

Chapter 3. Affected Environment

The Presidential Proclamation identifies the following resources on the CCNM:

- Overwhelming beauty and magnificent scenery;
- Geologic formations (i.e., beaches and rocky outcroppings);
- Feeding and nesting habitat for seabirds;
- Foraging and breeding habitat for marine mammals;
- Diverse vegetation;
- Tidepools and the nearshore ocean zone; and
- Historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest.

Per the Proclamation, all “islands, rocks, exposed reefs, and pinnacles above mean high tide within 12 nautical miles of the State of California” are reserved in order to protect the above resources.

This chapter discusses the regional setting and regulatory framework for these and other topics in coastal California.

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Chapter 3

Affected Environment

3.0.1 Introduction

The individual sections in Chapter 3 describe the resources and conditions in and adjacent to the CCNM that are relevant to the alternatives identified in Chapter 2 and the environmental consequences identified in Chapter 4. This chapter addresses current conditions for the following areas:

- 3.1, Air Quality;
- 3.2, Vegetation Resources;
- 3.3, Wildlife Resources;
- 3.4, Cultural Resources;
- 3.5, Environmental Justice;
- 3.6, Geologic and Soil Resources;
- 3.7, Health and Safety;
- 3.8, Indian Trust Resources;
- 3.9, Land Use/Lands and Realty;
- 3.10, Noise;
- 3.11, Paleontologic Resources;
- 3.12, Population and Housing;
- 3.13, Public Services;
- 3.14, Utilities and Service Systems;
- 3.15, Recreation;
- 3.16, Research;
- 3.17, Socioeconomics;
- 3.18, Traffic and Transportation;
- 3.19, Visual Resources;
- 3.20, Water Resources; and
- 3.21, Wilderness and Other Special Designations.

The present status of resources and conditions for the areas listed above are described, and the current management activities that affect these resources and conditions are identified.

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3.1.1 Introduction

This section discusses the regional setting and regulatory framework for air quality management in coastal California.

3.1.2 Setting

3.1.2.1 Environmental Setting

Climate along the coastline of California varies, with cooler temperatures, more rainfall, and more extensive cloud cover in the northern portions of the state. Conditions become milder in a continuum southward. California is divided into 15 air basins to better manage air pollution. The project area encompasses six of these basins, and climate and meteorology varies within each basin. These basins include the North Coast, San Francisco, North Central Coast, South Central Coast, South Coast, and San Diego. Figure 3.1-1 shows the location of the air basins.

For this analysis, sensitive land uses are defined as locations where people reside or where the presence of pollutant emissions could adversely affect the use of the land. Typical sensitive receptors include residents, school children, hospital patients, and the elderly. The CCNM project area includes sensitive land uses (e.g., residential areas).

The project area is also located near various Native American tribal lands. These include: Smith River Ranchería, Elk Valley Reserve, Resighni Reservation, Big Lagoon Ranchería, Trinidad Ranchería, Table Bluff Reservation – Wiyot Tribe, Manchester, Stewards Point Ranchería, and Campo-Manzanita and La Posta Reservation.

Attainment Status

Generally, the California Air Resources Board (ARB) designates whether areas are in attainment of air quality standards by air basin or county (see discussion under “Regulatory Setting”). When areas in an air basin or county have distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, ARB may designate a smaller area.

Table 3.1-1 presents the area designations and attainment status in the six affected air basins in California for carbon monoxide (CO), particulate matter 10 microns or less in diameter (PM10), and ozone. The table identifies areas as attainment, nonattainment, nonattainment-transitional, or unclassified for these pollutants. The boundaries of the designated areas that differ from the air basin or county boundaries are described at the bottom of the table.

Class I Areas in the CCONM

Under the Clean Air Act Amendments of 1977, Congress established a system for the Prevention of Significant Deterioration (PSD) to protect areas that were not classified as non-attainment. A classification system was implemented based on the allowable amounts of additional total suspended particulates and sulfur dioxide degradation that would be allowed for various areas. A Class I area has the greatest limitations, where any virtually degradation is considered significant. California coastal Class 1 areas include Redwood National Park, Point Reyes National Seashore, Pinnacles National Monument, and Ventana Wilderness.

3.1.2.2 Regulatory Setting

Federal

Federal and State Ambient Air Quality Standards

Existing air quality conditions in the project area can be characterized in terms of the ambient air quality standards that California and the federal government have established for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). Table 3.1-2 presents the state and federal standards for a variety of pollutants.

OZONE

Ozone is a respiratory irritant that increases susceptibility to respiratory infections. It is also an oxidant that can cause substantial damage to vegetation and other materials.

Ozone is not emitted directly into the air, but is formed by a photochemical reaction in the atmosphere. Ozone precursors, called reactive organic gases (ROGs), and oxides of nitrogen (NO_x) react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem.

Ozone is a regional pollutant. Because photochemical reactions take time to occur, high ozone levels often occur downwind of the emission source. Because the predominant wind direction in the Sacramento Valley is from the south, the project area is a receptor of regional pollutants from the Sacramento area. Ozone conditions in the area therefore result from a combination of locally generated and transported emissions.

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Table 3.1-1 State and Federal Attainment Designations for Air Basins in the CCNM Project Area

California Ambient Air Quality Standard for CO¹					National Ambient Air Quality Standard for CO		
Air Basin	N	NT	U	A	Air Basin	N	U/A
North Coast Air Basin (NCAB)					North Coast Air Basin		X
Del Norte County				X	San Francisco Bay Area Air Basin		X
Humboldt County				X	North Central Coast Air Basin		X
Mendocino County				X	South Central Coast Air Basin		X
Sonoma County (NCAB Portion)				X	South Coast Air Basin	X	
Trinity County				X	San Diego Air Basin		X
San Francisco Bay Area Air Basin				X			
North Central Coast Air Basin							
Monterey County				X			
San Benito County				X			
Santa Cruz County				X			
South Central Coast Air Basin				X			
South Coast Air Basin (Socab)							
Los Angeles County (SoCAB Portion)		X					
Orange County				X			
Riverside County (SoCAB Portion)				X			
San Bernardino County (SoCAB Portion)				X			
San Diego Air Basin				X			

California Ambient Air Quality Standard for PM10					National Ambient Air Quality Standard for PM10		
Air Basin	N	NT	U	A	Air Basin	N	U/A
North Coast Air Basin		X			North Coast Air Basin		X
San Francisco Bay Area Air Basin		X			San Francisco Bay Area Air Basin		X
North Central Coast Air Basin		X			North Central Coast Air Basin		X
South Central Coast Air Basin		X			South Central Coast Air Basin		X
South Coast Air Basin		X			South Coast Air Basin ⁷	X	
San Diego Air Basin		X			San Diego Air Basin		X

California Ambient Air Quality Standard for Ozone					National Ambient Air Quality Standard for Ozone		
Air Basin	N	NT	U	A	Air Basin	N	U/A
North Coast Air Basin					North Coast Air Basin		X
Sonoma County (NCAB Portion) ²			X		San Francisco Bay Area Air Basin	X	
Remainder Of NCAB				X	North Central Coast Air Basin		X
San Francisco Bay Area Air Basin		X			South Central Coast Air Basin		
North Central Coast Air Basin (2)			X		San Luis Obispo County		X
South Central Coast Air Basin					Santa Barbara County ⁴	X	
San Luis Obispo County ²			X		Ventura County	X	
Remainder Of SoCAB		X			Channel Islands ³		X
South Coast Air Basin		X			South Coast Air Basin ⁵	X	
San Diego Air Basin		X			San Diego Air Basin ⁴	X	

Notes:

- A = Attainment.
- N = Nonattainment.
- NT = Nonattainment-transitional.
- U = Unclassified.

¹ The area designated for carbon monoxide is a county or portion of a county. (1) Section 60200(a).

² Assembly Bill (AB) 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, Section 40925.5.

**Table 3.1-1 State and Federal Attainment Designations for Air Basins
in the CCNM Project Area (continued)**

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- ³ Channel Islands National Monument Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands. Ventura County includes Anacapa Island. Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County and therefore, are included as part of the South Coast Air Basin. San Nicolas is not part of the Channel Islands National Monument. It is considered part of Ventura County.
- ⁴ These areas have air quality that meets the 1-hour federal ozone standard. Redesignation requests are pending. EPA has proposed findings of attainment for Santa Barbara and San Diego.
- ⁵ The federal 1-hour ozone nonattainment area is the South Coast Air Basin prior to a boundary modification in April 1996. The current South Coast Air Basin includes the San Geronio Pass area, while the federal 1-hour ozone nonattainment area does not (CFR Section 81.305).
- ⁶ The federal carbon monoxide nonattainment area is the South Coast Air Basin prior to a boundary modification in April 1996. The current South Coast Air Basin includes the San Geronio Pass area, while the federal carbon monoxide nonattainment area does not.
- ⁷ The federal PM10 nonattainment area is the South Coast Air Basin prior to a boundary modification in April 1996. The current South Coast Air Basin includes the San Geronio Pass area, while the federal PM10 nonattainment area does not.
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Table 3.1-2 Ambient Air Quality Standards Applicable in California

Pollutant	Symbol	Average Time	Standard (parts per million)		Standard (micrograms per cubic meter)		Violation Criteria		
			California	National	California	National	California	National	
Ozone	O ₃	1 hour	0.09	0.12	180	235	If exceeded	If exceeded on more than 3 days in 3 years	
		8 hours	NA	0.08	NA	157	NA	If exceeded on more than 3 days in 3 years	
Carbon monoxide	CO	8 hours	9.0	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year	
		1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year	
(Lake Tahoe only)		8 hours	6	NA	7,000	NA	If equaled or exceeded	NA	
Nitrogen dioxide	NO ₂	Annual average	NA	0.053	NA	100	NA	If exceeded	
		1 hour	0.25	NA	470	NA	NA	If exceeded	
Sulfur dioxide	SO ₂	Annual average	NA	0.03	NA	80	NA	If exceeded	If exceeded on more than 1 day per year
		24 hours	0.04	0.14	105	365	NA	NA	
Hydrogen sulfide	H ₂ S	1 hour	0.25	NA	655	NA	NA	NA	
		1 hour	0.03	NA	42	NA	If equaled or exceeded	NA	
Vinyl chloride	C ₂ H ₃ Cl	24 hours	0.010	NA	26	NA	If equaled or exceeded	NA	
Inhalable particulate matter	PM10	Annual geometric mean	NA	NA	20	NA	If exceeded	NA	
		Annual arithmetic mean	NA	NA	NA	50	NA	If exceeded	If average 1% over 3 years is exceeded
		24 hours	NA	NA	50	150	If exceeded	If average 1% over 3 years is exceeded	
	PM2.5	Annual geometric mean	NA	NA	12	NA	If exceeded	NA	
		Annual arithmetic mean	NA	NA	NA	15	NA	If exceeded	If average 2% over 3 years is exceeded
		24 hours	NA	NA	NA	65	NA	If average 2% over 3 years is exceeded	

Table 3.1-2 Ambient Air Quality Standards Applicable in California (continued)

Pollutant	Symbol	Average Time	Standard (parts per million)		Standard (micrograms per cubic meter)		Violation Criteria	
			California	National	California	National	California	National
Sulfate particles	SO ₄	24 hours	NA	NA	24	NA	If equaled or exceeded	NA
Lead particles	Pb	Calendar quarter	NA	NA	NA	1.5	NA	If exceeded no more than 1 day per year
		30 days	NA	NA	1.5	NA	If equaled or exceeded	NA

Notes:

NA = Not applicable.

All standards are based on measurements at 25°C and 1 atmosphere pressure.
National standards shown are the primary (health effects) standards.

National ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS) for ozone have been set for a 1-hour averaging time. The state 1-hour standard is 0.09 parts per million (ppm), not to be exceeded. The federal 1-hour standard is 0.12 ppm, not to be exceeded more than three times in any 3-year period.

INHALABLE PARTICULATE MATTER

Particulates can damage human health and retard plant growth. Health concerns associated with suspended particulate matter focus on those particles small enough to reach the lungs when inhaled. Particulates also reduce visibility and corrode materials.

Particulate emissions are generated by a wide variety of sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic and construction equipment, and secondary aerosols formed by reactions in the atmosphere.

The NAAQS and CAAQS for particulate matter apply to two classes of particulates: particulate matter 2.5 microns or less in diameter (PM_{2.5}) and PM₁₀. For PM₁₀, the state standards are 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) as a 24-hour average and 20 $\mu\text{g}/\text{m}^3$ as an annual geometric mean. The federal standards for PM₁₀ are 150 $\mu\text{g}/\text{m}^3$ as a 24-hour average and 50 $\mu\text{g}/\text{m}^3$ as an annual arithmetic mean. For PM_{2.5}, the federal standards are 15 $\mu\text{g}/\text{m}^3$ as an annual average and 65 $\mu\text{g}/\text{m}^3$ as a 24-hour average. On June 20, 2002, ARB adopted a new annual standard for PM_{2.5} of 12 $\mu\text{g}/\text{m}^3$.

CARBON MONOXIDE

CO is a public health concern because it combines readily with hemoglobin and reduces the amount of oxygen transported in the bloodstream. CO can cause health problems such as fatigue, headache, confusion, dizziness, and even death.

Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter, when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

NAAQS and CAAQS for CO have been set for 1-hour and 8-hour averaging times. The state 1-hour standard is 20 ppm by volume, and the federal 1-hour standard is 35 ppm. Both state and federal standards for the 8-hour averaging period are 9 ppm.

TOXIC AIR CONTAMINANTS

Many pollutants are identified as toxic air contaminants (TACs) because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. Individual TACs vary greatly in the risk they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another.

There are no state or federal standards for TACs. However, for TACs that are known or suspected carcinogens, ARB has consistently found that there are no levels or thresholds below which exposure is risk-free. For certain TACs, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health risks, a similar factor called a hazard index is used to evaluate risk.

In the early 1980s, ARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Toxic Air Contaminant Identification and Control Act (Assembly Bill [AB] 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program by requiring a state-wide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Federal Clean Air Act

The federal Clean Air Act (CAA), enacted in 1970 and amended twice thereafter (including 1990), establishes the framework for modern air pollution control. The act directs the U.S. Environmental Protection Agency (EPA) to establish NAAQS for six pollutants: ozone, carbon monoxide (CO), lead, nitrogen dioxide (NO₂), particulate matter, and sulfur dioxide (SO₂). The NAAQS are divided into primary and secondary standards. The former are set to protect human health within an adequate margin of safety; and the latter protect environmental values, such as plant and animal life.

The CAA requires states to submit a state implementation plan (SIP) for areas in nonattainment for NAAQS. The SIP, which is reviewed and approved by EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to denial of federal funding and permits. In cases where the SIP is submitted but fails to demonstrate achievement of the NAAQS, EPA is directed to prepare a federal implementation plan. The applicable SIPs for the project area include the 2003 South Coast SIP (adopted August 1, 2003) and the 2001 Bay Area SIP (adopted October 26, 2001). These SIPs would not apply to BLM activities on the CCNM but could apply to activities related to its core partners.

Federal Conformity Requirements

Federal projects are subject to either the Transportation Conformity Rule (40 CFR 51[T]), which applies to federal highway or transit projects, or the General Conformity Rule (40 CFR 51[W]), which applies to all other federal projects. Because the alternatives are not federal highway or transit projects, they are subject to the General Conformity Rule.

The purpose of the General Conformity Rule is to ensure that federal projects conform to applicable SIPs so that they do not interfere with strategies used to attain the NAAQS. The rule applies to federal projects in areas designated as nonattainment for any of the six criteria pollutants and in some areas designated as maintenance areas. The rule applies to all federal projects except:

- Programs specifically included in a transportation plan or program that is found to conform under the federal transportation conformity rule,
- Projects with associated emissions below specified *de minimis* threshold levels, and
- Certain other projects that are exempt or presumed to conform.

If a proposed project would result in total direct and indirect emissions in excess of the *de minimis* emission rates, it must be demonstrated that the emissions conform to the applicable SIP for each affected pollutant. If emissions would not exceed the *de minimis* levels, and are not regionally significant, then the project is presumed to conform, and no further analysis or determination is required.

State

ARB and local air pollution control districts (APCDs) have responsibility for achieving the California Ambient Air Quality Standards (CAAQS), which are more stringent than the NAAQS. The CAAQS are achieved through district-level air quality management plans that are incorporated into the SIP.

The California Clean Air Act (CCAA) requires local and regional APCDs that are not attaining one or more of the CAAQS for ozone, CO, SO₂, or NO₂ to expeditiously adopt plans specifically designed to attain these standards. Each plan must be designed to achieve an annual 5-percent reduction in district-wide emissions of each nonattainment pollutant or its precursors (components from which pollutants are formed).

Recently enacted amendments to the CCAA impose additional requirements designed to ensure an improvement in air quality within the next 5 years. More specifically, local APCDs with moderate air pollution that did not achieve “transitional nonattainment” status by December 31, 1997, must implement the more stringent measures applicable to APCDs with serious air pollution.

Local

Ten air quality management agencies have jurisdiction in the CCNM project area: North Coast Unified Air Quality Management District (AQMD), Mendocino County AQMD, Northern Sonoma County APCD, Bay Area AQMD, Monterey Bay Unified APCD, San Luis Obispo County APCD, Santa Barbara County APCD, Ventura County APCD, South Coast AQMD, and San Diego County APCD. EPA has established federal ambient air quality standards for which ARB and the 10 air quality management agencies have primary implementation responsibility. ARB and the 10 air quality management agencies are also responsible for ensuring that state ambient air quality standards are met. The 10 air quality management agencies are also responsible for implementing strategies for air quality improvement and recommend mitigation measures for new growth and development. Figure 3.1-2 shows the location of the 10 air quality management districts.

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Section 3.2

Vegetation Resources

3.2.1 Introduction

Although the vegetative resources of the CCNM are not as conspicuous or well known as the wildlife resources, their presence is critical to the ecological functioning of many of the larger rocks and islands of the monument. Nevertheless, almost nothing is known about the distribution of special-status species on the offshore rocks and islands.

