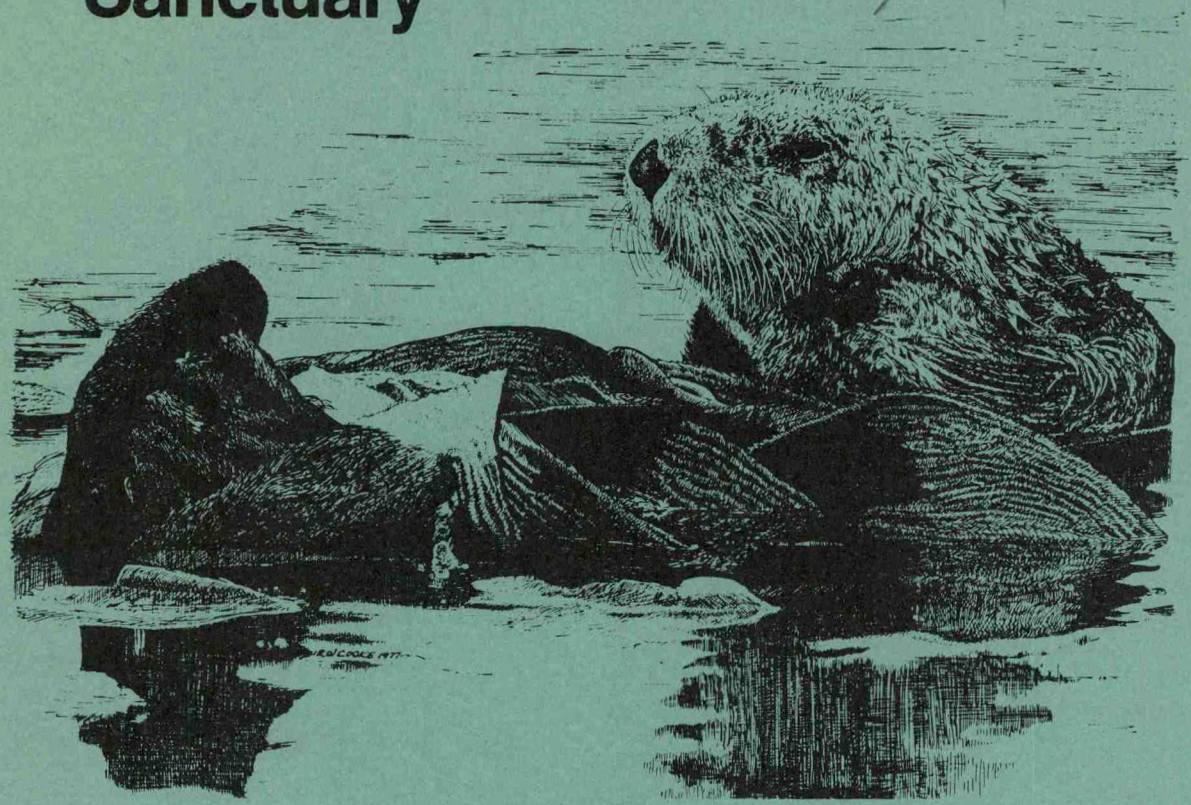
Monterey Bay National Marine Sanctuary

A Designation Prospectus



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
Marine and Estuarine Management Division

UNITED STATES DEPARTMENT OF COMMERCE

DESIGNATION PROSPECTUS FOR THE PROPOSED MONTEREY BAY NATIONAL MARINE SANCTUARY

August, 1990

Prepared By:

Marine and Estuarine Management
Division
Office of Ocean and Coastal
Resource Management
National Ocean Service
National Oceanic and Atmospheric
Administration
1825 Connecticut Avenue, N.W., Suite 714
Washington, D.C. 20235

DESIGNATION PROSPECTUS FOR THE PROPOSED
MONTEREY BAY NATIONAL MARINE SANCTUARY

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

PART I: TERMS OF THE PROPOSED DESIGNATION

Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, 16 U.S.C. 1431 et seq., as amended (MPRSA), authorizes the Secretary of Commerce to designate discrete areas of the marine environment of special national significance as National Marine Sanctuaries. National Marine Sanctuaries may be designated in those areas of coastal and ocean waters, the Great Lakes and their connecting waters, and submerged lands over which the United States exercises jurisdiction, consistent with international law (Figure 1). The National Oceanic and Atmospheric Administration (NOAA) manages the program through the Marine and Estuarine Management Division (MEMD) in the Office of Ocean and Coastal Resource Management.

The MPRSA (1434(a)(4)), provides that as a condition for establishing a national marine sanctuary, the Secretary of Commerce must set forth the terms of the designation. The terms must include: (a) the geographic area included within the Sanctuary; (b) the characteristics of the area that give it conservation, recreational, ecological, historical, research, educational or esthetic value; and (c) the types of activities that will be subject to regulation in order to protect those characteristics. The terms of the designation may be modified only by the same procedures through which the original designation was made.

FIGURE 1


National Marine Sanctuary Program
North Puget Sound
Western Washington Outer Coast
Cordell Bank
Gulf of the Farallones
Monterey Bay
Channel Islands
Santa Monica Bay
Fagatele Bay
Stellwagen Bank
Norfolk Canyon
U.S.S. Monitor
Gray's Reef
Flower Garden Banks
Key Largo
Alligator Reef
Looe Key
Sombrero Reef
American Shoal
Proposed
Congressionally Mandated
Designated

A. Geographic Area Included in the Sanctuary

Monterey Bay is located along the central California coast about 50 miles (80 km) south of San Francisco (Figure 3). It is California's second largest bay and one of the few major bays along the entire Pacific Coast of the United States. Perhaps its most significant feature is also its least obvious: it possesses the deepest and largest submarine canyon along the west coast of North America.

The bay is an open embayment approximately 20 nautical miles (nmi) (37 km) long, north to south, and up to 9 nmi (16 km) wide in an east-west direction. It is symmetrical in shape with bights in the extreme northern and southern ends. It covers an area of approximately 160 nmi^2 (550 km^2) (Breaker and Broenkow, 1989). Monterey Canyon, equivalent in size to the Grand Canyon, divides the bay into two more-or-less equal northern and southern parts.

