Mendocino County, nearly 10% in Humboldt County, and nearly 18% in Del Norte County. Approximately 5% or less of the population is composed of African American, Asian, Pacific Islander, or mixed races, although all of these groups are known to harvest living marine resources from shore. Throughout the MLPA Initiative process, outreach to small communities with minority populations was conducted. The Latino community in Fort Bragg participated in several MLPA Initiative meetings.

Table 6.6-5 shows the proposed MPAs and regulations where opportunities for subsistence take (i.e., where beaches and public access sites are present) would be affected. Recreational take restrictions would be reduced in the proposed MacKerricher, Russian Gulch, and Van Damme SMCAs compared with existing conditions. The proposed Point Cabrillo SMR currently prohibits take within its boundaries, and this restriction would not change under the Proposed Project. However, the proposed recreational take restrictions in the other MPAs shown in Table 6.6-5 with beach and coastal access would prohibit some or all of the species fished or gathered by subsistence fishers.

In general, the shoreline throughout the Study Region is inaccessible owing to the ruggedness and undeveloped nature of the region. The proposed shoreline MPAs minimally overlap with existing public coastal access points and would exclude a small portion of the Study Region (less than 13%) from recreational take (including subsistence fishing) opportunities. Potential effects of reduced recreational access from the Proposed Project are discussed in Section 6.3, "Recreation," and these impacts would similarly affect subsistence fishers. Upon implementation of the Proposed Project, subsistence fishers would still have many options available for fishing and gathering within the Study Region.

The proposed recreational take restrictions would apply to all residents and visitors of all financial classes and ethnicities (minority or not) equally, except for specific federally recognized tribes who are proposed to be exempt from take restrictions, as discussed in Impact EJ-1. In some proposed MPAs, take restrictions would be reduced compared with existing conditions; a wider variety of species would be allowed to be fished or gathered for consumptive purposes. In other MPAs, fishing for many popular species, including salmon and Dungeness crab, would be allowed. Throughout the MLPA planning process, minority communities were encouraged to participate, and attendance at some of the planning meetings reflected minority involvement. Considering that the proposed restrictions would apply to all shoreline subsistence fishers equally, and equal opportunities for involvement and participation in the MLPA planning process were provided, and abundant areas would remain for subsistence fishing and gathering, a disproportionate impact on minority or low-income populations near the Study Region would not likely result from the Proposed Project. This impact would be less than significant.

Isolated Communities

The isolated communities of Petrolia and Shelter Cove were involved throughout the MLPA planning process. Community members worked with the NCRSG to develop MPA alternatives that considered their recreational take activities. The nearest MPA (Sea Lion Gulch SMCA) is approximately 5 mi south along the coastline from Petrolia. Although no species take would be allowed within this proposed MPA, abundant areas would remain along the shoreline and the Mattole River for subsistence fishing and gathering activities. Thus, under the Proposed Project, the Petrolia community would not be significantly affected. There are no MPAs proposed near the community of Shelter Cove. As a result of community involvement, subsistence fishing activities conducted along the shoreline nearest to isolated communities would generally not be restricted by the Proposed Project. A disproportionate impact on isolated communities adjacent to the Study Region would not be likely to occur, and impacts would be less than significant. Refer to the *Petrolia and Shelter Cove Communities* discussion in Section 6.6.3 "Environmental Setting" for additional details.

For the proposed MPA options listed in Table 6.6-5, potential impacts, as described in Impact EJ-1, would be the same as for the non-tribal communities described above. A significant and disproportionate impact on minority, low-income, or isolated communities would not result from the proposed MPA options.

Level of Significance: *Less than Significant*

Impact EJ-3: Reduced Opportunities for other Nonconsumptive Activities by Minority and Low-income Groups or Isolated Communities

In addition to subsistence fishing, minority and low-income groups, tribes and tribal communities, and members of isolated communities use the shoreline for nonconsumptive recreation. Nonconsumptive recreational activities include swimming, surfing, picnicking, and other activities described further in Section 6.3, "Recreation." Tribes and tribal communities also conduct nonconsumptive ceremonial and cultural practices within the Study Region. These activities are described in Chapter 5, "Cultural Resources."

The MPA regulations in the Proposed Project would not displace or affect non-consumptive recreational activities for anyone wishing to recreate in the Study Region. The proposed special closures are the only component of the Proposed Project that would prohibit access, and therefore displace recreational activities in the Study Region. The special closure restrictions prohibit all activities within the 300-foot closure area surrounding the listed rocks and islands. The restrictions apply either year-round or seasonally between March 1 and August 31. The Castle Rock Special Closure is an existing national wildlife refuge that is closed to the public. The four seasonal closures (300-foot area surrounding False Klamath, Steamboat, Rockport, and Vizcaino Rocks) would only displace activities for 6 months of the year. All the proposed special closures are sited around offshore rocks not easily accessible to the public and are not known as popular recreational areas for environmental justice groups. Therefore, the proposed special closures would not cause significant and disproportional effects on recreational activities for minority or low-income groups, tribes or tribal communities, or isolated communities. This impact would be less than significant.

Level of Significance: *Less than Significant*