This analysis addresses all vegetation within the CCNM—the collective plant cover, including terrestrial vegetation such as herbaceous plants, trees, and grasses and intertidal vegetation such as seaweeds, algae, and lichens.

3.2.2 Setting

3.2.2.1 Environmental Setting

Terrestrial Vegetation

There are no databases documenting the terrestrial vegetation present in the CCNM. Although comprehensive studies have been made of the vegetation on the larger islands off California's coast (e.g., the Santa Catalina, San Clemente, San Nicolas, and Santa Barbara Islands—and Año Nuevo and the Farallones), very little is known of the botanical character of the smaller islands and rocks in the CCNM, particularly in northern California. Most of these offshore features lack soil sufficient to support complex vegetation.

However, a few islands do support a variety of plants. The plant species at these sites are believed to be largely representative of adjacent mainland communities that existed before human disturbance and modification began. In addition, because the islands are remote, some level of endemism may be represented by yet undocumented, unique taxa in these communities. To date, no comprehensive surveys of the plants on these islands and rocks have been conducted to verify these hypotheses.

Intertidal Vegetation

Marine vegetation in the CCNM includes species that are tolerant of regular, prolonged exposure and desiccation, in the splash zone and upper intertidal zone. Crustose forms of blue-green algae

(*Cyanophyta*) and black-colored lichens typically grow in the splash zone. In the upper intertidal areas, green algae (*Chlorophyta*), such as sea felt (*Enteromorpha* spp.) and sea lettuce (*Ulva* spp.) typically occur. Some species of red algae (*Porphyra*, *Gigartina* spp.) and brown algae (*Postelsia*, *Fucus* spp.) may also be found. At exposed sites, additional seaweeds may be present.

There are no databases documenting the intertidal vegetation present in the CCNM.

Special-Status Species

Because no comprehensive inventory of vegetation has been conducted in any area of the CCNM, it is not known whether any BLM special-status species exist on the monument's islands or rocks.¹ However, surveys of the larger coastal islands not included in the CCNM have identified numerous endemic plant species, many of which are currently classified as threatened or endangered. There is potential for similar endemism to occur on the larger vegetated islets, rocks, and shoreline cliffs in the CCNM. Focused botanical studies are needed to make these determinations.

Nonnative Species and Noxious Weeds

On the larger coastal islands, such as San Clemente, San Miguel, San Nicolas, Santa Barbara, and Santa Rosa Islands, nonnative plants account for 20–58 percent of all plant species. Introduction of these species may have occurred largely because of human activity, but some level of dispersal from invasive species from the mainland is likely responsible, through vectors such as wind, water currents, and animals. Adverse effects associated with nonnative and invasive plant species include competition with native plants; reductions in wildlife habitat; reduced biodiversity; and secondary economic effects related to recreation, tourism, and commercial operations.

While the islands cited above are not currently part of the CCNM, some of the larger islands of the CCNM are known to host nonnative and invasive plants, such as pampas grass (*Cortaderia jubata*) and iceplant (*Carpobrotus edulis*). Because no comprehensive survey of the vegetated islands and rocks has been conducted, the extent and distribution of nonnative plants are not known. Focused botanical surveys are needed to make these determinations.

3.2.2.2 Principal Uses of Vegetation

Wildlife Habitat

Terrestrial and intertidal vegetation provide important habitat for numerous wildlife species. On islands with vegetation and deep soil layers, burrowing bird species—such as storm-petrels, Cassin's auklets, rhinoceros auklets, and tufted puffins—often establish colonies in these areas. On some of the larger islands with grass or shrub communities, a variety of invertebrates—such as land snails, grasshoppers, crickets, flies and bees, butterflies, and moths—may be found, depending on proximity to the mainland and suitability of habitat. Several passerine birds, including song sparrows and a variety of migratory species, also occasionally use these areas.

¹ Per BLM Manual 6840 and California State Office Manual Supplement 6840.06, BLM special-status species include federally and state-listed species, as well as federal proposed and federal candidate species, and California Native Plant Society List 1B plant species.

Intertidal vegetation provides habitat for a variety of invertebrates, including rock louse (*Ligia occidentalis*), periwinkles (*Littorina* spp.), limpets, chitons, barnacles, and—during high water—hermit crabs and shore crabs.

Seaweed Harvest

Seaweed is regularly harvested by a variety of private and commercial interests, including the specialty food market. Species harvested that may be present in the CCNM include nori (*Porphyra*), sea palm (*Postelsia*) fronds, fucus tips (Bladderwrack), grapestone (*Gigartina papillata*), sea lettuce (*Ulva*), and Turkish towel (*Gigartina exasperata*).

Traditional Materials

Seaweed, grasses, and driftwood are typical traditional vegetative materials used by Native Americans who inhabited lands in the vicinity of the CCNM.

3.2.2.3 Regulatory Setting

Federal

Vegetative resources of the California coast are regulated and protected by numerous laws and agencies, including the ESA and the Clean Water Act. Within BLM, there are no specific field office-level policies for vegetation management in the CCNM, beyond the restrictions stipulated by state and federal regulations for listed species.

State

In California, the California Environmental Quality Act (CEQA), California Coastal Commission Act, the Porter-Cologne Water Quality Control Act, the Native Plant Protection Act, and CESA have regulatory jurisdiction. Furthermore, the California Fish and Game Code regulates seaweed harvest.

Local

Local jurisdictional planning authorities oversee land uses that may ultimately affect vegetation. The level of consistency in vegetation management among overlapping jurisdictions has not been determined.

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Section 3.3

Wildlife Resources

3.3.1 Introduction

Seabirds, shorebirds, and marine mammals are perhaps the most prominent wildlife on the CCNM. While historically the eggs of seabirds were gathered for human consumption and certain marine mammals were hunted for fur and food, there is currently no legal harvesting of these species. Their main economic value is related to wildlife viewing and tourism. A variety of marine and terrestrial invertebrates also inhabit the CCNM.

3.3.2 Setting

3.3.2.1 Environmental Setting

Each of the major categories of wildlife found on the CCNM is discussed in turn.

Birds

Nineteen species of marine birds and predatory birds consistently use offshore rocks for breeding in California (Table 3.3-1). One of these is listed as endangered under ESA, two are listed as endangered under CESA and are fully protected species in California, and seven are considered California species of special concern.

Breeding habitat requirements vary among these species. Some require soil; others require crevices; and many use open areas, vegetated or not. The key characteristics of these breeding sites are suitable locations for nests and the absence of terrestrial predators.

In addition to the breeding birds listed in Table 3.3-1, a small complement of shorebirds uses the lower elevations of CCNM rocks for feeding, primarily during migration and winter. These birds include black oystercatcher (*Haematopus bachmani*), black turnstone (*Arenaria melanocephala*), wandering tattler (*Heteroscelus incanus*), surfbird (*Aphriza virgata*), and rock sandpiper (*Calidris ptilocnemis*). During high tides, flocks of these species roost above the waves.

Table 3.3-1. Primary Breeding Birds and Predatory Birds of the California Coastal National Monument

Species	Status
Leach's storm-petrel (<i>Oceanodroma leucorhoa</i>)	NA
Ashy storm-petrel (<i>Oceanodroma homochroa</i>)	CSC, BCC
Black storm-petrel (<i>Oceanodroma melania</i>)	CSC
Fork-tailed storm-petrel (<i>Oceanodroma furcata</i>)	CSC
Brown pelican (<i>Pelecanus occidentalis</i>)	FE, SE, CFP
Double-crested cormorant (<i>Phalacrocorax auritus</i>)	CSC
Pelagic cormorant (<i>Phalacrocorax pelagicus</i>)	NA
Brandt's cormorant (<i>Phalacrocorax penicillatus</i>)	NA
Snowy egret (<i>Egretta thula</i>)	NA
Black-crowned night heron (<i>Nycticorax nycticorax</i>)	NA
Peregrine falcon (<i>Falco peregrinus</i>)	SE, CFP
Black oystercatcher (<i>Haematopus bachmani</i>)	BCC
Western gull (<i>Larus occidentalis</i>)	NA
Common murre (<i>Uria aalge</i>)	NA
Pigeon guillemot (<i>Cephus columba</i>)	NA
Xantus's murrelet (<i>Synthliboramphus hypoleucus</i>)	SCT, CSC, BCC
Cassin's auklet (<i>Ptychoramphus aleuticus</i>)	BCC
Rhinoceros auklet (<i>Cerorhinca monocerta</i>)	CSC
Tufted puffin (<i>Fratercula cirrhata</i>)	CSC

Notes:

BCC = Fish and Wildlife Birds of Conservation Concern.

CFP = California fully protected species.

CSC = California species of special concern.

FE = Federally listed as endangered.

NA = No special status.

SCT = State candidate for listing as threatened.

SE = State listed as endangered.

Existing Databases

The most recent inventory of seabirds on the islands and offshore rocks of California was prepared by SOWLS et al. (1980), although data gathered in the early 1990s by Harry Carter and others should be available in the latter part of 2004. These surveys, while comprehensive, are critically in need of updating. Populations of some of the larger seabirds, such as common murre (*Uria aalge*) and Brandt's cormorant (*Phalacrocorax penicillatus*), have been surveyed from the air; but many small breeding populations of seabirds have not been surveyed since the 1970s (Manuwal et al. 2001). There is very little information on the status of most of the seabird colonies in the CCNM. This is especially true for nocturnal burrow- or crevice-nesting seabirds, for which the above inventories were not designed to survey, and the smallest colonies. Future surveys likely will document more nesting sites than previously recorded because new technology now enables surveyors to better detect some of the more secretive birds, such as storm-petrels and small auklets, that are active mostly at night.

Marine Mammals

Seven marine mammal species regularly use offshore rocks for hauling out or breeding (Table 3.3-2). Three of these, the Guadalupe fur seal (*Arctocephalus townsendi*), Steller sea lion (*Eumetopius jubatus*) and sea otter (*Enhydra lutris*), are listed as threatened under ESA. The northern elephant seal (*Mirounga angustirostris*) and sea otter are fully protected species in California.

Table 3.3-2. Marine Mammals of the CCNM

Species	Status
Northern fur seal (<i>Callorhinus ursinus</i>)	MMPA
Guadalupe fur seal (<i>Arctocephalus townsendi</i>)	FT, ST, CFP
Steller sea lion (<i>Eumetopius jubatus</i>)	FT
California sea lion (<i>Zalophus californianus</i>)	NA
Harbor seal (<i>Phoca vitulina</i>)	NA
Northern elephant seal (<i>Mirounga angustirostris</i>)	CFP
Sea otter (<i>Enhydra lutris</i>)	FT, CFP

Notes:

- CFP = California fully protected species.
- FT = Federally listed as threatened.
- MMPA = Depleted, Marine Mammal Protection Act.
- NA = No special status.
- ST = State listed as threatened.

Harbor seals (*Phoca vitulina*) and California sea lions (*Zalophus californianus*) are common on many of the rocks along the coast. Both species typically choose sites that are sheltered from disturbance by human activities although, in some areas, the animals have acclimated to chronic human disturbance. Steller sea lions possibly breed on a few of the remote CCNM rocks in northern California. The other species are found primarily on larger islands (fur seal and elephant seal), the mainland (elephant seal), or in the water (sea otter).

Invertebrates

The CCNM's rocks and islands host a variety of intertidal and terrestrial invertebrates. The intertidal invertebrates occupy areas that are periodically inundated either by very high tidal stages or wave action above mean high tide. Because of the variations in coastal exposure to wave action and winds, there is variation in the invertebrate life forms that are found above the mean high tide line from one location to another along the coast. In some locations with open exposure, invertebrates normally found below the mean high tide mark are able to survive above this mark due to splash zone inundation. This condition places some of these invertebrates within the jurisdiction of the CCNM. Figure 3.3-1 illustrates this relationship between tidal fluctuation, wave action, and the four major intertidal life zones described in Ricketts et al. (1985). The Uppermost Horizon (Zone 1) supports pill bugs and certain barnacles, snails and limpets. The High Intertidal (Zone 2) also contains snails, barnacles, and limpets; in addition, mussels, periwinkles, and chitons are present. Both of these life zones occur within the monument in exposed areas. The Middle Intertidal (Zone 3) may extend above mean high tide in some heavy surf areas; this zone includes invertebrates common in the upper zones but also supports seastars and black abalone. The Lower Intertidal (Zone 4) is not expected to extend within the CCNM jurisdiction.

On some of the rocks and islands with grass and shrub plant communities, a variety of terrestrial invertebrates, such as land snails, grasshoppers, crickets, flies, bees, butterflies, and moths—may be found—depending on proximity to the mainland and suitability of habitat. Because no inventory of terrestrial invertebrates has been conducted in the CCNM, it is not known whether any special-status invertebrates occur there. However, surveys of the larger coastal islands not included in the CCNM have identified numerous endemic invertebrates, including crickets, moths, and butterflies, that live on the coastal islands; none are currently listed as threatened or endangered.

No information is available regarding the presence of invasive invertebrates in the CCNM.

Both terrestrial and intertidal invertebrates provide food for foraging bird species, including black oystercatcher, ruddy turnstone, black turnstone, wandering tattler, surfbird, rock sandpiper, and gulls (*Larus* spp.).

Other Species

Species other than those discussed above (e.g., passerine birds) are likely to be found on the CCNM, particularly on larger rocks and islands. No comprehensive inventory of such species has been conducted to date, nor is information available regarding the presence of invasive species, special-status species, or species that may pose threats to other endemic or special-status species found in the monument.

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3.3.2.2 Habitat Conditions and Threats to Wildlife

In general, the remoteness and difficult access common to these offshore rocks have left habitat conditions relatively unchanged. In a few cases, especially on islands near shore, invasive plant species have become established. The effect of these invasives on wildlife species is essentially unknown. Invasive animals such as rats and mice have a strong negative effect on seabird colonies, but the status of these rodents on the CCNM rocks is essentially unknown. Some concern has been raised recently regarding the effect of the growing Canada goose population, including the introduced Great Basin subspecies, on nesting seabirds on the north coast,.

While most of these rocks are difficult to access and rarely are visited by people, a few are located sufficiently close to coastal human activities to have been affected by these activities. Because some are located in places that make them hazards to boat traffic, navigational aids have been established on them. The most obvious impacts on the wildlife using these offshore rocks are the result of direct disturbance from human activities. Disturbance can result from a number of unrelated activities but generally involves people approaching nesting birds or roosting marine mammals close enough to cause detrimental changes in their behaviors, including flight and abandonment of nests or young. The practice of allowing dogs off leash is also a common type of disturbance. Generally, these disturbances result in more impact during the bird nesting season and the pinniped pupping season.

Fishing

Many of California's offshore rocks situated near harbors for launching and mooring boats are popular fishing destinations. While the activity of fishing does not necessarily cause disturbance, the proximity of a boat—with its attendant noise and movement—can stress nesting and roosting birds and marine mammals. Especially vulnerable are nesting Brandt's and pelagic cormorants, common murre, and Steller sea lions. The pelagic cormorant nests on cliffs inaccessible to terrestrial predators, which in many cases are next to relatively deep water suitable for small boat traffic and fishing. The other vulnerable species are colonial nesters that are particularly susceptible to nest predation by western gulls and common ravens. When these species are frightened from nests, the eggs and young chicks are left exposed and unprotected. One or two ill-timed disturbances can cause almost complete breeding failure of a colony. Nesting sites of the pelagic cormorant are distributed the entire length of the state. The most susceptible areas for Brandt's cormorants and common murre are in the northern half of the state. Large breeding colonies exist on a number of the offshore rocks near the towns of Mendocino (Mendocino County) and Trinidad (Humboldt County). Steller sea lions possibly breed on a number of these offshore rocks north of Cape Mendocino. Waters surrounding these larger rocks are known to be productive fishing sites.

A specialized form of fishing popular along the coast from Marin through Mendocino counties is sport diving for abalone. Waters surrounding these offshore rocks are particularly favored sites for this activity. At some locations, such as Van Damme State Beach in Mendocino County, many abalone divers use kayaks or inflatable boats launched from the beach to gain access to the waters around offshore rocks. While most of the activities associated with abalone diving are not particularly prone to disturb birds, marine mammals, especially harbor seals, may be disturbed by boaters approaching too closely. On some occasions, abalone divers will access these offshore rocks, potentially causing disturbance to nesting pelagic cormorants, pigeon guillemots or black oystercatchers. If these divers stay on the rocks for more than a few minutes, oystercatcher eggs and small chicks can be lost to western gull predation.

Another legal consumptive activity falling under the category of fishing is mussel collecting. While most mussel collectors confine their activities to mainland shorelines, those who use boats for abalone diving occasionally disembark on offshore rocks in search of mussel beds. This type of disturbance is likely to disturb black oystercatchers if they are nesting nearby and can cause loss of eggs or small chicks to gulls.

Recreational Kayaking and Scuba Diving

Recreational boating using various styles of kayaks has become common at many locations along the California coast. Some of the popular launching sites in northern California are located near sensitive offshore rocks, such as at Van Damme State Beach in Mendocino County. While most of the activities associated with kayaking are not considered a disturbance to seabirds, roosting or pupping harbor seals are prone to disturbance by boaters approaching too closely. Scuba divers, like abalone divers, are not usually a cause of disturbance to birds and marine mammals. Kayakers or scuba divers who leave their boats or the water and walk on smaller accessible rocks can potentially disturb nesting black oystercatchers, pelagic cormorants, or pigeon guillemots. It must be noted that any person going ashore for any reason on a rock with nesting seabirds, especially murre and cormorants, can cause significant harm.

Seaweed Collecting

A small industry exists for harvesting seaweeds as a specialty food. Seaweed collectors who go ashore on rocks with nesting seabirds can cause the types of disturbances described above.