The proposed Sanctuary area includes both Monterey Bay itself and the adjacent coastline to the north and south. Specifically, it includes a Sanctuary area of approximately 2,200 square nautical miles and includes the coastal and ocean waters over and submerged lands under the entire Monterey Canyon between the northern boundary of Pescadero Marsh, 2.0 nmi north of Pescadero Point, and the southern boundary of Julia Pfeiffer Burns Underwater Park and Area of Special Biological Significance (ASBS), 2.5 nmi south of Partington Point, and extending from these sites seaward approximately 18 nmi on a southwesterly heading of 240° and joined by an arc of approximately 46 nmi drawn from Moss Landing over the

Regional Context

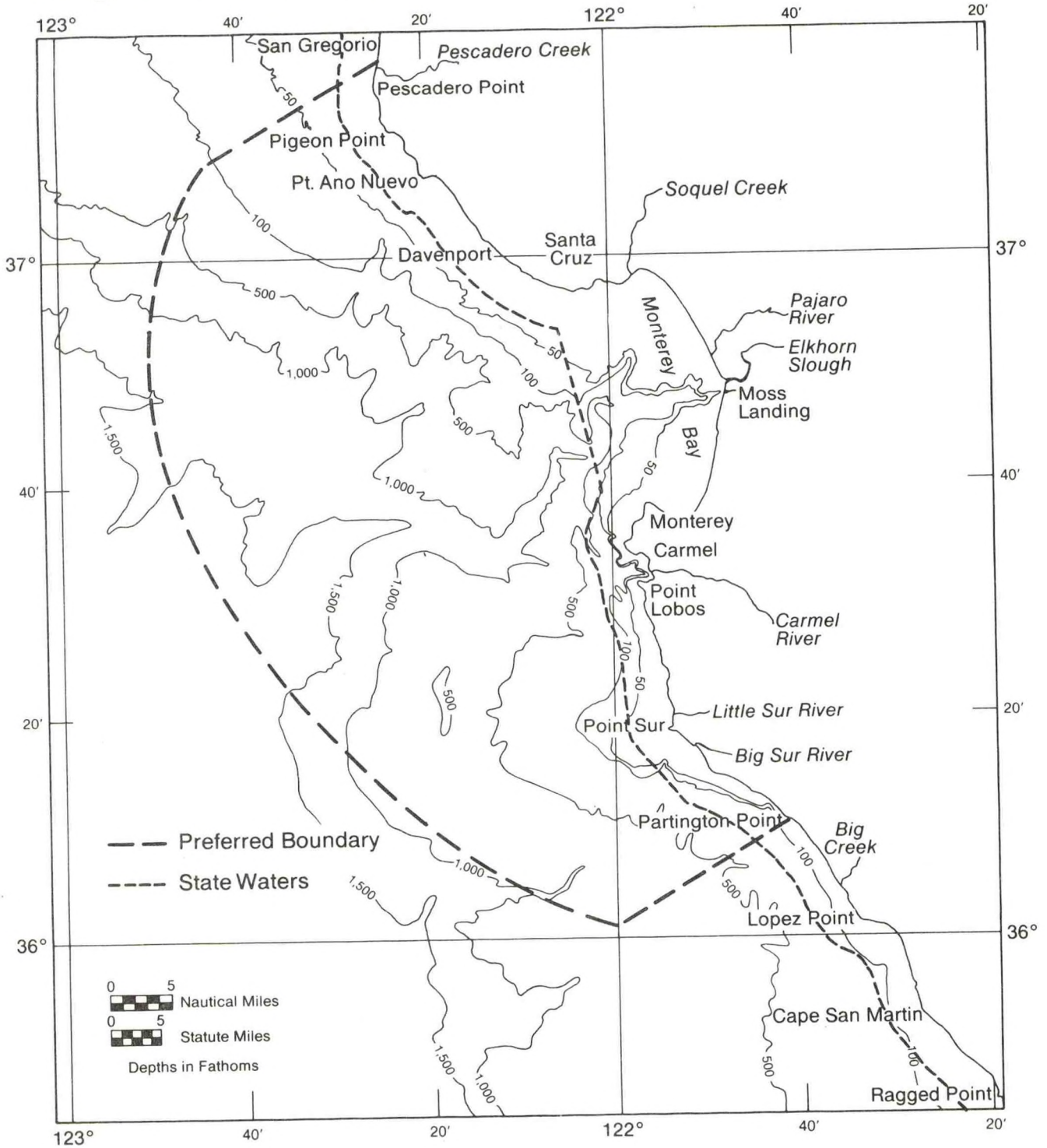


Figure 3. Proposed Monterey Bay Sanctuary Preferred Boundary Alternative.

entire Monterey Canyon complex out to the abyssal plain at 1,500 fathoms (approximately 3,000 m). The land-side boundary extends to the mean-high tide level but Moss Landing, Santa Cruz and Monterey Harbors are all excluded from the Sanctuary boundaries (Figure 3).

B. Characteristics of the Area that Give It Particular Value

The unique characteristics of the proposed Sanctuary area are largely the result of a major topographic feature of the seafloor and a set of oceanographic conditions that combine to produce the highly productive waters characteristic of the bay. The size, configuration, and proximity to shore of the Monterey Submarine Canyon produces strong seasonal upwelling of nutrient-rich bottom waters. These highly productive nearshore waters in turn support diverse floral and faunal populations. The extensive kelp beds, and the diversity of rock types, sediment types, and shoreline characteristics combine with the nutrient-rich waters to form several habitat assemblages.

Monterey Bay has the most diverse algal community in North America. The area supports one of the largest diversities of marine mammals in the world, including the endangered California gray whale, finback whale, humpback whale, sperm whale, and California sea otter. Año Nuevo, at the northern end of the proposed Sanctuary area, is the most important pinniped rookery and resting area in central and northern California. The bay area is important as a staging habitat for avifauna along the Pacific Flyway. The waters support extensive fish populations and major

west coast commercial fishing industries.

The highly diverse biota and the physical features of Monterey Bay combine to provide outstanding opportunities for scientific research. The wide variety of habitats are all readily accessible to researchers. There are nine research and/or education programs in the area (Figure 14).