Other Disturbances

A variety of miscellaneous activities can also cause significant disturbance to seabird and marine mammals in the CCNM. Nesting seabirds are particularly vulnerable to disturbance from low-flying aircraft. Nearby onshore activities with the potential to harm seabirds and marine mammals on portions of the CCNM near the mainland are loud construction activities (e.g., blasting during road maintenance), fireworks displays, and kite flying.

3.3.2.3 Regulatory Setting

Federal

Wildlife resources of the California coast are regulated and protected by numerous laws and agencies, including ESA, the CWA, the Marine Mammal Protection Act, and the Porter-Cologne Water Quality Control Act. Under BLM Manual 6840 and California State Office Manual 6840.8, BLM special-status species include federally listed, proposed, and candidate species, and state-listed species. Within BLM, there are no specific field office-level policies for wildlife management in the CCNM, beyond the restrictions stipulated by state and federal regulations for listed species.

State

In California, CEQA, the California Coastal Commission Act, and CESA have regulatory jurisdiction.

Local

Local jurisdictional planning authorities oversee land uses that may ultimately affect wildlife. The level of consistency in wildlife management among overlapping jurisdictions has not been determined.

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Section 3.4

Cultural Resources

3.4.1 Introduction

California's offshore rocks and islands have been used by humans for approximately 10,000 years. Native populations along the coast used offshore areas as temporary landing areas, resource procurement locations, habitation sites, and landmarks for both offshore and onshore navigation.

Ethnographic data indicate that offshore rocks and islands play an important role in mythology and cosmology, and may include burial grounds or meeting areas. Offshore rocks and islands also have served, and continue to serve, as traditional resource procurement areas (Kroeber 1925; Loeb 1926; McLendon and Oswalt 1978). The historic record indicates that Europeans and Euro-Americans also used offshore rocks and islands for multiple purposes since arriving at the California coast. Early European explorers' crews hunted sea lions and birds along the northern California coast. Later, the Spanish and Russians hunted on the offshore rocks and docked or anchored their ships there. In the 19th and 20th centuries, offshore rocks provided landings for the logging and mining industries. Some of the offshore rocks and islands were the sites of navigational aids, such as lighthouses. Numerous shipwrecks, many of which are still present on some offshore rocks, are also part of the history of these features (Del Cioppo 1983).

3.4.2 Terminology

A cultural resource is defined as a definite location of human activity, occupation, or use identified through field inventory (survey), historical documentation or research, or information from Native American tribal representatives. They are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit as outlined in the BLM 8100 Manual series. The term includes archaeological sites as well as historic buildings and structures (more than 50 years of age) that may be important in history or have important scientific use. Cultural resources also include TCPs, which are sites or locations that embody the beliefs, customs, and practices of a living community of people that have been passed down through generations, usually orally or through practice (National Park Service 1990).

Historic properties are cultural resources that have been determined eligible for listing in the NRHP through consensus between one or more federal agencies and the SHPO. Criteria for evaluating the significance of cultural resources may be found in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess

integrity of location, design, setting, materials, workmanship, feeling, and association, and that:

1. Are associated with events that have made a significant contribution to the broad patterns of our history; or
2. Are associated with the lives of persons significant in our past; or
3. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. Have yielded, or may be likely to yield, information important in prehistory or history.

3.4.3 Setting

3.4.3.1 Environmental Setting

Prehistoric Resource Potential of Offshore Rocks and Islands in the CCNM

Coastal sites and staging areas for prehistoric and ethnographic fishing, marine mammal hunting, and other resource gathering activities are many, and have been reasonably well documented in the archaeological and ethnographic literature. The same is true of islands that are larger or close to the mainland (e.g., the Channel Islands and Gunther Island). Because of inaccessibility and lack of development, however, archaeological survey information for smaller offshore islands and rock pinnacles is extremely limited. CHRIS does have information for larger islands that are not part of the CCNM (the Channel Islands and Farallon Islands), which would be useful for predictive modeling for archaeology that may be present in the CCNM. Published ethnographic literature for coastal tribes discuss how these offshore rocks were used for procuring resources and as meeting areas to discuss matters of importance with other villages and tribes (Gould 1978; Bean and Theodoratus 1978).

Historical Resource Potential of Offshore Rocks and Islands in the CCNM

Historical literature and photographs show that offshore rocks and islands have been used for multiple purposes since the arrival of Europeans to the California coast. They have also been responsible for numerous shipwrecks throughout California's history. Shipwreck debris from the mid-19th century is still present on some offshore rocks (Del Cioppo 1983). Earliest European use of these offshore rocks and islands dates back to the 16th century when explorers first visited the California coast (Cummings 1975). Ships logs from Cabrillo in 1539 and Drake in 1579 indicate that they hunted sea lions and birds on the Farallon Islands and along the northern California coast. Later, the Spanish and Russians used offshore rocks for hunting activities and for docking or anchoring their ships. These rocks were also used to stabilize logging flumes that would convey timber to ships that were anchored offshore due to a lack of a pier or shoreline dock. Some of the offshore rocks and islands also served as locations for navigational aids such as lighthouses (Woodward 1984).

Offshore Rocks and Islands as Traditional Cultural Properties

TCPs are considered as such because of their association with cultural practices or beliefs of a living community that are (a) rooted in that community's history, and (b) important in maintaining the continuing cultural identity of the community. The term “traditional” in this context refers to the beliefs, customs, and practices of a living community of people that have been passed down through generations—usually orally or through practice (National Park Service 1990). Ethnographic fieldwork has been conducted with many of the Native American groups along the California coast, although with some groups more than others. For many of these Native American groups, offshore rocks and islands play an important role in their mythologies. These offshore rocks and islands also have served, and continue to serve, as traditional resource procurement areas (Loeb 1926; Kroeber 1925). While this ethnographic information is useful, it is not the only step necessary in determining the locations and significance of potential TCPs.

3.4.3.2 Known and Recorded Cultural Resources

In 2001, the BLM State Archaeologist conducted a partial (2 miles from the coast in selected areas) search of existing records at the CHRIS for this project. Table 3.4-1 summarizes the results.

Table 3.4-1. Summary of Existing Records Search for Known and Recorded Cultural Resources in the CCNM

Map (USGS 7.5-minute quadrangle)	Site # or Report Name	Recorder/Author	Description
Monterey Peninsula	Mnt-130	G. Breschini (1974)	Large prehistoric habitation site
Port San Lucas	SLo-1163	G. Caruso (1986)	Prehistoric shell midden
Morro Bay South	SLo-497	L. Payen (1967)	Prehistoric shell midden
Point Arguello	SBa-2634H	N. DelCioppo (1983)	Shipwreck (1854)

3.4.3.3 Regulatory Setting

Federal

Federal laws and regulations have been established to protect the nation's historic properties and Native American cultural values. BLM is required to consider both the short- and long-term management of cultural resources on public lands under Sections 106 and 110 of the NHPA, under Section 14 of the ARPA, and under BLM's national Programmatic Agreement with the Advisory Council on Historic Preservation (ACHP) and the National Conference of SHPOs. In addition, an up-to-date inventory of cultural resources is an important part of the planning requirements of the FLPMA. Finally, BLM is required to protect and preserve Native American cultural values under the American Indian Religious Freedom Act of 1978 (AIRFA) and the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA).

State

CEQA requires that public or private projects financed or approved by non-federal public agencies be assessed to determine the effects of the projects on historical resources. CEQA uses the term “historical resources” to include buildings, sites, structures, objects, or districts—each of which may have historical, pre-historical, architectural, archaeological, cultural, or scientific importance. CEQA states that if implementation of a project results in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (Title 14, California Code of Regulations Sections 15064.5, 15126.4). Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined. Note that CEQA does not apply to the CCNM RMP at this time; however, subsequent discretionary actions by DFG, DPR, or other non-federal partners may trigger the requirements of CEQA.

Section 3.5

Environmental Justice

3.5.1 Introduction

This section discusses the existing conditions related to environmental justice issues in the vicinity of the CCNM and describes applicable regulations pertaining to environmental justice.

3.5.1.1 Definitions

Environmental Justice

The U.S. Environmental Protection Agency (EPA) defines environmental justice as “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” (U.S. Bureau of Land Management 2002).

Minority Populations

Minority populations consist of 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 (U.S. Bureau of Land Management 2002).

Low-Income Populations

The U.S. Census Bureau defines a low-income population in an affected area as one with an annual household income of 80 percent or less of the median household income of the general population (U.S. Bureau of Land Management 2002).

3.5.2 Setting

3.5.2.1 Environmental Setting

The CCNM covers the entire coastline of California, from Mexico to the Oregon border. Due to the large size of the state, only 15 of its 58 counties include coastline. These coastline counties include (from north

to south): Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Diego Counties.

According to the 2000 U.S. Census Bureau, the population of the 15 counties comprising the CCNM and vicinity is 19,666,136—representing 58 percent of Californians. The 2000 Census data show that approximately 63 percent of the population in the coastline counties consists of minority individuals (12,467,808). Eleven of the 15 counties are considered low income, according to the above-defined threshold for poverty levels.

The information derived from the data collected shows that communities in the CCNM project area may potentially be affected by environmental justice impacts.

3.5.2.2 Subsistence Fishing

The general concept of a “subsistence fisher” lumps together ethnically diverse peoples with different fishing access, preferences, and success on potentially different water bodies (and commonly excludes Caucasian, middle-income, or upper-income consumers with high rates of consumption who are thus also potentially at risk) (California Environmental Protection Agency 2001).

The California Environmental Protection Agency (CalEPA) considers subsistence fishers to be people who rely on non-commercial fish as a major source of protein. CalEPA suggests that subsistence fishers tend to consume non-commercial fish and/or shellfish at higher rates than other fishing populations, and for a greater percentage of the year, due to cultural and/or economic factors. CalEPA suggests that Native American and lower income urban, rural, and Asian-American populations often include subsistence fishers, and described some of the difficulties in characterizing these subpopulations in general, and subsistence fishers, in particular. For example, subsistence fishers may not have registered for fishing licenses for a variety of reasons and thus are likely to be underrepresented in surveys based on fishing licenses. (California Environmental Protection Agency 2001.)

Various minority populations, low-income communities, and tribes in California depend on marine life as an important component of their diets. Seaweed, invertebrates, and fish are collected from coastal waters. Abalone, in particular, is often taken from coastal areas in California for consumption. While only a small amount of marine life is collected from the CCNM, the monument represents an important resource to low-income and minority communities.

3.5.2.3 Spiritual and Cultural Appreciation

Some lands in California have cultural and spiritual significance to certain segments of the population and to tribal communities in particular. It is likely that portions of the CCNM have such significance to various cultural groups. This topic is discussed in more detail in Section 3.3, “Cultural Resources.”

3.5.2.4 Recreation

As mentioned in other sections of this report, recreation is an important CCNM resource. Because recreation and relaxation at coastal areas is a resource that people from all over California enjoy, access points for coastal areas are provided for visitors who live inland. Access points that are located near

public transit stations allow visitors with limited transportation options to more easily enjoy the monument.

3.5.2.5 Education/Outreach

The CCNM contains unique habitat and resources with educational value. Educational opportunities are provided for Californians who do not live near the coast. As mentioned above, proximity to public transit is a characteristic of educational facilities that affects access for disadvantaged communities. Availability of educational materials in languages other than English also improves access for members of some minority groups.

3.5.2.6 Regulatory Setting

Federal

Executive Order 12898

On February 11, 1994, President Clinton signed Executive Order (EO) 12898, titled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” The EO followed a 1992 report by the EPA indicating that “[r]acial minority and low-income populations experience higher than average exposures to selected air pollutants, hazardous waste facilities, and other forms of environmental pollution.” This EO requires federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their actions on minorities and low-income populations and communities. The federal agency must ensure that its activities do not discriminate against persons or groups on the basis of race, national origin, or income.

Additionally, the President issued a memorandum to heads of all (federal) agencies and departments accompanying EO 12898, to underscore certain provisions of existing law in order to ensure environmental justice. These environmental and civil laws included Title VI of the Civil Rights Act of 1964, NEPA, the Clean Air Act, and public information laws, among others.

Title VI of the Civil Rights Act of 1964

Title VI of the Civil Rights Act of 1964, as amended, prohibits discrimination in federally assisted programs. The act stipulates that no person in the United States shall, on the ground of race, color, national origin age, sex, or disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. All federal programs and projects are subject to this act. The general procedures to be followed are set forth in 49 CFR 21 and 23 CFR 200.

Executive Order 13045

EO 13045, “Protection of Children from Environmental Health Risks and Safety Risks,” that was issued by the President on April 21, 1997, requires all federal agencies to ensure that their policies, programs, activities, and standards address disproportionate health risks to children that result from environmental health or safety risks. The EO defines environmental health and safety risks as those that are attributable

to products or substances the child is likely to come into contact with or ingest, such as air, food, water, soil, and products children use or are exposed to.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act is intended to protect places of religious importance to American Indians, Eskimos, and Native Hawaiians. The act applies to all projects that affect places of religious importance to Native Americans. The act requires project proponents to consult with knowledgeable sources in order to identify and determine any effects on places of religious importance. In addition, the act requires compliance with NHPA Section 106 procedures if the property is listed in or eligible for inclusion in the NRHP. The act is codified in 42 U.S. Government Code (USC) 1996 (Public Law 95-341).

BLM Environmental Justice Guidance

BLM's Instruction Memorandum No. 2002-164, May 7, 2002 (U.S. Bureau of Land Management 2002), addresses environmental justice and includes the following directives for BLM employees:

- Consider the impacts of actions and inactions on minority populations, low-income communities, and tribes;
- Analyze and evaluate the equity of the distribution of benefits and risks of BLM decisions; and
- Actively seek the participation of affected minority communities and groups.

State

Environmental justice is defined in California state law as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws and policies” (Government Code Section 65040.12). Numerous statutes relating to environmental justice have since been passed. Most relate to the procedural framework for environmental justice programs in the state, including development of an intra-agency environmental justice strategy for CalEPA and its boards, departments, and office, and establishment of the Office of Planning and Research (OPR) as the coordinating agency for state environmental justice programs.

Local

A few cities, counties, and regional agencies in California have adopted environmental justice policies.

Geologic and Soil Resources

3.6.1 Introduction

This section discusses existing geologic, seismic, soil, and mineral conditions along the California coast and describes applicable regulations pertaining to these resources.

3.6.2 Setting

3.6.2.1 Environmental Setting

General information on the geology, topography, seismicity, soils, and minerals of the California coast is available from a variety of sources, including the U. S. Geological Survey (USGS), the California Geological Survey (CGS) (1:250,000 mapping series), and the Natural Resources Conservation Service (NRCS), as well as numerous large-scale mapping efforts conducted by state and federal governments and university researchers. In addition, a soil survey is currently being completed for the Channel Islands. A comprehensive listing of sources of information is available at the California Resources Agency's Ceres web site (<<http://www.ceres.ca.gov>>).

Geology and Topography

Because of the spatial extent and variable conditions of the monument, the CCNM comprises a wide variety of geologic and topographic features. The greater part of the monument, from approximately Point Conception in Santa Barbara County north to the Oregon border, is located within the Coast Ranges geomorphic province, which is characterized by sedimentary strata with a terraced, uplifted, and wave-cut coastline. A granitic core, extending from the southern extremity of the Coast Ranges to north of the Farallon Islands, is found in this region west of the San Andreas Fault. South of Point Conception, the coastline enters the Transverse Range geomorphic province, characterized by an east-west mountain structure that extends offshore. The majority of the coastal rocks in this province are of marine and non-marine sedimentary origin. South of this, the monument enters the Peninsular Ranges geomorphic province that is dominated by marine and non-marine sedimentary rocks along the coast and granitic rocks inland.

In addition, from Cape Vizcaíno in Mendocino County south to San Diego, the California coast comprises a discontinuous series of narrow, flat-lying marine terraces. Gradual erosion has created a relatively shallow submerged continental shelf offshore. This shelf varies in width but is often no more than 4 or

5 miles wide and is often etched by submarine canyons. Many of the rocks and islands found on the continental shelf are remnants of mainland areas that were exposed by tectonic uplift (discussed below).

Geologic features found in the monument have either of two basic formative histories:

- (1) Larger islands off of the coast, including the Farallon and Channel Islands, as well as rocks and islands offshore of these larger islands and some nearshore CCNM features, are the result of tectonic and volcanic activity, which generated uplifts that formed these features.
- (2) Other nearshore rocks and islands are sedimentary in formation, the result of deposition of geologic material over time. Tectonic activity and faulting may have cleaved or uplifted these sedimentary rocks from the mainland; therefore, tectonic activity plays a role in this formative history as well.

Multiple physical factors lead to the ongoing formation and dissolution of the rocks and islands in the monument, including the erodibility of the geologic material and the extent of tectonic forces and wave, wind, and tidal action. The rocks and islands off the California coast are dynamic; certain rocks and islands will eventually be eroded below mean high tide, while other areas currently attached to the shoreline will become separated from the coast. Where wave forces are strong, offshore formations tend to be rocky, whereas in areas with lower wave energy, sandy areas and beaches may form. In general, north of Point Conception, strong waves and wind have caused numerous rocks and cliffs to form. To the south, the buffering effect of the Channel Islands and the Southern California Bight—an indentation and southeasterly shift in the coastline south of Point Conception—reduces the impact of storm waves; and rocks and islands tend to be less abundant and more sandy.

Because of their isolation, individual monument features may act as representatives of certain geologic formation types and/or as benchmarks for particular geologic processes. These features may have special scientific or interpretive value to coastal geologic research.

Nearshore CCNM features may be adversely affected by human-induced sedimentation and erosion, which may alter geomorphologic processes on the monument. California's coastal beaches, wetlands, and watersheds have been significantly affected by extensive human alteration of the natural flow of sediment to and along the coast. Some watersheds no longer provide a sufficient supply of sediment to beaches; in other areas, wetlands are compromised from too much sedimentation, and beaches can erode due to lack of sand. The extent to which this alteration of natural processes has affected geomorphology of the CCNM is unknown.

Seismicity

The project area is subject to seismic hazards because of its proximity to numerous faults. These faults are known to be historically active and are capable of generating earthquakes with sufficient magnitude to cause strong ground motion in the CCNM project area. Seismic hazards refer to earthquake fault ground rupture, ground shaking, liquefaction and related hazards, and earthquake-induced slope failure.

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) regulates development near active faults to mitigate the hazard of surface rupture. Faults in an Alquist-Priolo Earthquake Fault Zone are typically active faults. As defined under the Alquist-Priolo Act, an active fault is one that has experienced surface displacement within Holocene time (about the last 11,000 years). A potentially

active fault is one that has experienced surface displacement during Quaternary time (last 1.6 million years).

Numerous active, potentially active, and pre-Quaternary faults are found offshore and nearshore in the vicinity (i.e., located in an approximately 20-mile radius) of the CCNM. Most of these faults are aligned parallel to the coastline (i.e., trending in a southeast-to-northwest alignment). The San Andreas is the predominant fault system extending through most of California and enters the Pacific Ocean south of San Francisco Bay, rejoining the mainland at Point Arena and again at Shelter Cove.

From north to south, other active faults include the Trinidad Fault, the Mad River Fault Zone, the Little Salmon Fault, the Mendocino Fault, the Maacama Fault Zone, the Rodgers Creek Fault Zone, the Hayward Fault Zone, the Calaveras Fault, the San Gregorio Fault Zone, the Palo Colorado Fault, the San Simeon Fault, the Los Osos Fault Zone, the Los Alamos Fault, the Santa Ynez Fault, the San Cayento Fault, the San Gabriel Fault Zone, the Red Mountain Fault, the Ventura Fault, the San Fernando Fault, the Verdugo Fault, the Santa Cruz Island Fault, the Malibu Coast Fault, the Hollywood Fault, the Raymond Fault, the Newport Inglewood Fault, the Palo Verdes Fault Zone, the Cabrillo Fault, the Whittier Fault, the Elsinore Fault Zone, the Palo Verdes Hills-Coronado Bank Fault Zone, the Newport Inglewood-Rose Canyon Fault Zone, the San Diego Trough Fault Zone, and the Coronado Bank Fault Zone (Jennings 1994). All of these faults are within Alquist-Priolo Earthquake Fault Zones (Hart and Bryant 1997).

Many other potentially active and pre-Quaternary faults are also found offshore and nearshore in the vicinity of the CCNM. Figure 3.6-1 identifies the types of faults that are found along the coastline.

Finally, north of the Mendocino Fault is found the Cascadia Subduction Zone, which extends north into Canada. In this zone, the eastward-moving Juan de Fuca tectonic plate meets the westward-moving North American plate. Periodic large earthquakes can occur approximately once every 500 years when the Juan de Fuca plate successfully slips beneath the North American plate. In the period between the earthquakes, the Juan de Fuca plate continues to attempt to slide beneath the North American plate, resulting in compression and uplift of the rocks along all the edges of the plates.

Ground Shaking Hazard

Ground shaking hazard varies from low to high in the CCNM, depending on location. Areas most susceptible to a significant amplification of ground shaking are typically underlain by soft sediments. Based on a probabilistic seismic hazard map that depicts the peak horizontal ground acceleration values exceeded at a 10-percent probability in 50 years (Petersen et al. 1996), the probabilistic peak horizontal ground acceleration values for the proposed project area range from 0.1 to 0.9g (where g is the force of gravity). Areas with medium to high ground shaking hazard are identified in Figure 3.6-2.

Liquefaction and Related Hazards

Poorly consolidated, water-saturated fine sands and silts located within 50 feet of the surface are typically considered to be the most susceptible to liquefaction. Soils and sediments that are not water saturated and that consist of coarser or finer materials are generally less susceptible to liquefaction (California Division of Mines and Geology 1997). The areas with soils and sediments susceptible to liquefaction in the CCNM project area are similar to areas where medium to high ground shaking hazard exists (see Figure 3.6-2).

Two potential ground failure types associated with liquefaction in the CCNM project area are lateral spreading and differential settlement (Association of Bay Area Governments 2003). Lateral spreading involves a layer of ground at the surface being carried on an underlying layer of liquefied material over a nearly level surface toward a river channel or other open face.

Another common liquefaction-related hazard in the CCNM project area is differential settlement as soil compacts and consolidates to varying degrees after the ground shaking ceases. Differential settlement occurs when the layers that liquefy are not of uniform thickness, a common problem when the liquefaction occurs in artificial fills. Settlement can range from 1 to 5 percent, depending on the cohesiveness of the sediments (Tokimatsu and Seed 1984).

Landslides and Debris Flows

No large-scale mapping effort for the entire CCNM project area has been conducted to date. Based on the surrounding coastal topography in the CCNM project area, however, the potential for landslides to occur exists throughout many areas on the coastline (Varnes 1978). Proposed future construction activities under the CCNM RMP would likely occur on flat land, as defined by Wentworth et al. (2000). Flat land has little or no potential for slumps, translational slides, earth flows, or any other slope movements identified by Varnes (1978). Many of the cliffs and hills immediately east of the CCNM project area, however, do have the potential for landslides. These areas would most likely be mapped either as having areas of few landslides or areas with mostly landslides, as defined by Wentworth et al. (2000).

Soils

A small number of the rocks and islands, mainly concentrated in the northern portion of the coast, have native soils that support vegetation. These soils were likely formed under three conditions: (1) soil formation may have occurred on the rocks in-situ; (2) for rocks and islands that were once a part of the mainland, soil formation may have occurred while the islands were still attached to the mainland; or (3) some combination of the above. In all cases, these soils may have research and interpretive interest as they may represent unique soil types, provide examples of soil formation, or pristine examples of soils currently or historically found on the shoreline. No soil surveys are known to be completed for the CCNM.

Minerals

The presence of mineral deposits and energy resources on the rocks and islands of the CCNM has not been systematically documented. Within submerged lands adjacent to the monument, mineral deposits include:

- Aggregate resources, such as sand, silt, and gravel;
- Precious and semi-precious stones and metals, including gold, jade, titanium, platinum, barite, manganese, nickel, cobalt, and copper (California Resources Agency 1997); and
- Fluid minerals, including oil and natural gas deposits and seeps. The seeps are catalogued by USGS (U.S. Geological Survey 2003).

Small-scale recreational mineral collection occurs along various portions of the coast, such as recreational jade collection along the Big Sur coastline. Much of this collection is performed by divers outside the

CCNM boundaries. Although not likely, some collection may occur in the CCNM. No data are available regarding the extent of recreational collection in the CCNM.

Nearshore and offshore mineral production occurs for various resources at multiple locations, including:

- Sand and gravel from Santa Catalina Island and in the outer continental shelf of Southern California (San Pedro Shelf and San Diego Shelf);
- Heavy minerals from various areas off the coast;
- Barite nodules east of San Clemente Island, southwest of San Nicolas Island, on the southwest slope of Cortes Bank, on the Patton Escarpment, and southwest of Navy Bank; and
- Manganese nodules, primarily on the abyssal ocean floor and submarine ridges, and on the lower continental slope.

Historically, sand mining operations were conducted in the Monterey Bay Area. In addition, the entire California coastline has a history of mining operations for beach placers, in particular gold and jade. Beach placers are concentrations of heavy minerals deposited as a result of the action of shore currents and waves, which tend to sort and distribute the materials broken down from the sea cliffs or washed into the sea by streams. Under special circumstances, gold deposits can be formed by the action of the waves, winds, and currents on the seashores. Some of this mining activity may have historically occurred on the CCNM.

Coastal Erosion

The physical configuration of the California shoreline is dynamic and constantly changing due to coastal erosion and accretion. The rate of this shoreline change is determined by natural processes, such as rough seas, sea-level rise, high tides, nearshore currents, rainfall and runoff, landslides, and earthquakes, as well as by human developments that can restrict or accelerate the volume of sand available for beaches.

California's beaches, coastal bluffs, bays, estuaries, and other shoreline features are altered according to geologic conditions, the availability of beach sand, the wave and current energy impinging on the coast, and other physical processes that affect sand movement and retention. A constant supply of sand is necessary for beaches to form and be maintained along this shoreline. Many human activities reduce the supply of sand that reaches the ocean and, in turn, deprive beaches of replenishment. These activities include dam construction, river channelization, and other developments. Lack of sand creates greater vulnerability for shorelines that have always been subject to varying levels of erosion. In the long term, sand supply from inland sources may be increased through redesign of existing structures or altering water management practices. Short-term management of shoreline erosion will likely continue to focus at the land/sea interface along the California coastline.

Sand is transported along the coast (long-shore transport) by wave-induced nearshore currents, providing vital sand flow for California beaches. Construction of breakwaters, jetties, or groin fields to protect harbor entrances, maintain beaches, or protect coastal structures have both positively and negatively affected sand movement along the shoreline. Protective structures trap sand and allow beaches to expand upcoast from the device but can interrupt the flow of sand to other beaches. The structures protecting Santa Barbara and Oceanside harbors are two well-known examples of protective structures in California that provide benefits to the community but also increase downcoast erosion. In many cases, however, few adverse affects have been documented; and the major impact appears to be the increased width of narrow beaches, providing recreational opportunities and property protection.

Other forces, such as intense storms, can cause serious shoreline retreat (storms in 1982, 1983, and 1995 caused major damage to California's beaches). Such events occasionally force coastal residents, local governments, or state agencies to dump boulders (rip-rap) in front of threatened structures during emergency attempts to save property. Such emergency measures can be costly, ineffective, and result in unintended effects (including reduced shoreline access), although they can be effective if properly engineered and permitted by agencies of jurisdiction.

Historically, most beaches in California were relatively narrow; but width varied depending on geologic setting and other processes influencing sand movement, supply, and retention as discussed above. Extensive post-World War II coastal development occurred in California during one of the mildest weather periods in centuries. In the last 20 years, however, the State has suffered major public and private property losses from severe erosion in such coastal areas as Marin, Santa Cruz, San Luis Obispo, Santa Barbara, Los Angeles, Orange, and San Diego Counties as more "normal" historical weather patterns returned.

3.6.2.2 Regulatory Setting

Currently, no BLM regulations or management policies govern the geology, topography, or soil resources of the CCNM. Under the Presidential Proclamation establishing the CCNM, the CCNM is removed from mineral mining activity, exploration, and research, as well as from appropriation, injury, destruction, and removal of monument features.

The CCNM has not been managed as a source of minerals since 1930 at the latest. The islands were first withdrawn from surface entry, mining, and mineral leasing by EO 5328, signed by President Hoover on April 14, 1930. This EO temporarily withdrew all of the unreserved islands, rocks, and pinnacles situated in the Pacific Ocean off the coast of California from settlement, location, sale, or entry, for classification and in aid of legislation.

This order was revoked by Public Land Order 6369, issued in April 1983 and signed by the Secretary of the Interior, which also withdrew all of the unreserved islands, rocks, pinnacles, and reefs off the coast of California, except Pelican and Round Rocks near Crescent City, from surface entry, mining, and mineral leasing to protect the islands for establishment of the California Islands Wildlife Sanctuary. The withdrawal was to remain in effect for 50 years.

This Public Lands Order was supplemented by the January 11, 2000 Presidential Proclamation, which appropriated and withdrew the monument from "all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument."

Mineral extraction from the submerged lands adjacent to the CCNM are, in most cases, managed by the State of California within 3 nautical miles of the coast and by the federal MMS seaward from the state/federal boundary (i.e., 3 nautical miles to 12 nautical miles from the coastline).

A brief overview of other non-BLM applicable federal, state, and local policies, laws, and ordinances pertinent to geologic, topographic, and soils resources is presented below.

Federal

Section 402 of the Clean Water Act/National Pollutant Discharge Elimination System

Amendments in 1987 to the federal CWA added Section 402p, which establishes a framework for regulating municipal and industrial storm water discharges under the National Pollutant Discharge Elimination System (NPDES) program. EPA has delegated to the State Water Resources Control Board (SWRCB) the authority for the NPDES program in California, which is implemented by the state's nine Regional Water Quality Control Boards (RWQCBs). Under the NPDES Phase II Rule, any construction activity disturbing 1 acre or more must obtain coverage under the state's General Permit for Storm Water Discharges Associated with Construction Activity (General Permit). General Permit applicants are required to prepare an NOI and a Storm Water Pollution Prevention Plan (SWPPP) and implement and maintain BMPs to avoid adverse effects on receiving water quality as a result of construction activities, including earthwork. The components of the SWPPP most relevant to geologic, topographic, and soils resources are erosion and sediment control measures.

State

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code [PRC] Sec. 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It also defines criteria for identifying active faults, giving legal weight to terms such as active, and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones.

Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are "sufficiently active" and "well-defined." A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the Act as referring to approximately the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Hart and Bryant 1997).

Seismic Hazards Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC Sec. 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards; and cities and counties are required to regulate development within mapped Seismic Hazard Zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within Seismic Hazard Zones until appropriate site-specific geologic or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

California Building Standards Code

The State of California's minimum standards for structural design and construction are given in the California Building Standards Code (CBSC) (24 CCR). The CBSC is based on the UBC (International Code Council 1997), which is used widely throughout United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for California conditions with numerous, more detailed, or more stringent regulations. The CBSC requires that "classification of the soil at each building site shall be determined when required by the building official" and that "the classification shall be based on observation and any necessary test of the materials disclosed by borings or excavations." In addition, the CBSC states "the soil classification and design-bearing capacity shall be shown on the (building) plans, unless the foundation conforms to specified requirements." The CBSC provides standards for various aspects of construction, including but not limited to excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In accordance with California law, certain aspects of the project would be required to comply with all provisions of the CBSC.

Local

Local jurisdictions typically regulate construction activities through a multi-stage permitting process that may require preparation of a site-specific geotechnical investigation. The purpose of a site-specific geotechnical investigation is to provide a geologic basis for the development of appropriate construction design. Geotechnical investigations typically assess bedrock and Quaternary geology, geologic structure, soils, and previous history of excavation and fill placement. As appropriate, they may also address the requirements of the Alquist-Priolo Act, the Seismic Hazards Mapping Act, and local regulations.

Individual counties typically have specific grading and erosion control ordinances. These ordinances are in place to limit erosion and sedimentation from construction activities. A grading permit, as typically required by a county code, is usually required for specific projects where earthwork will be involved. As part of this permit, the project applicant is usually required to submit a grading and erosion control plan, vicinity and site maps, and other supplemental information. In addition, standard conditions in the grading permit typically include an extensive list of BMPs similar to those described for the SWPPP above.

Other

Coastal erosion issues are currently being addressed by the California Coastal Sediment Management Workgroup, a consortium of multiple federal, state, and non-profit agencies that includes the California Department of Boating and Waterways, DFG, DPR, the California Coastal Commission, the SLC, the California Coastal Conservancy, the Corps, USGS, and the California Coastal Coalition. This group is currently preparing a California Coastal Sediment Management Master Plan and has developed a National Regional Sediment Management Demonstration Program (California Coastal Sediment Management Workgroup 2002).

3.7.1 Introduction

This section describes the existing status of health and safety issues on and around the CCNM.

3.7.2 Setting

3.7.2.1 Environmental Setting

Health and safety issues pertinent to the CCNM focus around the potential for personal injury on the CCNM. The rocks and islands that make up the monument are often slippery and sharp, and any access to them is likely to be hazardous. The surrounding waters, with potentially dangerous tides and currents, may also carry flotsam that could collect around or wash up on the monument, or at times contain high levels of contaminants such as from a sewage discharge or an oil spill (see Section 3.23, “Water Resources,” for further discussion of water discharge, including ballast water disposal).

No activities that use hazardous materials and no hazardous materials spills are known to exist in or on the CCNM; however, the accidental or intentional release of hazardous materials on monument lands is a possibility, including accidental oil spills. It is also possible, however unlikely, that merely being a national monument may make the CCNM a potential target for a terrorist attack.

Various agencies are responsible for public safety and hazardous materials response, and have adopted regulations and policies regarding that topic. Because the CCNM spans many jurisdictions, these policies are not consistent throughout the project area. One municipality may offer lifeguard services, and another may involve an NOAA or DFG officer to help oversee water-based recreation. Overflights by civilian and military aircraft are restricted in some areas by zones designated by the Federal Aviation Administration (FAA). Oil spill response is managed by California’s Office of Oil Spill Prevention and Response (OSPR), which is part of DFG.

BLM and other agencies do not currently have resources to provide active law enforcement on the monument; as a result, little law enforcement or provision for public safety in the monument exists.

3.7.2.2 Regulatory Setting

Federal

Currently, except for prohibitions on the removal of monument features and minerals exploration and extraction, BLM does not impose restrictions on human activity in the CCNM. Further, BLM currently has limited resources to enforce restrictions identified in the Presidential Proclamation. Enforcement activity by BLM is also complicated by the definition of the CCNM (i.e., mean high tide), because it may be difficult to ascertain precisely when activities are within BLM jurisdiction.

BLM has a contingency plan in place to provide guidance in the case of an oil spill or hazardous substance release. This plan was evaluated and the findings were presented in BLM Work Plan for EOI Emergency Preparedness & Response Strategy—Oil Discharge & Hazardous Substance Releases (Work Plan) (U.S. Bureau of Land Management Protection and Response Group 2002). The Work Plan identified gaps within BLM contingency plans and provided recommendations to address them.

Within the coastal waters of California, EPA regulates ocean disposal sites for dredge material, and MMS manages mineral extraction activities between 3 and 12 nautical miles off the coast. Hazardous materials associated with mineral extraction are managed by the MMS' Environmental Division.

State

Mineral extraction activities are managed by the State of California (State Lands Commission) within 3 nautical miles of the coast.