Recreational fishing is a very popular activity both in Monterey Bay and the exposed coastal areas (Figure 16). Five major types of recreational fishing are pursued: private boat or skiff fishing, partyboat fishing, spearfishing, pier and shore (surf) fishing, and shellfishing.

The Monterey Bay area is well known for recreational diving. The area from Cannery Row on the Monterey Peninsula to Point Lobos State Underwater Reserve is the most popular diving area in all of central and northern California. More than 70 percent of all diving between Point Conception and Oregon occurs in this area (U.S. Department of the Interior, 1987).

Opportunities for nature observation include whale watching, viewing seabird nesting and roosting sites, and observing marine mammal pupping and haul-out areas.

Surfing is a popular activity throughout the bay area, especially at Pacific Grove, Moss Landing, Asilomar Beach, the mouth of the Big Sur river, and Santa Cruz. The main surfing season runs from late summer through early spring.

The Monterey Bay area also contains significant historical and cultural resources, such as native indian deposits and shipwrecks.

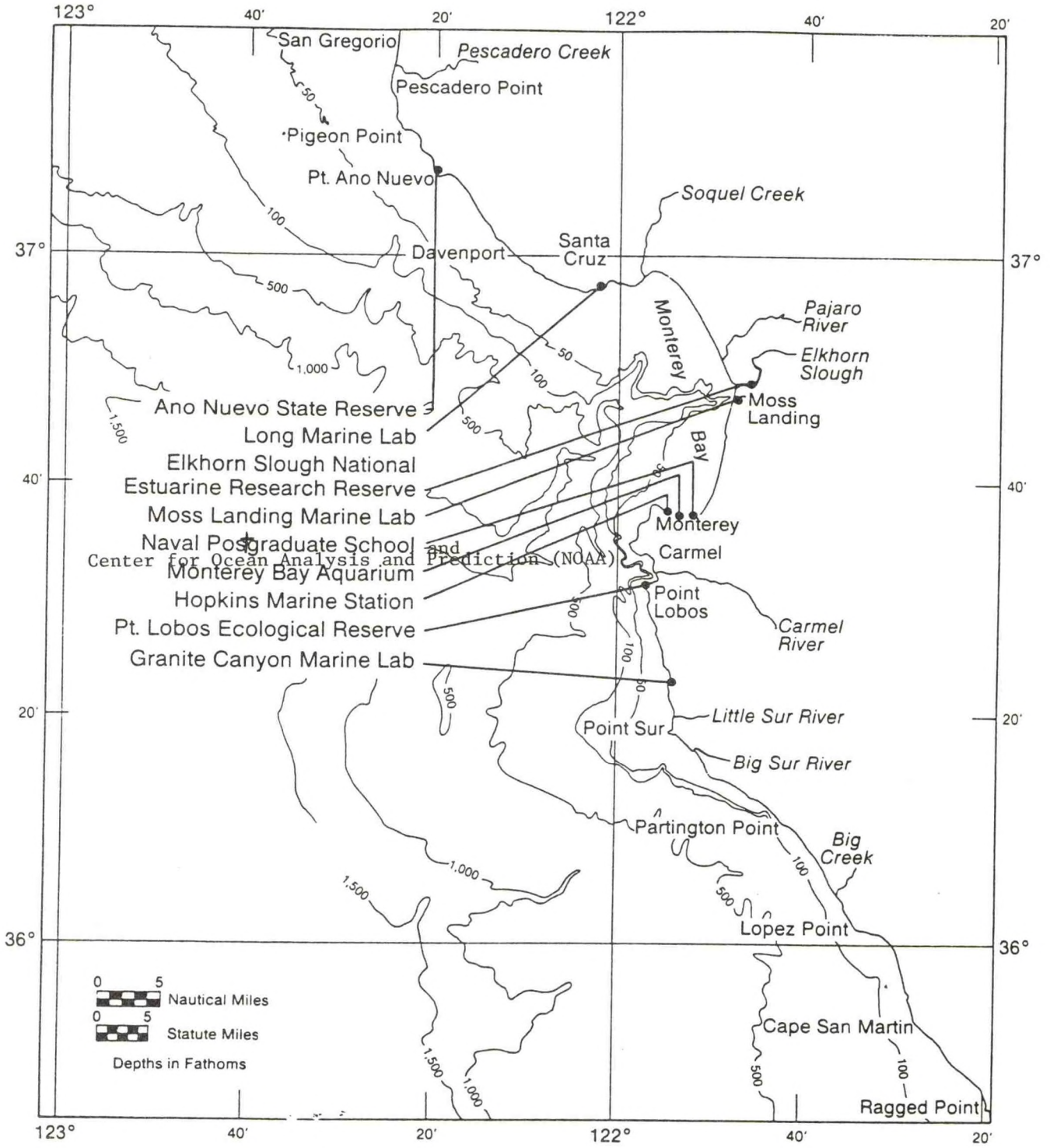


Figure 14. Existing Research and Education Programs in the Monterey Bay Area.