Hazardous materials releases are managed by the state OSPR. The mission of OSPR is to provide best achievable protection of California's natural resources by preventing, preparing for, and responding to spills of oil and other deleterious materials, and through restoring and enhancing affected resources. OSPR has six branches, which are each responsible for different areas of management: executive, administrative, enforcement, legal, marine safety, and scientific. Programs include a Resource Assessment Program, which conducts Natural Resource Damage Assessments of pollution events that result in significant injuries to wildlife and/or habitat. It also implements a Wildlife Response Plan, which directs response actions concerning the identification, protection, rescue, processing, and rehabilitation of oiled or threatened wildlife. OSPR is currently developing a Human Disturbance Reduction Program, initially focusing on private aviation and personal watercraft. Oil spill response is typically carried out by a consortium of entities, including the USCG, NOAA, BLM, local law enforcement, and others.

Local

Health and safety issues are managed by local governments by their law enforcement personnel and, in some cases, the environmental health division. The degree to which local governments address health and safety issues varies by jurisdiction.

Section 3.8

Indian Trust Resources

3.8.1 Introduction

This section discusses Indian trust resources on and adjacent to the monument.

3.8.2 Setting

Indian trust resources are legal interests in assets held in trust by the federal government for Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. Assets are anything that holds monetary value and can be real property, physical assets, or intangible property rights. (Examples of trust assets are lands, minerals, hunting and fishing rights, and water rights. Indian rancherías, reservations, and public domain allotments are frequently placed in trust status.)

No Indian trust resources have been identified on monument lands.

Native American lands adjacent to the project area include Smith River Ranchería, Elk Valley Reserve, Resighni Reservation, Big Lagoon Ranchería, Trinidad Ranchería, Table Bluff Reservation – Wiyot Tribe, Manchester, Stewards Point Ranchería, Campo-Manzanita and La Posta Reservation, a Pomo Ranchería at Fort Bragg, and the Yurok's Klamath office and Requa locale.

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Land Use/Lands and Realty

3.9.1 Introduction

This section describes current land uses and the entities involved with lands and realty in the CCNM.

3.9.2 Setting

3.9.2.1 Environmental Setting

Land Use

The CCNM is federally owned and managed under the authority of BLM. The CCNM's rocks and islands are naturally occurring features that are treated primarily as natural resources subject to minimal human contact. On a limited basis, the rocks and islands are used for some human purposes, such as sites for navigational aids (e.g., lighthouses). Also, although not allowed or legal, some humans use the CCNM for recreation and as sites for harvesting invertebrates during low tides.

Land uses on adjacent coastal property are controlled by a number of state, federal, and local entities. Each of these entities has its own land use plan and permitting process. The CCNM overlaps on the jurisdiction of five BLM field offices, adjoins or borders on 10 California State Park district offices, 11 DFG Marine Region field offices, 6 NPS units, a variety of military properties (including Vandenberg AFB and San Clemente and San Nicolas Islands), 15 California coastal counties, and dozens of municipalities. Portions of four National Marine Sanctuaries and the subsurface responsibilities of the MMS and the SLC underlie the CCNM; as do the offshore, below high tide responsibilities of a number of local governmental entities who are submerged lands grantees. Several other entities are also involved in property associated with the CCNM (e.g., The Nature Conservancy, private landowners, and USCG own property adjacent to the monument). See Chapter 1, "Introduction," for more information and Figures 1-4a–e for maps of many of the coastal jurisdictions.

At present, no process is in place to ensure that land use planning by BLM and adjacent government entities is consistent.

Lands and Realty

The proclamation that established the CCNM described the monument as "... all unappropriated or unreserved lands and interests in lands owned or controlled by the United States in the form of islands, rocks, exposed reefs, and pinnacles above mean high tide within 12 nautical miles of the shoreline of the State of California." Based on mapping data prepared by both the SLC and MMS, BLM estimated in July 2000 that the CCNM could include roughly 11,507 rocks and small islands¹ totaling about 900 acres along 1,100 miles of the California coastline.

As mentioned above, the CCNM includes rocks, islands, exposed reefs, and pinnacles. Although many of the rock features immediately offshore of major islands are part of the CCNM, the CCNM does not include the major islands themselves (e.g., Santa Catalina and other Channel Islands, the Farallon Islands, and the islands of San Francisco Bay). Because of the vast amount of land protected as part of the CCNM, there is no comprehensive inventory of specific coastal features and, in many cases, exact property boundaries have not been defined for the CCNM.

Table 3.9-1 presents examples of islands not included in the CCNM because they have previously been appropriated or reserved.

In addition to the major islands listed above, Orange County has a congressional withdrawal of all rocks off the coast of Orange County that are 2 acres or less and within 1 mile from the shore.

3.9.2.2 Regulatory Setting

Federal

The Presidential Proclamation establishing the monument states:

All Federal lands and interests in lands within the boundaries of this monument are hereby...withdrawn from all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws . . .

This restriction means that no portion of the monument can be disposed of by BLM except by exchange and only if it would further the protective purposes of the CCNM. There is no restriction on land acquisitions.

¹ This inventory enabled BLM to count rocks 4 square meters or larger (i.e., the exposed portion above mean high water). The count does not include rocks less than 4 square meters in size. It can be conservatively estimated that at least another 15,000 exposed rocks that are less than 4 square meters are within the jurisdiction of the CCNM. Therefore, the total number of rocks and small islands within the CCNM is more than 25,000 and could be as high as 40,000 individual rocks and small islands exposed above mean high water (the majority of which would be under 4 square meters in size).

Table 3.9-1. Islands Not Included in the California Coast National Monument

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Name	County	Ownership	Management
Alder Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Alm Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Anacapa Island (three islets)	Ventura	NPS	Channel Islands National Park
Año Nuevo Island	San Mateo	State Parks	Año Nuevo State Reserve; State purchased, originally was a Mexican Land Grant (Punta del Año Nuevo)
Bird Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Bird Rock (Santa Catalina Island)	Los Angeles	Private	1.30-acre islet is for sale; conveyed out of federal ownership under Scrip patent (Patent No. 1026930); located north of Twin Harbor area of Santa Catalina Island
Cape Vizcaíno Islands 1, 2, and 3	Mendocino	Private	Unknown (cluster of islets north of Cape Vizcaíno); Patent No. 999436
Castle Rock	Del Norte	USFWS	Castle Rock National Wildlife Refuge
Castle Rock (South end of Big Sur)	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Cat Rock (Anacapa Island)	Ventura	NPS	Channel Islands National Park (Anacapa Island complex)
Channel Islands National Park Rocks and Islets	Santa Barbara and Ventura	NPS	Channel Islands National Park (all rocks and islands within 1 nautical mile of San Miguel, Santa Rosa, Santa Cruz, Anacapa, and Santa Barbara Islands)

Table 3.9-1. Islands Not Included in the California Coast National Monument (continued) Page 2 of 5

Name	County	Ownership	Management
Deadman's Island	Los Angeles	Treasury Department	Dredged out of existence (Los Angeles Harbor project)
Duck Island	Marin	Private	Unknown (Tomales Bay); Homestead 1884 (Patent No. 1900)
Farallon Islands	San Francisco	YSFWS	Farallon Islands National Wildlife Refuge; reserved by Proclamation 2416 of 7/25/40 (Middle Island and North Farallon Island) and PLO 4671 of 6/23/69 (SE Farallon Island with rocks, heads, reefs and islands SE of Middle Farallon Island)
GGNRA rocks	San Francisco and Marin	NPS	Golden Gate National Recreation Area (all rocks, islands, and pinnacles within ¼ mile seaward zone); Public Law 92-589 (10/27/72)
Hog Island	Marin	Private	Unknown (Tomales Bay); cash entry 1878 (Patent No. 6273)
Hunter Rock	Del Norte	Smith River/ Indian Ranchería	Smith River/Indian Ranchería; withdrawn by EO 1495 (4/11/12)
La Cruz Rock	San Luis Obispo	Private	Hearst Corporation (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141])
Two Rocks in the vicinity of Laguna Beach	Orange	BLM	Withdrawn for lighthouse purposes (Act of Congress 5/28/35) (Most likely Seal Rock and Bird Rock)
Lighthouse Island	Del Norte	Del Norte County	Del Norte Historical Society (Battery Point Island); quitclaim deed (12/5/69) for "an historic monument" and "shall not be used for park or recreational purposes" (includes reversion clause)
Mendocino Island 1 and 2	Mendocino	State Parks	Mendocino Headlands State Park (two islets on south side of the town of Mendocino)
Middle Rock (Cape San Martin)	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Morro Rock	San Luis Obispo	State Parks	Morro Bay State Park
NW Seal Rock	Del Norte	Del Norte County	Lease to St. George Reef Lighthouse Preservation Society
Orange County Rocks and Islands	Orange	BLM	Temporary withdrawal for public purposes all rocks, pinnacles, reefs, and islands of less than 2 acres within 1 mile of the coastline of Orange County (Act of Congress 2/18/31)

Table 3.9-1. Islands Not Included in the California Coast National Monument (continued) Page 3 of 5

Name	County	Ownership	Management
Outer Islet	San Luis Obispo	Private	Hearst Corporation (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141])
Pelican Rock	Del Norte	Del Norte County	Crescent City Harbor District; conveyed to Del Norte County (Act of Congress 6/19/48) “for the purpose of a public wharf or...use in the reconstruction, maintenance, and operation of Crescent City Harbor”
Piedra Blanca No. 1 and No. 2	San Luis Obispo	Private	Hearst Corporation (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141])
Plaskett Rock	Monterey	Private	Hearst Corporation (?) (Patent No.1056141, patented off as Valentine Scrip in 1932)
Point Lobos Rocks and Islets	Monterey	State Parks	Point Lobos State Reserve; Recreation and Public Purpose Act (Patent No. 1126429) (458 surveyed rocks and islets)
Point Reyes NS Rocks and Reefs	Marin	NPS	Point Reyes National Seashore (all rocks and reefs within ¼ mile zone offshore and parallel to mean high tide line along national seashore); Act of Congress (9/13/62) and NPS Order (10/20/72)
Preston Island	Del Norte	Private	Within Crescent City (connected to mainland); patented in 1918 (Patent No. 613075)
Prewitt Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act])
Prince Island	Del Norte	Smith River Indian Ranchería	Smith River Indian Ranchería; referenced in EO 1495 (4/11/12) as being the same as Hunter Rock
Prince Island	Santa Barbara	U.S. Navy	MOU with NPS (Channel Islands National Park, off San Miguel Island)
Redwood National Park rocks and islets	Del Norte	NPS	Redwood National Park (all rocks and islands, and pinnacles within ¼ mile zone offshore of coastal section approximately between north end of Freshwater Lagoon and south end of Crescent City, including White, False Klamath, Wilson, and Sister Rocks); Public Law 90545, 82 Stat. 931 (10/2/68)
Round Rock	Del Norte	Crescent City Harbor District(?)	Crescent City Harbor District (?); withdrawn (4/30/48) for Department of Army by PLO 474 (under Rivers and Harbors Act of 1899)
St. George Reef	Del Norte	USCG	Withdrawn by EO (1/29/1867) for lighthouse purposes (all rocky islets off Point St. George)
San Clemente Island	Los Angeles	U.S. Navy	Naval Oceans Systems Facility

Table 3.9-1. Islands Not Included in the California Coast National Monument (continued) Page 4 of 5

Name	County	Ownership	Management
San Francisco Bay Islands	Various	Various	Various (reserved for military, lighthouse, and other purposes, including GGNRA)
San Juan Rocks	Orange	BLM	Withdrawn for lighthouse purposes (Act of Congress 5/28/35)
San Martin Rock (Cape San Martin)	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
San Mateo Rocks	Orange	BLM	Withdrawn for lighthouse purposes (Act of Congress 5/28/35)
San Miguel Island	Santa Barbara	U.S. Navy	MOU with NPS (Channel Islands National Park)
San Nicholas Island	Ventura	U.S. Navy	Pacific Missile Range
Santa Barbara Island	Santa Barbara	NPS	Channel Islands National Park
Santa Catalina Island	Los Angeles	Private	Santa Catalina Island Company et al.
Santa Cruz Island	Santa Barbara	NPS and TNC	Channel Islands National Park and TNC preserve
Santa Rosa Island	Santa Barbara	NPS	Channel Islands National Park
Sea Lion Rock	Monterey	Army	Fort Hunter Liggett (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation)
Sea Lion Rock (Cape San Martin)	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Sugarloaf Island	Humboldt	USCG	Withdrawal by EO (6/8/1866 and 5/23/1867) for lighthouse purposes
Villa Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)

Table 3.9-1. Islands Not Included in the California Coast National Monument (continued) Page 5 of 5

Name	County	Ownership	Management
Whaleboat Rock	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)
Whaler Island	Del Norte	Crescent City Harbor District (?)	Crescent City Harbor District (?); patented on 6/17/36 (Patent No. 1084201) for use as anchor point and rock quarry for breakwater construction
Whaler's Island	San Luis Obispo	Port San Luis Harbor District	Port San Luis Harbor District; patented 5/5/65 (Patent No. 04-65-0301) for public park and fishing purposes only (with reversion clause)
White Rock No. 2	Monterey	USFS	Los Padres National Forest (originally patented off as Valentine Scrip in 1932 [Patent No. 1056141]; re-acquired by U.S. Army [Ft. Hunter Liggett] from Hearst Corporation. Using the authority of a 1956 statute [70 Stat. 656], U.S. Army transferred administration to Los Padres National Forest and administered under authority of Weeks Act)

Notes:

BLM = U.S. Bureau of Land Management.	PLO = Public Land Order.
EO = Executive Order.	TNC = The Nature Conservancy.
GGNRA = Golden Gate National Recreation Area.	USCG = U.S. Coast Guard.
MOU = Memorandum of understanding.	USFS = U.S. Forest Service.
NPS = National Park Service.	USFWS = U.S. Fish and Wildlife Service.

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3.10.1 Introduction

This section discusses the existing noise environment in the CCNM planning area. A brief background discussion of noise terminology follows.

Sound. A vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

Noise. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

Noise-Sensitive Receptor. Noise-sensitive receptors are generally defined as people who are particularly affected by unwanted sound. These receptors are typically associated with land uses such as residences, hospitals, schools, guest lodging, libraries, and certain types of recreational uses.

Decibel (dB). A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.

A-Weighted Decibel (dBA). An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Maximum Sound Level (L_{max}). The maximum sound level measured during the measurement period.

Minimum Sound Level (L_{min}). The minimum sound level measured during the measurement period.

Equivalent Sound Level (L_{eq}). The equivalent steady-state sound level that in a stated period of time would contain the same acoustical energy.

Percentile-Exceeded Sound Level (L_{xx}). The sound level exceeded “x” percent of a specific time period. L₁₀ is the sound level exceeded 10 percent of the time.

Day-Night Sound Level (L_{dn}). The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

Community Noise Equivalent Level (CNEL). The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the

period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.

Ldn and CNEL values rarely differ by more than 1 dB. As a matter of practice, Ldn and CNEL values are considered to be equivalent and are treated as such in this assessment. In general, human sound perception is such that a change in sound level of 3 dB is just noticeable, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as doubling or halving the sound level.

3.10.2 Setting

3.10.2.1 Environmental Setting

The existing noise environment in the planning area varies depending on location but ranges from quiet remote wilderness areas to noisy urban areas. Sources of noise include transportation sources (e.g., surface traffic, aircraft, trains, and motorized boats), construction activities, recreational activities (e.g., recreational airplane and helicopter overflights and jet skis), industrial activities, and natural sources (e.g., wildlife and waves).

3.10.2.2 Regulatory Setting

Federal

No federal regulations apply to noise in the CCNM area.

State

California Government Code Section 65302(f) requires that cities and counties include a noise element in their general plans. The purpose of the noise element is to provide a guide for establishing a pattern of land uses that minimizes the exposure of community residents to excessive noise. OPR has published general plan guidelines that include guidelines for noise land use compatibility (Table 3.10-1).

Local

Coastal cities and counties have established policies and regulations in the form of general plans, ordinances, and municipal codes, which address the generation and control of noise that could adversely affect their citizens and noise-sensitive land uses. The noise element of each general plan contains goals and policies to support the achievement of planning guidelines related to noise. City and county noise ordinances and municipal codes are used primarily to limit noise from stationary sources. Typically, noise ordinances and municipal codes regulate construction activity noise.

Table 3.10-1. State Land Use Compatibility Standards for Community Noise Environment

Land Use Category	Community Noise Exposure - L_{dn} or CNEL (db)						
	50	55	60	65	70	75	80
Residential – Low Density Single Family, Duplex, Mobile Homes	█	█	█	█	█		
Residential - Multi-Family	█	█	█	█	█		
Transient Lodging – Motels, Hotels	█	█	█	█	█		
Schools, Libraries, Churches, Hospitals, Nursing Homes	█	█	█	█	█		
Auditoriums, Concert Halls, Amphitheaters	█	█	█	█	█		
Sports Arenas, Outdoor Spectator Sports	█	█	█	█	█	█	
Playgrounds, Neighborhood Parks	█	█	█	█	█		
Golf Courses, Riding Stables, Water Recreation, Cemeteries	█	█	█	█	█	█	
Office Buildings, Business Commercial and Professional	█	█	█	█	█		
Industrial, Manufacturing, Utilities, Agriculture	█	█	█	█	█	█	

	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

Source: California Governor’s Office of Planning and Research 1998.

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Section 3.11

Paleontologic Resources

3.11.1 Introduction

This section discusses existing paleontological conditions along the California coast and describes applicable regulations pertaining to the resource.

3.11.2 Setting

3.11.2.1 Environmental Setting

Sources of Information

Information on the paleontological resources of the California coast is available from the paleontological resources database at the Museum of Paleontology at U.C. Berkeley in Berkeley, California, the largest single repository of paleontological information in the state, and from the publication *Assessment of Fossil Management on Federal & Indian Lands* (U.S. Department of the Interior 2000).