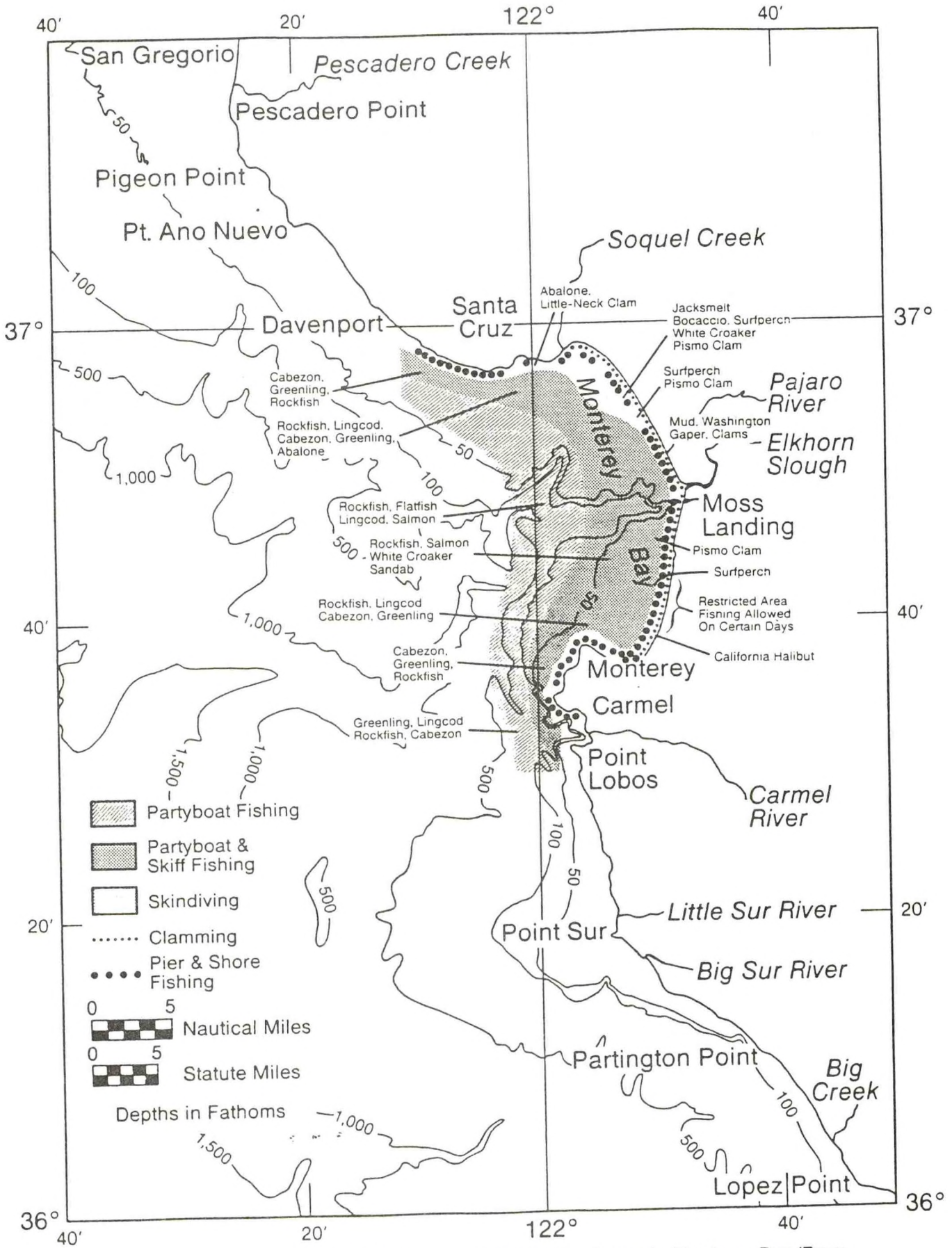


Figure 16. Location of Primary Sportfishing and Shellfishing Areas in Monterey Bay (From Central Coast OCS Regional Studies Program, 1989).

C. Activities Subject to Regulation

A summary of the existing regulatory regime in the area of the proposed Monterey Bay National Marine Sanctuary (MBNMS) is included in Part III--(Section 1) Status Quo Alternative of the Attached DEIS/MP. The attached regulations and Designation Document describe the relationship between Sanctuary designation and other regulatory programs. The proposed Designation Document also includes a list of activities subject to regulation now or in the future.

To protect the Sanctuary's distinctive habitats, resources and qualities, the following activities may be regulated, including prohibition, to the extent necessary and reasonable to ensure the protection and management of the conservation, ecological, recreational, research, educational, historical and esthetic resources and qualities of the area:

a. Exploring for, developing, or producing oil, gas or minerals in the Sanctuary;

b. Discharging or depositing any material or other substance;

c. Possessing, moving, or injuring, or attempting to possess, move, or injure, a Sanctuary historical resource;

d. Drilling through, dredging or otherwise altering the seabed of the Sanctuary; or constructing, placing or abandoning any structure or material on the seabed of the Sanctuary;

e. Taking marine mammals in the Sanctuary or seabirds in or above the Sanctuary;

f. Flying over the Sanctuary in motorized aircraft at low altitude;

g. Operating commercial (other than fishing) vessels in the Sanctuary; and

h. Operating thrill craft (e.g., jet skis, wet bikes, surf jets, hovercraft, speed boats less than 13 feet in length) in the Sanctuary.

However, any of the prohibited activities other than exploring for, developing, or producing oil, gas or minerals in the Sanctuary could be conducted lawfully if: necessary for national defense or law enforcement; necessary to respond to an emergency threatening life, property, or the environment; or pursuant to:

(1) a National Marine Sanctuary permit;

(2) a certification by the Director of the Office of Ocean and Coastal Resource Management of a valid lease, permit, license, or other authorization issued by any Federal, State, or local authority of competent jurisdiction as of (or if conducted pursuant to any valid right of subsistence use or access, in existence as of) the effective date of this designation subject to complying with any terms and conditions imposed by the Director as he or she deems necessary to achieve the purposes for which the Sanctuary was designated; or

(3) a valid lease, permit, license, or other authorization issued by any Federal, State, or local authority of competent

jurisdiction after the effective date of Sanctuary designation, provided that the Director was notified of the application in accordance with the requirements set forth in the regulations and the Director did not object to the issuance of such authorization, and such authorization contains, and the owner or holder complies with, such terms and conditions, as the Director deems necessary to protect Sanctuary resources and qualities.

PART II: BASIS FOR SECRETARIAL DESIGNATION FINDINGS

The Secretary must evaluate the proposal in terms of the Sanctuary designation standards in order to determine whether to designate an area of the marine environment as a National Marine Sanctuary. In a written decision document, the Secretary must find that (a) the area is of special national significance due to its resource or human-use values; (b) existing state and federal authorities are inadequate to ensure coordinated and comprehensive conservation and management of the area, including resource protection, scientific research, and public education; (c) designation of the area will ensure comprehensive conservation and management, including resource protection, scientific research, and public education; and (d) the area is of a size and nature that will permit comprehensive and coordinated conservation and management. In the case of the Monterey Bay area, Congress has mandated its designation as a National Marine Sanctuary. The DEIS/MP addresses the factors required in making the designation findings in more detail.