Paleontological Resources

Because of the sedimentary nature of many of the CCNM's features, the CCNM likely contains paleontological resources. In addition, the CCNM offers excellent opportunities to identify such resources because of the large areas of exposed geologic material found in the rocks and islands of the monument. Nevertheless, the extent of information available on coastal California's paleontological resources has not been evaluated (BLM is currently conducting an extensive review of literature on coastal paleontology, but this effort has not yet been completed).

Paleontologists consider all vertebrate fossils to be of significance. Fossils of other types are also considered significant if they represent a new record, a new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations.

Rock units may be described as having:

- (a) High potential for containing significant nonrenewable paleontological resources,
- (b) Undetermined potential, or
- (c) Low potential for containing nonrenewable paleontological resources.

Even an area designated as having a low potential may yield significant fossils. The areal and stratigraphic limits of the subject rock formation define the scope of the paleontological potential. Paleontologists can accordingly develop maps that suggest sensitive areas and units that are likely to contain paleontological resources. These maps form the basis for preliminary planning decisions. Lead agency evaluation of a project relative to paleontological sensitivity maps should trigger a request for opinion from a state paleontologic clearinghouse or an accredited institution with an established paleontologic repository.

The determination of a site's (or rock unit's) degree of paleontological potential is first founded on a review of pertinent geological and paleontological literature, and on locality records of specimens deposited in institutions. This preliminary review may suggest particular areas of known high potential. If an area of high potential cannot be delimited from the literature search and specimen records, a surface survey will determine the fossiliferous potential and extent of the rock units within a specific area. The field survey may extend outside the defined area to areas where rock units are better exposed.

The sensitivity of rock units in which fossils occur may be divided into the following three operational categories (Reynolds 1995).

A. High Potential. Rock units from which vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing non-renewable fossiliferous resources. These units include, but are not limited to, sedimentary formations and some volcanic formations that contain significant nonrenewable paleontologic resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical; and (b) the importance of recovered evidence for new and significant taxonomic, phylogenic, ecologic, or stratigraphic data. Areas that contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as high potential.

B. Undetermined Potential. Specific areas underlain by rock units for which little information is available are considered to have undetermined fossiliferous potential. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

C. Low Potential. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or rock units have low potentials for yielding significant fossils. Such units are poorly represented by specimens in institutional collections. These deposits generally will not require protection or salvage operations.

Based on available data, the paleontological sensitivity for rock units in the CCNM is undetermined; however, based on the sedimentary nature of many of the rocks on the coast, it is likely that many of the rock units are of high potential.

3.11.2.2 Regulatory Setting

Federal

BLM currently manages the CCNM under the direction set forth in the Proclamation establishing it as a national monument and the basic regulations under which BLM operates. The Presidential Proclamation does not allow any new mineral extraction or drilling in the CCNM, or removal or alteration of monument features.

The following additional federal laws, regulations, and policies are in place to protect paleontological resources.

Laws and Regulations

- Antiquities Act of 1906 (16 U.S. Government Code [USC] 431–433),
- Federal Land Policy and Management Act of 1976 (PL 94-579),
- Archaeological and Paleontological Salvage (23 USC 305),
- National Environmental Policy Act of 1969 (42 USC 4321),
- National Historic Preservation Act of 1966 as amended through 1992 (16 USC 470–470m),
- National Registry of Natural Landmarks (16 USC 461–467),
- Section 4(f) of the Department of Transportation Act of 1966 (23 USC 138 and 49 USC 1653), and
- 43 CFR (Public Lands: Interior) Subpart 3622 – Free Use of Petrified Wood.

Policies

Federal land management agencies require paleontological permits for conducting project-related resource investigations, both inventory and mitigation, on lands under their jurisdiction. Policy and permit procedures for BLM, USFS, NPS, and the Corps are presently in various stages of development and implementation.

BLM

BLM grants Scientific Paleontological Collecting Permits based on the provisions of FLPMA and the Antiquities Act of 1906. Permits for paleontological investigation and mitigation may include stipulations that address such issues as curation, distribution of articles and reports, qualifications, site restoration, and safety. Permit authorization may involve the State Office as well as the Field Offices.

FHWA

Section 305 of the Federal-Aid Highway Act of 1956 (20 USC 78, 78a) gave the Federal Highway Administration (FHWA) the authority to use federal funds to salvage archaeological and paleontological sites affected by highway projects. A directive (codified as 23 CFR 765 and contained in Federal-Aid Highway Program Manual 7-7-4) was developed to implement this program. Current FHWA policy holds that when paleontological resources are identified as an issue of public concern during the environmental review process, those concerns must be addressed in the NEPA document. Resulting data recovery measures should be based on statements of scientific significance, using criteria accepted in the literature of the field. This policy would be triggered if any of the management activities involved partnership with FHWA, such as construction of facilities that may affect the coastal highways.

State

The following state regulation is in place to protect paleontological resources:

- Public Resources Code, Chapter 1.7., Section 5097.5 Archaeological, Paleontological, and Historical Sites (Stats. 1965, c. 1136, p. 2792). This code defines any unauthorized disturbance or removal of fossil sites or remains on public land as a misdemeanor.

Section 3.12

Population and Housing

3.12.1 Introduction

This section presents an overview of population and housing on and adjacent to the monument.

3.12.2 Setting

3.12.2.1 Environmental Setting

No housing exists on the monument. No people live on the monument.

Many coastal communities are adjacent to the monument. See Section 3.17, “Socioeconomics,” for a discussion of population and housing in the coastal counties. Because of the scale of work that would be required, an analysis of population and housing on a town or community level has not been completed for this report.

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Section 3.13

Public Services

3.13.1 Introduction

This section describes the current conditions related to public services in the CCNM project area, including law enforcement, emergency services, schools, parks, and beaches.

3.13.2 Setting

3.13.2.1 Environmental Setting

Public Services

Law Enforcement

Law enforcement in and adjacent to the CCNM includes management of water-based recreation, protection of terrestrial and aquatic resources, oversight of permitted activities, control of airplane and helicopter overflights, emergency response to spills and accidents, and oversight of maritime commerce and immigration. The California coastline and offshore areas include federal, state, local, and private jurisdictions. Each portion of the coast, region of offshore waters, and offshore land mass is part of a single agency or private owner's legal jurisdiction. Ownership on the mainland is shown in the Map Atlas (located at the end of this report); Figure 1-2 shows primary offshore jurisdictions. Some areas are subject to agreements that allow agencies besides the legal owners to patrol and enforce regulations. The result is a complicated system of oversight and enforcement, often resulting in ambiguity and duplication of efforts. Responsibility for a given area of enforcement is generally determined based on the resource involved.

BLM field offices have uniformed law enforcement rangers, and the DOI has special agents that provide law enforcement for BLM. No BLM employees regularly patrol CCNM lands. While BLM retains legal responsibility for the CCNM, DFG historically has handled and continues to handle the day-to-day management of the area. (The authority for this management originated in the 1983 MOU between BLM and DFG.) This includes law enforcement activities.

Protection of federally listed endangered or threatened species is under the jurisdiction of USFWS and NOAA Fisheries. Enforcement of laws related to federally protected marine species is carried out by the

USCG on behalf of NOAA Fisheries and USFWS. The USCG also provides emergency oil spill response.

Overflights by civilian and military aircraft are restricted in some areas by zones designated by the Federal Aviation Administration (FAA)

Depending on an offshore rock's location along the coast or proximity to shore, it may incidentally be patrolled by another agency or a municipality. Monument holdings that are close to a public beach with lifeguard services, for example, are likely to be de facto under the patrol of local law enforcement, while monument holdings that are directly offshore of state parks are likely to be patrolled by DPR rangers.

Emergency Services

The USCG is charged with emergency response along the California coast. In addition, rocks and islands that lie close to regularly patrolled beaches, parks, sanctuaries, or other holdings are likely to be subject to emergency response carried out by relevant landside jurisdictions.

Schools

No primary or secondary schools are located on or directly adjacent to the monument. The CCNM, while potentially offering opportunities for primary or secondary school educational activities, is not likely to affect the demand for schools. Consequently, this topic is not discussed further.

Several universities own or use lands along the coast (refer to Table 2-3), and CCNM lands are used by these universities for research and educational purposes. However, no portion of the monument is officially associated with any university or school.

Parks and Beaches

Numerous federal, state, regional, and local parks and beaches are located along the California coast. A partial list is provided in Appendix K, and locations of many of these holdings are shown in Figures 1-4a–e.

Section 3.14

Utilities and Service Systems

3.14.1 Introduction

This section describes the current conditions of utilities, including power, waste disposal, water, wastewater, and stormwater, and communication infrastructure, in and around the monument.

3.14.2 Setting

3.14.2.1 Environmental Setting

The only known utility right-of-way on the CCNM is held by the Pacific Gas and Electric Company, on Lion Rock offshore of Diablo Canyon. No other utilities or communication infrastructure currently exist on the CCNM, nor does it contain any facilities requiring utilities.

The coast adjacent to the CCNM contains a variety of utility and communication infrastructure, which varies based on location. Locations on the coast that may be utilized for monument facilities generally have existing infrastructure to support these uses.

3.14.2.2 Regulatory Setting

Federal

The Presidential Proclamation establishing the monument states:

All Federal lands and interests in lands within the boundaries of this monument are hereby...withdrawn from all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws...

This restriction encompasses utility and communication infrastructure.

State and Local

Numerous state and local jurisdictions have authority over coastal lands. Coastal locations selected for construction of monument facilities would be subject to site-specific state or local regulations regarding utilities and communications infrastructure.

3.15.1 Introduction

This section identifies current recreational activities in and surrounding the CCNM, as well as the present management of these activities. Recreational use includes activities that occur on the rocks and islands (e.g., exploration, fishing, and tidepooling), in the surrounding waters (e.g., scuba, snorkeling, swimming, boating, fishing, and surfing), and on the adjoining mainland (e.g., wildlife viewing and sightseeing).

For the purposes of this discussion, recreational activities in the monument have been grouped into the following six categories, based on where the activities take place:

- On-island (exploration, fishing, tidepooling, and rock hopping/climbing),
- Water-contact (swimming, snorkeling, scuba, surfing, and wind surfing),
- Non-motorized boating (sea kayaking, canoeing, sailing, and wind surfing),
- Motorized boating (pleasure boating, fishing, and personal water craft),
- Aerial (non-commercial planes and helicopters), and
- Mainland viewing (wildlife viewing and sightseeing).

While other recreational activities may take place in the monument, these categories and the associated recreational activities comprise the current and primary forms of recreation that may be affected by management plan actions.

3.15.2 Setting

3.15.2.1 Coastal Recreation in California

According to the State's official web site, California's tourism is a major part of California's economy, generating more than \$75 billion in direct travel spending, supporting jobs for more than 1 million Californians, and generating \$5 billion in direct state and local tax revenue. Tourism is California's third largest employer and fifth largest contributor to the gross state product.

Coastal recreation and tourism is a significant portion of this industry. It has been estimated that, in 1992, the value of tourism and recreation along the California coast was \$9.9 billion. Of this total, \$6.6 billion was from direct spending and \$3.3 billion was indirect spending estimated from economic income multipliers (Moller and Fitz 1994).

According to the 2000 National Survey on Recreation and the Environment, over 17 million people participated in one or more marine-based recreational activity along California's coast in 2000. About 5 million arrived from another state and 12 million were California residents. California ranks first in the nation for the total number of state residents that participate in marine-based recreation and second after Florida for the combined total number of tourists and residents (Leeworthy and Wiley 2001).

Table 3.15-1 identifies the various marine-based recreational activities that were tracked in this survey. The table identifies the number of California residents that participated in that activity during the 12-month period but not necessarily in California, the total number of residents and tourists that participated in the activity in California and, where available, the total number of participation days for that activity in California.

Recreational pressures tend to be the most intense near the state's urban centers, and recreational boaters are further concentrated around a limited number of boat ramps. Although there are more than 850 public coastal access points in California, there are far fewer boat launch ramps. While these use patterns, combined with statewide statistics, help identify the overall value and importance of coastal recreation and tourism, there are very few regional, county, or community statistics to help measure and compare the value and importance of these activities at any one point along the coast. Table 3.15-2, which shows coastal State Park attendance by county, may at first appear to provide the tools to compare recreational use between counties; however, State Park units are not equally distributed nor do the statistics separate marine-based recreational activities from other types of uses.

While the figures cited above are impressive, the majority of the total participants (12.6 million participants and 151 million use days) focus on beach-related recreation, most of which occurs in southern California where the proximity to the CCNM rocks and islands is limited. The figures for non-beach waterside-related recreation (1.5 million participants and 20.1 million use days) are probably more relevant and cover areas such as scenic overlooks and rocky coastlines where proximity to the CCNM is likely.

The over 12,000 rocks, islands, and reefs that make up the CCNM are for the most part inaccessible to most recreationists due to their small individual size, location in the rugged surf zone, and lack of landing areas. Therefore, on-island recreation is generally restricted to the few locations where the rocks can be reached from the mainland at low tide or where there is a safe access point from the water. Beyond on-island recreation, recreational activities in the water adjoining the monument, in the air, and on the mainland overlooking the monument can be affected by management activities and in turn can affect the natural and cultural features of the monument.

Table 3.15-1. Marine Recreational Activities in California (in millions of persons)

Activity	Residents (M)	Total (M)	Participation Days (M)
Beach-related	9.1	12.6	151
Non-beach waterside-related	1.1	1.5	20.1
Swimming	6.1	8.4	94.6
Snorkeling	1.3	0.71	3.8
Scuba	0.73	0.29	1.4
Surfing	0.74	1.1	22.6
Wind surfing	0.06	0.08	Not available
Fishing	2.5	2.7	20.3
Motor boating	1.5	1.5	11.6
Sailing	1.0	1.1	6.8
Personal water craft	0.7	0.7	2.9
Canoe	0.2	0.2	Not available
Kayak	0.5	0.43	Not available
Bird watching	1.9	2.6	65.8
Other wildlife watching	4.4	2.6	38.8
Viewing/photographing scenery	2.9	4.2	107.9
Hunting	<u>0.1</u>	<u>0.1</u>	Not available
Total	12.2	17.6	Not available

Note: M = Millions (of people).

Source: Leeworthy and Wiley 2001.

Table 3.15-2. 1992 California Coastal State Park and Recreation Area Attendance
(in thousands of persons)

County	Day Use (T)	Overnight Camping (T)	Total Attendance (T)
Del Norte	59.4	37.0	96.4
Humboldt	872.3	142.4	1,014.7
Mendocino	1,771.1	246.0	2,017.2
Sonoma	2,817.6	151.1	2,968.7
Marin	1,653.1	44.7	1,697.8
San Francisco	231.5	0.0	231.5
San Mateo	958.7	61.2	1,019.9
Santa Cruz	4,238.8	363.3	4,602.1
Monterey	2,222.8	17.2	2,240.0
San Luis Obispo	3,861.0	603.0	4,464.0
Santa Barbara	791.1	596.4	1,387.5
Ventura	2,108.3	173.8	2,282.2
Los Angeles	548.3	107.5	655.8
Orange	4,923.8	279.0	5,202.8
San Diego	<u>6,187.6</u>	<u>422.1</u>	<u>6,609.7</u>
Total	33,245.4	3,244.6	36,490.0

Note: T = Thousands (of people).

Source: Moller and Fitz 1994.

3.15.2.2 Coastal Access

Approximately 25 percent of the California shoreline is owned by DPR, and another 17 percent of the shoreline is also publicly owned and accessible (California Coastal Commission 1997). More than 850 public access points are available along the coast. These access points are managed by a wide variety of federal, state, and local jurisdictions; access ranges from coastal overlooks on bluffs to full-service parks with boat launches, beaches, and picnicking and camping facilities. A partial list of coastal parks and beaches is provided in Appendix K, and is shown in Figures 1-4a–e.

The rocks and islands in the CCONM offer limited public access because they are located offshore, separated from the mainland by heavy surf; are of small average size; and in some instances have steep rock faces. Safety risks, a lack of landing areas, and limited recreational values naturally limit public access to the rocks. However, some rocks accommodate exploration because they are close to the mainland at low tides or because they have safe landing areas for boats. In these cases, people take the opportunity to climb rocks, hike, explore tidepools, and study nature. Whether people can successfully

access the monument by watercraft depends on the presence of boat launch ramps, beach access points, marinas, and sea conditions.

3.15.2.3 Regulatory Setting

The majority of publicly owned recreational access areas associated with the CCNM are in non-BLM jurisdictions. The management and control of recreational access to the CCNM depends on cooperation among the many entities and land managers that oversee these access points, and these entities each have their own rules and restrictions regarding allowed recreational activities. The diversity of jurisdictions, large numbers of unstaffed access points, limited operational budgets, and varying management priorities make monitoring recreational activities and conducting effective public outreach very difficult. Resource management, education, access, and law enforcement efforts are prioritized differently based on the entities involved, and without a full picture of recreational pressures.

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3.16.1 Introduction

This section presents an overview of research activities on the monument.

3.16.2 Setting

3.16.2.1 Environmental Setting

Many public and private entities conduct research along the California coast. Various universities, maritime museums, marine sanctuaries, federal and state resource agencies, and nonprofit organizations conduct or sponsor research efforts. A partial list of these institutions is included in Table 3.16-1.

Current research efforts have numerous goals. Many programs are in place to better understand the extent and condition of biological resources, while others study the physical processes that affect the coast. Data collection on important cultural and historic locations is ongoing, and other efforts are aimed at understanding the effects of current human activities on coastal resources and processes.

No known single entity tracks and manages research programs along the California coast. CCNM management staff and BLM field offices currently administer a permit process for institutions or individuals wishing to access the CCNM for research purposes. However, it is not known how many of the research entities along the coast are aware of the requirement to obtain permits from BLM before researchers access the rocks and islands; nor is it known how much research is carried out without permits. Other coastal land-owning agencies (e.g., DPR, USFWS, and NPS) also issue research permits for activity in their jurisdictions, as does NOAA Fisheries; and DFG issues scientific collecting permits. It is possible that permitted researchers might assume that offshore rocks fall in these agencies' allowed research areas. A comprehensive guide to attaining research permits on the California coast could not be found for inclusion in this report.