A. National Significance of the Area

1. Natural Resource and Ecological Qualities

The proposed Monterey Bay National Marine Sanctuary meets all of the site identification criteria developed by the Marine and Estuarine Management Division (NOAA, 1983). Typical of the Oregonian province, the Bay is strongly influenced by cool, relatively clear waters dominated by the California current. The

Monterey Submarine Canyon results in a strong upwelling of nutrient-rich water. The water quality in the central California region is known to be very good. The periodic upwelling and extensive, year-round mixing with the open ocean result in well-buffered, highly productive and well-oxygenated offshore waters. (However, a few specific areas within Monterey Bay, have shown deterioration in water quality but without further information on this deterioration Monterey Bay is currently classified as a Potentially Water Quality Limited Segment).

Consequently, the overall good water quality of the nearshore waters and the diversity of habitats support exceptionally rich and abundant floral and faunal communities that are unique to central and northern California. The variety of habitat assemblages is one of the major determinants of the rich intertidal and subtidal communities and represents the range of habitats to be found in the Oregonian province. The high density of habitat types and community assemblages provides an excellent environment for a wide variety of research projects and educational opportunities.

While there are submarine canyons elsewhere in the Oregonian province, the Monterey Submarine Canyon is unique in its size, configuration, and proximity to shore. This canyon, along with adjacent submarine canyons, enriches local water through strong seasonal upwellings, modifies currents and provides habitat for pelagic communities. The proximity of the canyon to the shore also provides a unique opportunity to the scientific community for deep-sea research. Monterey Bay itself is a rare geological feature as

it is one of the few large bays along the Pacific coast. This fact lends additional importance to this area as a resting and staging area for migrating birds.

The proposed Monterey Bay National Marine Sanctuary is characterized by a combination of oceanographic conditions an seafloor topography that produce a highly productive environmental setting. Oceanographic conditions off the coast are controlled by the California Current system. Upwelling occurs during the spring and summer when the California Current flows southward along the coast (Figure 5). Upwelling provides the nutrients which are essential for high phytoplankton production in the surface waters. This high primary productivity forms the basis of a food chain which supports the areas diverse biological communities that range from algae and invertebrates to fish, seabirds and marine mammals. The occurrence of five habitat types contributes to the diversity of the living natural resources of the area. Habitats associated with the submarine canyon, the nearshore sublittoral, the rocky intertidal, the sandy intertidal and the kelp forest areas are all found in the Bay.

(a) Benthic Organisms

The diversity of the plants and animals comprising the benthic communities related to the diversity of the habitats found in the area. The presence of warm and cold water species, deep and shallow water species, and several rare or uncommon species all within the relatively small area of Monterey Bay is unique.

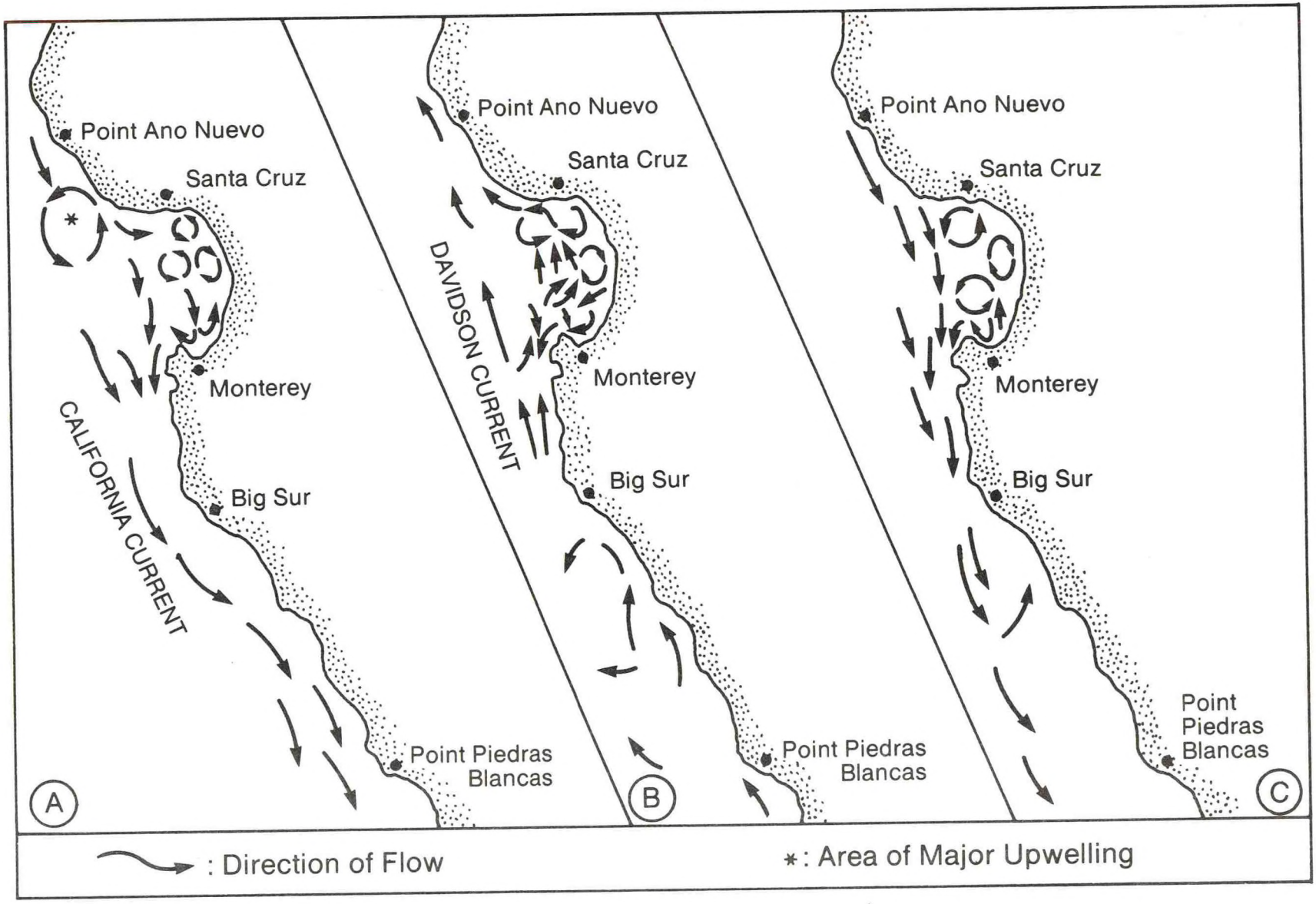


Figure 5. Surface Ocean Currents in the Monterey Bay Vicinity: (A) Spring to Late Summer, California Current, Upwelling; (B) Late Fall Through Winter, Davidson Current; (C) Late Summer to Early Fall, Oceanic Period (Modified from Association of Monterey Bay Area Governments, 1978).

Large marine algae, or seaweeds, are diverse and abundant in with over 450 of the 669 species of algae described for California present in the Monterey Bay area. The area has the largest marine flora of the temperate northern hemisphere, with numerous endemic species and the only population of one large understory kelp (Eisenia arborea) between southern California and Canada. It has been suggested that Monterey Bay may represent a biogeographic boundary for the distribution of algae. Forests of giant kelp and bull kelp dominate the algal communities, forming unique critical habitats with their own assemblage of characteristic organisms.

The Monterey Bay area has one of the most diverse and species-rich invertebrate faunas of any marine area of similar siz**e in the entire world (James Nybakken, pers. comm., 1989). Only two of the 33 or so known invertebrate phyla have not been collected in Monterey Bay. There may be more species of mollusks in Monterey Bay than in any other locality outside of tropical or semi-tropical areas. The bay is the northern limit of the range for many southern species and the southern limit of the range for many northern species. The numbers of species of shallow-water starfish, limpets and chitons, is the highest and most diverse in the world. A strange animal named Poeobius, which has been considered a missing link between two types of marine worms (annelids and sipunculans) and the cnidarian Tetraplatia, both uncommon in the world's oceans, are abundant in Monterey Bay. The rocky intertidal habitat has the widest assortment of invertebrate species. Deep water invertebrates such as sponges and soft corals

are found in the submarine canyon. Among the deep water species is the clam Calyptogena, which is the same genus as the giant clams of the thermal vent areas of the Galapagos Islands.

(b) Fish

The variety of fish species in the Monterey Bay area are many and varied. The diverse habitats of the area each have their own characteristic assemblage of fish. The submarine canyon for example, allows many uncommon deep-sea species to enter the Bay and come close to shore. 110 species of deep-living fishes belonging to 41 families were captured in the bay. Several of these species were previously unrecorded in the area, while others were extremely rare or far beyond their normal range. The extremely rare persimmon eelpout (Maynea californica) has recently been found to be abundant in the Monterey Canyon in association with its own unique bottom drifting seaweed habitat. A rare, deep-water North Pacific frostfish (Benthodesmus elongatus pacificus), previously unknown in California, and a rare prowfish (Zaprora silenus) have also been caught in the canyon habitat.

Fish of the nearshore subtidal habitats exhibit the greatest diversity. Commercially important fish such as pelagic schooling northern anchovy, Pacific herring, and jack mackerel are found here as are the large predators such as king salmon, sablefish, and sharks. Many important species of rockfish are found over rocky reefs.

Grunion and smelt spawn on the beaches of the sandy intertidal

areas in the inner bay. The kelp forests provide critical habitat for many fish species and provide protection to juvenile finfish. Rocky intertidal areas are characterized by a small and specialized group of fish adapted for life in tide pools and wash areas.

(c) Marine Mammals

Twenty-six species of marine mammals have been observed in the Monterey Bay area, including five species of pinnipeds (seals and sea lions), one fissiped (the sea otter), and twenty species of cetaceans (whales and dolphins) (Table 5 and Figure 8).

The five species of pinnipeds considered common in the Monterey Bay area include California sea lions, Stellar sea lions, Northern elephant seals, Northern fur seals, and Pacific harbor seals. Año Nuevo is the most important pinniped breeding site in the area and is the most important pinniped rookery and resting area in central and northern California.

California sea lions are the most abundant pinnipeds in the area (Bonnell et al., 1983). Sealions haul out on offshore rocks and islands. The autumn population on Año Nuevo Island has reached more than 7,000 animals.

Although Año Nuevo Island has the largest breeding population of Stellar (northern) sea lions south of Alaska (Loughlin et al., 1984), the numbers of this species have been declining throughout their range over the last 30-year period. These sea lions presently breed almost exclusively on offshore rocks to the northwest of Año Nuevo Island. The latest aerial survey (in the

Table 5. Marine mammals found in the Monterey Bay area. Status abbreviations: SR - seasonal resident, YR - year-round resident, ST - seasonal transient (A. Baldridge, pers. comm., in Heimlich-Boran, 1988)

Common Name	Genus/Species	Status
PINNIPEDS:		
California sea lion	Zalophus californianus	SR
Steller sea lion*	Eumatopias jubatus	SR
Northern elephant seal	Mirounga angustirostris	SR
Northern fur seal	Callorhinus ursinus	ST
Guadelope fur seal **	Arctocephalus townsendi	ST
Harbor seal	Phoca vitulina	YR
FISSIPED:		
Southern sea otter *	Enhydra lutris	YR
CETACEANS:		
California gray whale **	Eschrictius robustus	ST
Blue whale **	Balaenoptera musculus	ST
Fin whale **	Balaenoptera physalus	ST
Minke whale	Balaenoptera acutorostrata	SR
Humpback whale **	Megaptera novaengliae	ST
Pacific right whale **	Eubalaena glacialis	ST
Sperm whale **	Physeter catadon	ST
Pygmy sperm whale	Kogia breviceps	ST
Baird's beaked whale	Berardius bairdi	ST
Cuvier's beaked whale	Ziphius cavirostris	ST
Short-finned pilot whale	Globicephala macrorhynchus	ST
Killer whale	Orcinus orca	ST
False killer whale	Pseudorca crassidens	ST
Risso's dolphin	Grampus griseus	SR
Pacific white-sided dolphin	Lagenorhynchus obliquidens	SR
Northern right whale dolphin	Lissodelphis borealis	SR
Dall's porpoise	Phocoenoides dalli	SR
Harbor porpoise	Phocoena phocoena	SR
Bottlenose dolphin	Tursiops truncatus	ST
Common dolphin	Delphinus delphis	ST