Table 3.16-1. California Coastal Research Institutions

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Institution
College/University Institutions
Scripps Institution of Oceanography (University of California [UC] San Diego)
Hancock Institute for Marine Studies (University of Southern California)
Southern California Marine Institute (Occidental College, University of Southern California, and California State University)
Marine Science Center (UC Los Angeles)
Moss Landing Marine Laboratories (California State University)
Hopkins Marine Station (Stanford)
Santa Barbara Marine Science Institute (UC Santa Barbara)
Bodega Bay Marine Lab (UC Davis and UC Berkeley)
Long Marine Lab (UC Santa Cruz)
Humboldt State Marine Research Program (California State University)
Romberg Tiburon Centers (California State University)
Government Agencies
State Water Resources Control Board
California Department of Fish and Game (including the California Department of Fish and Game Office of Oil Spill Prevention and Response)
U.S. Fish and Wildlife Service
U.S. Geological Survey
U.S. Minerals Management Service
National Oceanic and Atmospheric Administration
Beach Erosion Authority for Clean Oceans and Nourishment
California Oceans Resource Management Program (California Resources Agency)
National Marine Sanctuaries
Monterey Bay National Marine Sanctuary
Gulf of the Farallones National Marine Sanctuary
Cordell Banks National Marine Sanctuary
Channel Islands National Marine Sanctuary
Museums and Aquariums
Santa Barbara Maritime Museum
National Maritime Museum (San Francisco)
San Diego Maritime Museum
Los Angeles Maritime Museum
Ventura County Maritime Museum
Maritime Museum of Monterey
Humboldt Bay Maritime Museum (Eureka)
Monterey Bay Aquarium
Cabrillo Marine Aquarium (San Pedro)
Stephen Birch Aquarium, Scripps (La Jolla)
Steinhart Aquarium, California Academy of Science (San Francisco)
Aquarium of the Pacific (Vallejo)
Sea World, San Diego

Table 3.16-1. California Coastal Research Institutions (continued)

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Institution
Other Organizations (Including Nonprofits)
PRBO Conservation Science
Ocean Conservancy
Pacific Seabird Group
The Otter Project, Inc.
Save Our Shores
Surfrider Foundation
California Coastal Coalition
California Sea Grant
Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO)
Communication Partnership for Science and the Sea (COMPASS)
Southern California Coastal Water Research Project
Center for Integrated Coastal Observation, Research and Education (CI-CORE)
Coastal Ocean Currents Monitoring Program

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Section 3.17

Socioeconomics

3.17.1 Introduction

This section discusses the existing social and economic conditions in the 15 counties that include coastline in the state of California. Per BLM requirements, the Sonoran Institute's Economic Profile System was used in the compilation of this report. A profile was created for each county, and the counties were aggregated into three regions for this analysis: northern (Del Norte, Humboldt, Mendocino, Sonoma, and Marin Counties), central (San Francisco, San Mateo, Santa Cruz, Monterey, and San Luis Obispo Counties), and southern (Santa Barbara, Ventura, Los Angeles, Orange, and San Diego Counties). Profiles were not created at the city, town, or community level due to the size of the project area.

3.17.2 Setting

The CCNM is adjacent to 15 Californian counties: Del Norte, Humboldt, Mendocino, Sonoma, Marin, San Francisco, San Mateo, Santa Cruz, Monterey, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, and San Diego Counties. Because these counties are spread over such a large geographic area and cover disparate amounts of the state, comparisons among these counties is difficult for many socioeconomic indicators. In addition, these counties often extend many miles inland, such that the countywide socioeconomic characteristics presented here may not directly correspond with California's coastal demographics. Nevertheless, some general trends and comparisons have been outlined below based on both county boundaries and the three regions identified above.

3.17.2.1 Population

Fifty-eight percent of Californians (17,227,739 people) live in coastal counties. Population increased statewide by 14 percent between 1990 and 2000 (Table 3.17-1). All coastal counties saw population increases in that same timeframe, but several counties grew by more than 14 percent, and seven of them grew by less than 10 percent. Population growth was similar between the three regions.

Table 3.17-1. Population Statistics by Coastal County

County	1990	2000	Percent Change
Del Norte	23,460	27,507	17.3
Humboldt	119,118	126,518	6.2
Mendocino	80,345	86,265	7.4
Sonoma	388,222	458,614	18.1
Marin	230,096	247,289	7.5
Northern Region	841,241	946,193	12.5
San Francisco	123,959	776,733	7.3
San Mateo	649,623	707,161	8.9
Santa Cruz	229,734	255,602	11.3
Monterey	355,660	401,762	13.0
San Luis Obispo	217,162	246,681	13.6
Central Region	2,176,138	2,387,939	9.7
Santa Barbara	369,608	399,347	8.0
Ventura	669,016	753,197	12.6
Los Angeles	8,863,164	9,519,338	7.4
Orange	2,410,556	2,846,289	18.1
San Diego	2,498,016	2,813,833	12.6
Southern Region	14,810,360	16,332,004	10.3
State of California	29,760,021	33,871,648	13.8

Source: Sonoran Institute's Economic Profile System.

3.17.2.2 Density

While only 6 percent of Californians live in a rural environment, three coastal counties' populations include more than 30 percent rural residents, and four other counties have more than 10 percent rural residents (Table 3.17-2). Population density varies among the coastal counties. San Francisco County, which is solely comprised of the City of San Francisco, has a population density of 16,634 people per square mile, while Del Norte, Humboldt, and Mendocino Counties have less than 40 people per square mile on average. In general, the northern region displays relatively low densities, the central region displays intermediate densities (primarily related to Bay Area counties and San Francisco in particular), and the southern region displays the highest densities (with populations primarily concentrated in Los Angeles and Orange Counties).

Table 3.17-2. Density Statistics by Coastal County

County	Urban	Rural	2000 Density (people per square mile)
Del Norte	64.0	32.0	27
Humboldt	70.0	30.0	35
Mendocino	54.0	46.0	25
Sonoma	86.0	14.0	291
Marin	94.0	6.0	476
Northern Region	82	18	93
San Francisco	100.0	0.0	16,634
San Mateo	99.0	1.0	1575
Santa Cruz	85.0	15.0	574
Monterey	89.0	11.0	121
San Luis Obispo	81.0	19.0	75
Central Region	94	6	316
Santa Barbara	95.0	5.0	146
Ventura	97.0	3.0	408
Los Angeles	99.0	1.0	2,344
Orange	100.0	0.0	3,606
San Diego	96.0	4.0	670
Southern Region	98	2	1,198
State of California	94.0	6.0	217

Source: Sonoran Institute's Economic Profile System.

3.17.2.3 Age

The coastal county with the highest median age is Marin; the northern region displays the highest median ages (Table 3.17-3). Only three coastal counties have median ages younger than the statewide median.

Table 3.17-3. Age Statistics by Coastal County

County	Median Age	Under 20	40 to 54	Over 65
Del Norte	36.4	28	22	13
Humboldt	36.3	27	24	12
Mendocino	38.9	28	25	14
Sonoma	37.5	27	25	13
Marin	41.3	22	28	14
Northern Region	38.4	25.8	25.6	13.2
San Francisco	36.5	16	22	14
San Mateo	36.8	25	23	12
Santa Cruz	35	27	24	10
Monterey	31.7	32	20	10
San Luis Obispo	37.3	26	23	14
Central Region	35.7	23.6	22.3	12.3
Santa Barbara	33.4	29	20	13
Ventura	34.2	31	22	10
Los Angeles	32	31	20	10
Orange	33.3	30	21	10
San Diego	33.2	29	20	11
Southern Region	32.6	30.4	20.3	10.2
State of California	33.3	30	21	11

Source: Sonoran Institute's Economic Profile System.

3.17.2.4 Race and Ethnicity

Table 3.17-4 includes the percentage of each county's population who consider themselves to be one of several races or ethnicities. In general, the northern region has a higher percentage of white residents than the central and southern regions, and at the same time a lower percentage of residents of Hispanic/Latino ethnicity. A higher percentage of Native Americans live in the northern three coastal counties than in the other counties.

Table 3.17-4. Race Statistics by Coastal County

County	White	Black or African-American	American Indian and Alaska Native	Asian	Hispanic or Latino
Del Norte	78.9	4.3	6.4	2.3	13.9
Humboldt	84.7	0.9	5.7	1.7	6.5
Mendocino	80.8	0.6	4.8	1.2	16.5
Sonoma	81.6	1.4	1.2	3.1	17.3
Marin	84.0	2.9	0.4	4.5	11.1
Northern Region	82.5	1.7	2.1	3.1	14.1
San Francisco	49.7	7.8	0.4	30.8	14.1
San Mateo	59.5	3.5	0.4	20.0	21.9
Santa Cruz	75.1	1.0	1.0	3.4	26.8
Monterey	55.9	3.7	1.0	6.0	46.8
San Luis Obispo	84.6	2.0	0.9	2.7	16.3
Central Region	60.0	4.5	0.6	17.6	23.5
Santa Barbara	72.7	2.3	1.2	4.1	34.2
Ventura	69.9	1.9	0.9	5.3	33.4
Los Angeles	48.7	9.8	0.8	11.9	44.6
Orange	64.8	1.7	0.7	13.6	30.8
San Diego	66.5	5.7	0.9	8.9	26.7
Southern Region	56.1	7.1	0.8	11.2	38.3
State of California	59.5	6.7	1.0	10.9	32.4

Source: Sonoran Institute's Economic Profile System.

3.17.2.5 Income and Housing

The counties with the lowest per capita and median household incomes are the three northernmost—Del Norte, Humboldt, and Mendocino (Table 3.17-5). These counties also have the lowest median house values, and the vacancy rate in these counties is relatively high. Marin, San Francisco, and San Mateo Counties all have high per capita and median household incomes, as well as high median house values.

Table 3.17-5. Income and Housing Statistics by Coastal County

County	Per Capita Income	Median Household Income	Median House Value	Vacancy Rate
Del Norte	14,573	29,673	121,100	12.1
Humboldt	17,203	31,226	133,500	8.4
Mendocino	19,443	35,996	170,200	9.9
Sonoma	25,724	53,076	273,300	5.9
Marin	44,962	71,306	514,600	4.1
Northern Region	28,716	52,609	304,267	6.3
San Francisco	34,556	55,221	396,400	4.9
San Mateo	36,045	70,819	469,200	2.7
Santa Cruz	26,396	53,998	377,500	7.8
Monterey	20,165	48,305	265,800	8.0
San Luis Obispo	21,864	42,428	230,000	9.3
Central Region	30,391	57,055	378,188	5.5
Santa Barbara	23,059	46,677	293,000	4.4
Ventura	24,600	59,666	248,700	3.4
Los Angeles	20,683	42,189	209,300	4.2
Orange	25,826	58,820	270,000	3.5
San Diego	22,926	47,067	227,200	4.4
Southern Region	22,204	46,812	226,805	4.1
State of California	22,711	47,493	211,500	5.8

Source: Sonoran Institute's Economic Profile System.

Section 3.18

Traffic and Transportation

3.18.1 Introduction

This section describes the existing conditions of the roadways, transit services, and bicycle facilities in the CCNM planning area.

3.18.2 Setting

3.18.2.1 Environmental Setting

Most of the CCNM is remote, undeveloped, and inaccessible by motor vehicles. Some portions of the CCNM may be accessible to off-highway and recreational vehicles; however, no known vehicular usage occurs on the CCNM.

While the CCNM itself is inaccessible, coastal roadways provide access to areas of the coastline adjacent to the CCNM. Many roads exist, most notably the two major north-south transportation routes, State Route (SR) 101 and SR 1. In addition, one north-south railroad track, Amtrak, runs adjacent to portions of the CCNM. These routes serve as links for travelers, residents, communities, and businesses along the coast.

Roadways, railroads, bus routes, and bikeways that may be affected by the RMP are described below.

Roadways

State Route 1

SR 1 is a north-south roadway that varies from two lanes in rural, less-populated areas to six lanes in urban areas along the California Coast. SR 1 begins north of San Francisco near Leggett and follows the coastline through Fort Bragg and Mendocino, rejoining SR 101 just north of the Golden Gate Bridge. South of the bridge, SR 1 breaks off again, going through San Francisco before returning to the coast at Pacifica. South of Pacifica, it continues along the coast through Monterey and Big Sur. For a few miles south of San Luis Obispo, it coincides with SR 101 again. SR 1 separates to go through Lompoc, rejoins SR 101 along the Santa Barbara Channel, and finally takes its own path at Ventura, following the coastline through Malibu, past Los Angeles, and finally terminating where Interstate 5 reaches the coast just north of San Clemente.

State Route 101

SR 101 is a north-south, two- to six-lane roadway that traverses portions of the CCNM. SR 101 begins near Crescent City and follows the coast to Eureka, where it turns inland. It crosses the Golden Gate Bridge into San Francisco and continues down the peninsula on the west side of San Francisco Bay, through San Jose, and returns to the coast just south of San Luis Obispo. SR 101 follows the coast to Ventura, from which it takes an inland route to Los Angeles, where it disappears into the complex of downtown expressways.

Railways

One passenger rail line runs adjacent to the CCNM. Operated by Amtrak, the Pacific Surfliner travels along portions of the CCNM from San Luis Obispo to San Diego. The Pacific Sunliner offers 11 daily round trips between Los Angeles and San Diego. Three stations or stops along this route that are within the vicinity of the CCNM include San Clemente Pier, Oceanside, and Solana Beach. The station in Oceanside also serves Greyhound and the local transit district buses.

Bikeways

Cyclists are granted full access to most state route facilities in California. Portions of SR 101 and SR 1 serve as bike routes.

3.18.2.2 Regulatory Setting

Federal

Routes under the jurisdiction of the BLM are provided a motorized-vehicle route designation of “open” or “closed.” Because of its isolated nature, no known roadways exist on the CCNM, and no route designations exist. Any routes identified as open on the CCNM would be available for general public use by any motorized-vehicle, whether licensed or not (although unlicensed vehicles require a State-issued “green sticker” permit). Closed routes would be used only for administrative and emergency purposes.

Motorized-vehicle access to private lands across federal lands is secured through rights-of-way grants. Temporary access may be provided on routes designated “closed” through authorizations on a case-by-case basis. No right-of-way grants for this purpose are known to exist on the CCNM.

State

SR 1 and SR 101 are under the jurisdiction of the California Department of Transportation (Caltrans).

Section 3.19

Visual Resources

3.19.1 Introduction

This section discusses existing visual and aesthetic resources along the California coast and describes applicable regulations pertaining to these resources.

3.19.1.1 Terminology

In Webster's New World Dictionary, *aesthetics* is defined as "the study or theory of beauty and the psychological responses to it." Aesthetics (or visual resource) analysis is, therefore, a process to logically assess visible change and viewer response to that change.

Identification of existing conditions with regard to visual resources entails three steps.

1. Objective identification of the visual features (visual resources) of the landscape;
2. Assessment of the character and quality of those resources relative to overall regional visual character; and
3. Identification of the importance to people, or sensitivity, of views of visual resources in the landscape.

With an establishment of the no action (baseline) conditions, a proposed project or other change to the landscape can be systematically evaluated for its degree of impact. The degree of impact depends both on the magnitude of change in the visual resource (i.e., visual character and quality) and on viewers' responses to and concern for those changes. This general process is similar for all established federal procedures of visual assessment (Smardon et al. 1986) and represents a suitable methodology of visual assessment for other projects and areas.

The approach for this visual assessment is adapted from FHWA's visual impact assessment system (Federal Highway Administration 1983) in combination with other established visual assessment systems.

The visual impact assessment process involves identification of:

- Relevant policies and concerns for protection of visual resources;
- Visual resources (i.e., visual character and quality) of the region, the immediate project area, and the project site;
- Important viewing locations (e.g., roads) and the general visibility of the project area and site, using descriptions and photographs;
- Viewer groups and their sensitivity; and
- Potential adverse effects.

3.19.2 Setting

3.19.2.1 Environmental Setting

Description of General Visual Character

Some of the most spectacular ocean views in the United States are located along the California coast. The coastal character varies greatly between sunny southern California to the shady forests of the north. Views are defined by qualities including perfect sights of ocean waves breaking on rocky shorelines and cliffs, dozens of historical landmarks like Spanish missions and Spanish settlements, and the opportunities to participate in numerous types of outdoor recreation.

The islands and rocks of the CCONM represent a key visual element defining the wild coastline for which California is known. Steep cliff faces rise out of turbulent waters that have eroded away solid rock over hundreds of years to leave monolithic rock behind. Views of arching sea stacks stand monumental amidst crashing waves. This is a dynamic landscape of beauty that commands the viewer's attention.

As visual resources along the coast, the rocks and islands create distinctive visual patterns and serve as striking and memorable landscape components. In their natural setting, the CCONM's features represent a landscape that is free from encroaching elements, with high visual integrity. The visual coherence and compositional harmony of the rocks and islands, when considered as a whole, provide a unified landscape that defines the western edge of California.

Viewers

Different types of viewers have varying sensitivity to visual quality and changes in visual quality. Sensitivity is based on their familiarity with the view, sense of ownership of that view, and activity (which determines how much attention is paid to the view). Viewers in the actual viewshed of the project would include primarily residential viewers, recreational viewers, and commercial viewers.

Residential viewers are typically very sensitive to visual quality and changes in visual quality. This is because of their familiarity with the view, their investment in the area (if they are homeowners or long-time residents), and their sense of ownership of the view. The view from their residences and yards represents a visual extension of their property, and changes in this view are noticeable and can result in

strong positive or negative reactions. Residential viewers within the viewshed of the CCNM would be located on the landward and ocean side of SR 1. Homeowners within this region invest large amounts of money in coastal properties, a large reason being the unique and beautiful visual qualities of the area.