** Endangered * Threatened

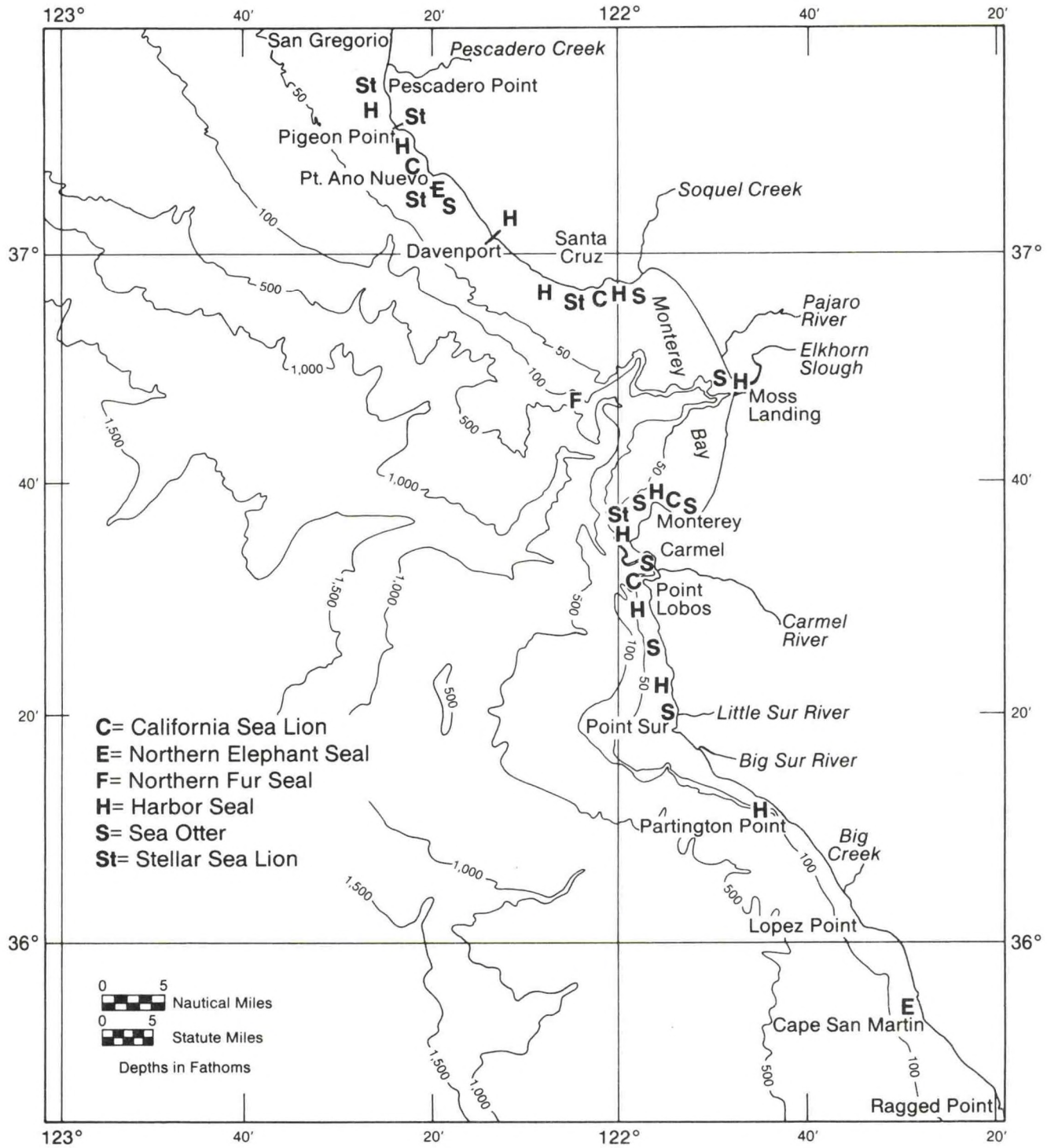


Figure 8. Principal Sea Otter and Pinniped Areas of Concentration in the Monterey Bay Area (U.S. Fish and Wildlife Service, 1981; California Department of Fish and Game, 1980; in NOAA, 1982).

summer of 1985) showed the population to be 1,169 animals, including 328 pups (Bonnell and Le Boeuf, unpubl. data). On April 5, 1990 the Stellar sea lion was designated a threatened species by NOAA's National Marine Fisheries Service (55 FR 12645). Northern elephant seals are found in greatest numbers on Año Nuevo Island and the adjacent mainland point. The breeding population at these locations presently numbers about 3,500 animals. Pacific harbor seals are year-round residents in the area, preferring to haul out at dozens of sandy beach and rock reef sites around the area. More than 1,800 animals were counted on land in this area during a survey in 1982. Northern fur seals rarely haul out on land. They prefer the open waters over the Monterey Canyon, with their greatest numbers occurring well offshore in waters 200 to 2000 meters deep. They have been proposed for designation as a depleted species by the NOAA's National Marine Fisheries Service.

Twenty species of cetaceans have been observed in the Monterey Bay area, although only about one-third occur with any frequency. Six of the whales are listed as endangered species: the blue, fin, humpback, gray, right, and sperm.

Gray whales are seasonal migrants passing through the area twice on their yearly migration from Alaska to Baja California. These whales pass close to shore and are the object of most of the whale watching in the area. Blue whales, once considered only a summer visitor, have increased in number in the Monterey Bay area.

Minke and humpback whales feed close to shore in and near the Bay while fin whales prefer the deeper waters over the Monterey,

soquel, and Carmel canyons for feeding. The extremely endangered Pacific Right whale has not been seen in Monterey Bay. They were last seen in the area in 1986 and 1987, north of Año Nuevo Island. Sperm, Pilot, false killer, Killer and two species of rare beaked whales have also been sighted in the Bay.

Dall's porpoise and the harbor porpoise are commonly found in the Bay. The most numerous cetaceans are the Pacific white-sided dolphins, northern right whale dolphins, and Risso's dolphins. Bottlenose dolphins are found in small numbers (12-18) within the bay while common dolphins are found year round in large schools.