Recreational viewers include people engaged in active recreation or passive recreation. Viewers engaged in most active recreation, such as playing sports, tend to have only an average sensitivity to visual quality and visual change. Although they are aware of their surroundings, they are usually focused on the recreational activity itself. People engaged in more passive recreation, such as picnicking, photography, nature hikes, and bird watching—and even more active activities such as bicycling and kayaking—are more aware of their surroundings and more sensitive to the visual quality. The visual quality is often an important element in their recreation. Some of these viewers would be very sensitive to visual changes if they regularly return to the same place for their recreation. Others, such as first-time or occasional viewers, who would not be as familiar with the views, would not be as apt to notice changes. There are limitless opportunities for recreationists of all kinds within and surrounding the CCNM. The Pacific Coast Highway is popular with bicyclists and recreational drivers. Recreational viewers often come to the area for its aesthetic qualities.

Tourists are similar to recreational viewers. Depending on what brings tourists to a particular location, they tend to be more or less sensitive to visual quality. If the point of the visit is to enjoy the views or see the scenery, then visual quality is an important element in their trip. However, if their travel is intended to take advantage of indoor activities, visual quality is of less significance. California's coast is a destination for thousands of tourists every year. Tourists often travel along the scenic Coastal Highway because of the unique views offered by the CCNM.

Other viewers, with exceptions, usually have an average sensitivity to visual quality or change. These include people on the local roadway system, including motorists, bicyclists, and pedestrians. Such viewers have varying sensitivity, depending on their purpose of travel. If they are traveling to simply get from one place to another for business or pleasure, their sensitivity normally would be average. If they are traveling for pleasure, which is often the case along the coast, it is likely that they would be more sensitive to their surroundings.

Commercial viewers, such as proprietors or customers, usually have their attention on the commercial activity itself. Industrial workers' attention is primarily focused on their work. Exceptions may include the many commercial uses along the coast that are focused on the view, such as a restaurant with window seats or outdoor seating

Finally, it is important to note that this discussion addresses average viewer sensitivity. Some viewers are more or less sensitive than their activity or ownership would indicate. Individuals' reactions to views vary greatly, depending on a number of factors—including how much they know or care about the view, their personal tastes, and their opinions about the activity they are viewing.

3.19.2.2 Regulatory Setting

Federal

VRM Management System

BLM has developed an analytical process that identifies, sets, and meets objectives for maintaining scenic values and visual quality. The Visual Resource Management (VRM) system functions in two ways. BLM first conducts an inventory that evaluates visual resources on all lands under its jurisdiction (Inventory/Evaluation). Once inventoried and analyzed, lands are assigned relative visual ratings (Management Classifications). Class designations are derived from an analysis of scenic quality (rated by landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modification), a determination of viewer sensitivity levels (sensitivity of people to changes in the landscape), and distance zones (visual quality of a landscape, as well as user reaction, may be magnified or diminished by the visibility of the landscape). Management classes describe the different degrees of modification allowed to the basic elements of the landscape (form, line, color, and texture).

When a site-specific project is proposed, the degree of contrast between the proposed activity and the existing landscape is measured (contrast rating). The contrast rating process compares the proposed activity with existing conditions element by element (form, line, color, and texture) and feature by feature (land/water surface, vegetation, and structures). The contrast rating is compared to the appropriate management class to determine whether contrasts are acceptable. If the proposed project exceeds the allowable contrast, a BLM decision is made to (1) redesign, (2) abandon or reject, or (3) proceed—but with mitigation measures stipulated to reduce critical impacts. The VRM management class objectives are defined as follows:

- **Class 1:** Natural ecological changes and very limited management activity are allowed. Any contrast created within the characteristic landscape must not attract attention. This classification is applied to wilderness areas, wild and scenic rivers, and other similar situations.
- **Class 2:** Changes in any of the basic elements caused by management activity should not be evident in the characteristic landscape. Contrasts are visible but must not attract attention.
- **Class 3:** Changes to the basic elements caused by management activity may be evident but should remain subordinate to the existing landscape.
- **Class 4:** Any contrast may attract attention and be a dominant feature of the landscape in terms of scale, but it should repeat the form, line, color, and texture of the characteristic landscape.

Existing CCNM Visual Resources Management

To date, no VRM inventory has been completed on the CCNM and no VRM classes have been designated. As a result, no specific BLM regulations or management policies currently govern the visual resources of the CCNM. However, present land management and development oversight by the California Coastal Commission, Caltrans, the California Coastal Conservancy, and local counties and cities affect access to visual resources—including both distant and immediate views of the CCNM. Because such a great volume of the viewers and sensitive receptors of CCNM resources are roadway travelers, it is especially important to engage Caltrans in the inventory, planning, and management process.

State

California Scenic Highway Program

The California Scenic Highway Program was created by the California State Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. A highway may be designated scenic depending on how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes on the traveler's enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. The status of a state scenic highway changes from eligible to officially designated when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a scenic highway. For the purpose of visual resource protection, this analysis treats eligible roadways with the same status as officially designated roadways (California Department of Transportation 1996).

Examples of visual intrusions which would degrade scenic corridors as stipulated by Caltrans include dense and continuous development, highly reflective surfaces, parking lots not screened or landscaped, billboards, noise barriers, dominance of power lines and poles, dominance of exotic vegetation, extensive cut and fill, scarred hillsides and landscape, and exposed and unvegetated earth (California Department of Transportation 1996).

Portions of two coastal state highways, SR 1 and SR 101, are designated by Caltrans as scenic highways. Official designations for SR1 are located in San Mateo, Monterey, San Luis Obispo, and Santa Barbara Counties, with other eligible segments located throughout the state. SR 101 enjoys an official designation in its coastal reach in Del Norte County, with other eligible coastal segments located in both northern and southern California.

California Coastal Act

The California Coastal Act (California Public Resources Code Section 30000 et seq.) protects the California coastline by requiring preparation of local coastal plans by local jurisdictions to guide planning and development within the coastal zone, as well as issuance of coastal development permits. The Act contains numerous policies, including protection of the scenic beauty of coastal landscapes and seascapes. As part of the RMP process, a consistency determination will be prepared that identifies whether the RMP is consistent with the Act, including the Act's policies related to visual resources.

Local

Local policies exist for visual resources in the CCNM but were not researched for this study.

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Section 3.20

Water Resources

3.20.1 Introduction

This section identifies existing conditions on and around the CCNM with respect to water quality and water resources, and the relevant regulatory authorities involved in water quality and water resources management on the CCNM.

3.20.2 Setting

3.20.2.1 Environmental Setting

The CCNM itself is not known to contain significant water resources; however, monument features are found in the Pacific Ocean and are surrounded by water. The water surrounding these geologic features support a variety of life, including, marine mammals, fish, migratory birds, and marine flora found in both the littoral and intertidal zones. The variation in water temperature and other abiotic factors, such as wind and tidal influence, result in a varying environment along the coast.

Pollution of coastal water is a major threat to the CCNM. The coast is used by people for commercial and recreational purposes that include resource extraction, snorkeling, scuba diving, boating, kayaking, and surfing, all of which may lead to water contamination. In addition, the ocean is also used for both legal and illegal disposal of pollutants. Legal discharges include treated wastewater, industrial discharges, and urban and agricultural runoff. Illegal discharges include illicit dumping. In the future, some coastal waters will be subject to brine discharges from desalination facilities.

The pollution problem zones are concentrated on the beaches and waters of Los Angeles, San Diego, and San Francisco Bay where populations are most dense and people have easy coastal access. These types of pollutions can be classified into point sources (such as municipal wastewater treatment facilities, industrial facilities, and coastal power plants) and non-point source pollution (such as urban and agricultural runoff, leaks, accidental spills, trash, and illegal dumping). Offshore oil and gas operations also require routine discharges and sometimes result in oil spills. Regulatory agencies have issued permits to literally thousands of point-source dischargers along the California coastline.

Human recreation (such as scuba diving, snorkeling, kayaking, and fishing) can induce coastal erosion, and sedimentation can adversely affect the monument resources by decreasing the visibility of the water. Other activities that result in sedimentation include dam construction, river channelization, and other developments along a river or stream.

Maritime traffic contributes to non-point source pollution, as well as the discharge of ballast water. The main pollutants generated by ship traffic are sewage, oily bilge water, hazardous wastes, and solid wastes. Under the CWA, ships may discharge raw sewage within 3 nautical miles of the coast and therefore could significantly affect the CCNM.

Region IX of the EPA has established six ocean disposal sites for dredge material and spoils, primarily for material from harbor dredging. Locations include one offshore of Humboldt County, two offshore of the Golden Gate, two offshore of Orange County, and one offshore of San Diego (Science Applications 2003). Depending on the disposal material, the material may pose a threat to the water quality.

Finally, naturally occurring features may adversely affect water quality and CCNM resources. Animal excrement may affect the monument and the water that surrounds the monument—both in the water and out of the water. For example, the mammals and birds that use the monuments for resting or nesting create a large amount of excrement. During a storm, this excrement may run off into the water, adversely affecting the water quality by nutrient standards. In addition, California possesses numerous naturally occurring oil and natural gas seeps, ranging from Eureka to Santa Barbara. Although naturally occurring, these seeps may also adversely affect water quality and biota in the splash zone of the CCNM—especially in the area between Lompoc and Oxnard, where tar washes up on shore.

3.20.2.2 Regulatory Setting

Federal

Clean Water Act

The CWA is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit; permit review is the CWA's primary regulatory tool. The following paragraphs provide additional details on specific sections of the CWA.

Under CWA Section 303(d) and California's Porter-Cologne Water Quality Control Act of 1969 (discussed below), the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) establishes the total maximum daily load (TMDL) process to assist in guiding the application of state water quality standards; this process requires the states to identify streams whose water quality is impaired (affected by the presence of pollutants or contaminants) and to establish the TMDL or the maximum quantity of a particular contaminant that a water body can assimilate without experiencing adverse effects.

CWA PERMITS FOR STORMWATER DISCHARGE

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the NPDES program, administered by EPA. In California, the SWRCB is authorized by EPA to oversee the NPDES program through the RWQCBs (see related discussion under "Porter-Cologne Water Quality Control Act" below). The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits.

NPDES General Construction Permits. Most construction projects that disturb 1 acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (General

Construction Permit), which requires the applicant to file a public NOI to discharge stormwater and to prepare and implement an SWPPP. The SWPPP includes a site map and description of proposed construction activities, along with demonstration of compliance with relevant local ordinances and regulations, and an overview of the BMPs that will be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Permittees are further required to conduct annual monitoring and reporting to ensure that BMPs are correctly implemented and effective in controlling the discharge of stormwater-related pollutants. Projects constructed in Caltrans facilities or rights-of-way must comply with the requirements of the Caltrans statewide NPDES permit, which has requirements similar to those of the General Construction Permit.

Individual NPDES Permits. All point source discharges to waters of the United States not covered by a general permit are required to apply for an individual NPDES permit with the RWQCB. All offshore oil and gas platform discharges into federal waters are also regulated by individual NPDES permits. The RWQCB then issues waste discharge requirements (WDRs) and monitoring provisions to ensure compliance with CWA standards.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, passed in 1969, implements the federal CWA at the state level (see “Clean Water Act” above). It established the SWRCB and divided the state into nine regions, each overseen by an RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state’s surface and groundwater supplies, but much of its daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 401, 402, and 303(d). In general, the SWRCB administers water rights and statewide water pollution control and water quality functions, while the RWQCBs conduct planning, permitting, and enforcement activities within their regions. The CCNM falls in the jurisdiction of six RWQCBs: Region 1 (North Coast), Region 2 (San Francisco Bay), Region 3 (Central Coast), Region 4 (Los Angeles), Region 8 (Santa Ana), and Region 9 (San Diego). The guiding regulatory document for the coast is the SWRCB’s *California Ocean Plan*, which identifies plans and policies for maintaining coastal water quality (SWRCB 2001). In addition, each RWQCB has its own Basin Plan.

WATER QUALITY OBJECTIVES BY REGION

The RWQCBs have set water quality objectives for all surface waters in their respective regions (including the North Coast, Central Coast, and South Coast Regions) for the following substances and parameters: ammonia, bacteria, biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity. Specific objectives for concentrations of chemical constituents are applied to bodies of water based on their designated beneficial uses.

Table 3.20-1 summarizes coastal shorelines, estuaries, and bays that have been designated as impaired under Section 303(d) of the CWA. Note that this list excludes those water bodies located within San Francisco Bay, as this area is outside the CCNM. The southern portion of the coast (Los Angeles and south) contains the majority of impaired coastal water bodies.

Table 3.20-1. Impaired Coastal Water Bodies

Regional Water Board	Geographical Extent (County)	Number of Impaired Water Bodies		
		Bays	Estuaries	Coastal Segment
North Coast	Oregon border to northern Marin	1	2	0
San Francisco Bay	Marin to San Mateo	0	0	5
Central Coast	Santa Cruz to Santa Barbara	3	9	11
Los Angeles	Ventura to Los Angeles	12	4	57
Santa Ana	Orange	3	1	3
San Diego	Orange to Mexico border	13	10	20

Source: State Water Resources Control Board 2003.

Other Regulatory Authorities

In addition to the SWRCB, EPA regulates dumping of sewage and wastewater into the ocean. Nevertheless, this is still a problem in densely populated areas such as southern California. The Director of Environmental Health for each coastal county in California is required to report annually to the SWRCB on the number of beach closures and warning sign postings due to public health threats in their jurisdiction. EPA, along with the Corps, also regulates disposal sites for dredge material. Mineral extraction activities (i.e. oil and gas facilities) are managed by the State of California within 3 nautical miles of the coast and by the federal MMS between 3 and 200 nautical miles off the coast.

The principle federal legislation controlling the discharge of ballast water is the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (NANPCA) and the National Invasive Species Act of 1996 (NISA). Under NISA, all vessels carrying ballast water into U.S. waters are required to keep records and provide written information to the USGS.

In 2000, the Ballast Water Management for Control of Nonindigenous Species Act (Assembly Bill 703) went into effect, establishing a general ballast water management program for California under the direction of SLC. The law states that all vessels entering U.S. territorial waters must manage ballast water according to prescribed measures in order to prevent the release of nonindigenous species into state waters. On September 25, 2003, a new relevant package of laws was signed in California that limits cruise ships from discharges of ballast water, sewage, bilge water, and other wastes (Environmental News 2003).

Finally, Fish and Game Code 5650 et seq. regulates discharges of materials to the waters of the State, including any substance or material deleterious to fish, plant life, or bird life.

Wilderness and Other Special Designations

3.21.1 Introduction

This section presents an overview of current and possible special designations of monument lands. Special designations include wilderness, ACECs, back-country byways, national recreation areas, national trails, and wilderness study areas. Chapters 1 and 2 also include discussion of current special designations.

3.21.2 Setting

3.21.2.1 Wilderness

The rocks and islands of the California coast are not currently designated as wilderness. In 1997 and 1999, legislation was introduced in the U.S. Congress to designate BLM-administered coastal rocks and islands in California as wilderness within the National Wilderness Preservation System, but neither of the bills passed through Congress.

The FLPMA recognizes that public lands having wilderness characteristics possess unique resource values and will be managed within BLM's multiple-use mandate. As directed in Section 201 of the FLPMA, if lands are found to have wilderness characteristics through assessment, the BLM land use planning process (defined in Section 202 of the FLPMA) is required to address whether it may protect those wilderness characteristics against or with other possible resource values and uses. In that analysis, BLM should consider the quality of the wilderness characteristics and its ability to preserve those characteristics; the prescriptions necessary to protect the specific wilderness characteristics; the presence of other resource values and uses, and the effect of protecting wilderness characteristics on them; the effect of managing for other resource uses on wilderness characteristics; and the contribution that protecting lands with wilderness characteristics provides in meeting other resource management goals and objectives in the plan.

“Wilderness character” is defined as land:

- (1) That has been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable;
- (2) That has outstanding opportunities for solitude or a primitive and unconfined type of recreation;

- (3) With at least 5,000 acres of land or of sufficient size as to make practicable its preservation and use in unimpaired condition; and
- (4) That potentially contains ecological, geological, or other features of scientific, educational, scenic, or historical value.

To date, the CCNM has not been assessed to determine whether all or portions of the monument possess wilderness character. However, the entire CCNM is likely to fulfill all four criteria, with the possible exception of criterion (3), because total acreage for the CCNM is currently less than 900 acres. The CCNM is not currently managed for wilderness character.

Some coastal lands adjacent to the CCNM are designated as Wilderness Study Areas and wilderness areas. Table 3.21-1 shows which coastal lands possess designated wilderness areas or potential wilderness areas.

Table 3.21-1. Areas Containing Designated Wilderness and/or Potential Wilderness in Coastal California

Coastal Area (and Management Agency)	Wilderness Area	Potential Wilderness Area
King Range (U.S. Bureau of Land Management)		✓
Ventana Wilderness (U.S. Forest Service)	✓	
Silver Peak Wilderness (U.S. Forest Service)	✓	

Source: <http://www.calwild.org/places>.

3.21.2.2 Other Special Designations

In 1990, the California Islands Wildlife Sanctuary was designated by BLM as an ACEC. This designation highlighted the islands' special values and provided additional protection of the resources found on the islands. Daily management of the sanctuary continued to be the responsibility of the DFG as prescribed in the MOU of 1983. This designation is proposed to be lifted under this RMP (see Chapter 2, "Alternatives").

On August 27, 1998, all areas within ½ mile of the coastline were designated as the California Offshore Rocks and Pinnacles Ecological Reserve under the authority of California Fish and Game Code, Article 4, Section 1590, Ecological Reserves; and California Code of Regulations, Title 14, Sections 630 (Ecological Reserves) and 632 (Marine Protected Areas). The Ecological Reserve will continue to be managed by DFG under current California Fish and Game Code and California Administrative Code regulation.

No back-country byways, national recreation areas, national trails, or wilderness study areas currently exist on monument lands.