The California or southern sea otter is a threatened species that is found throughout the shallow waters of Monterey Bay from Point Pinos to Año Nuevo Island. The California sea otter population is a remnant of the North Pacific population that was decimated by the commercial fur trade in the 18th and 19th centuries. In 1914, this population in California occupied a few miles of the rocky Point Sur coast and was estimated to contain about 50 otters. The present population is estimated to be fewer than 1800 animals (Saunders, 1989).

(d) Seabirds

The Monterey Bay area historically has been recognized as a uniquely important region of seabird occurrence. It is located on the Pacific Flyway and offers a protected area with a diversity of habitats for the variety of bird species present. The upwelling of nutrient-rich waters supports highly productive food webs which

provide abundant seabird prey.

Ninety-four seabird species are known to occur in the Monterey Bay region. Twelve species are resident breeders or former breeders within the region. Common breeding species include Brandt's cormorants, western gulls, pigeon guillemots, and common murres (Dohl, 1983) (Table 4). The majority of seabirds occur here as non-breeding residents/visitors and spring/autumn migrants.

Four species of endangered birds are found in the area: the short-tailed albatross, the California brown pelican, the American peregrine falcon, and the California least tern. The western snowy plover, is a candidate species for being listed as endangered or threatened by the U.S. Department of the Interior. The southernmost relic population of the severely threatened marbled murrelet occurs at several isolated sites inland in the Santa Cruz mountains. The southernmost confirmed nesting site for rhinoceros auklets was recently established at Año Nuevo Island. In addition the seacliffs of the Monterey Bay region support more nesting pigeon guillemots than the Farallon Islands, which has the largest single colony in California. Ashy storm-petrel populations currently number less than 10,000 birds. About 85% of them breed on the Farallon Islands. Almost all of them come to Monterey Bay to feed over the submarine canyon during the summer and fall.

Many shorebirds including sandpipers, turnstones, plovers, sanderlings, willets, and godwits gather on the beaches during spring migration. Año Nuevo Bay is an important wintering site for Harlequin ducks (a species of Special Concern) and brant.

Table 4. Representative Seabirds and their Seasonal Status in the Monterey Bay Area (from Briggs, et al., 1983).

Breeding Species

Double-crested cormorant
Brandt's cormorant
Pelagic cormorant
Western gull
Caspian tern
Tufted puffin
Snowy Plovers
Forster's tern
Common murre
Pigeon guillemot
Marbled murrelet
Rhinoceros auklet
Brown pelican (until 1959)

Winter resident/visitors

Common loon
Arctic loon
Western grebe
Red-necked grebe
Laysan albatross
Northern fulmar
Black scoter
Surf scoter
Harlequin duck
Herring gull
Glaucous gull
Black-legged kittiwake

Spring/autumn migrants

Flesh-footed shearwater
Mottled petrel
Brant
Red phalarope
Horned puffin
Pomarine jaeger
Long-tailed jaeger
South Polar skua
Laughing gull
Sabine's gull
Arctic tern
Common tern

Summer/autumn (nonbreeding) residents/visitors

Buller's shearwater
Black-footed albatross
Pink-footed shearwater
Sooty shearwater
Black-vented shearwater
Black storm-petrel
Royal tern
Elegant tern
Xantus' murrelet
Ashy storm-petrel

Rarities

Yellow-billed loon
Short-tailed albatross
Cape petrel
Greater shearwater
Least storm-petrel
Red-billed tropicbird
Brown booby
King eider
Black tern
Thick-billed murre
Black skimmer
Little gull

(2) Historical, Cultural and Archaeological Significance

Cultural and historical resources are prehistoric and historic remains comprising a non-renewable resource base that provides anthropologists and historians with information for reconstruction of past cultural systems and behaviors (BLM, 1980). The coastal lands of central California contain numerous archeological sites, most of which represent Native American resources. The Monterey Bay area is within the former territory of the Costanoan Indians. Archeological evidence suggests that the earliest human occupancy of coastal California began well over 10,000 years ago with immigrants who were primarily hunters. About 7,500 years ago the people became dependent on shoreline resources and seed gathering (Meighan, 1965, in Gordon, 1977). The Costanoan economy was a continuation of this dependence. Old habitation sites can be located today by kitchen midden deposits (also called shellmounds) which accumulated in the villages. Many of these deposits on the coast are found in sand dunes at Año Nuevo Point and above the rocky shoreline of the Monterey Peninsula.

Offshore cultural and historical resources include aboriginal remains and sunken ships and aircraft. An in-house study conducted by the BLM in 1979 to compile and organize available shipwrecks data identified 1,276 vessels of historic interest that were reported lost along the central and northern coast of California.

The lighthouse at Point Pinos has been designated a national and California historic site. Multiple historic sites are located at Santa Cruz, Carmel and Monterey.

3. Present and Potential Uses that Depend on Maintenance of the Monterey Bay Area Resources and Qualities

(a) Commercial Fishing

The Monterey Bay area has a large and economically important commercial fishing industry. In 1987, a total of over 29 million pounds of fish with a value of almost $10 million was landed at Moss Landing, Monterey, Santa Cruz, and Salinas. Market squid represented the largest catch in terms of poundage, followed by rockfish, mackerel, sole, tuna, and anchovy. The various species of rockfish were the most important fish in dollar value, followed by salmon, swordfish, squid, and tuna. The diversity of the commercial catch is shown by the fact that 89 different species or species groups were landed at Monterey.

Related to fisheries are several aquaculture operations within the Monterey Bay area, which are dependent in large part on a clean source of ocean waters. Some operations collect organisms directly from the Bay while others grow and produce their own stocks through captive breeding. The industry include a silver and king salmon hatchery, a lobster hatchery, growing Pacific Oysters, culturing abalone, production of oyster and clam seed for grow-out to other growers, raising sea hares (a species of nudibranch or sea slug) and an algae research farm. Kelp is harvested commercially for alginate extraction and as food for abalone aquaculture.

(b) Research and Education

A unique feature of Monterey Bay is the combination of biological and physical characteristics in the area that provide

outstanding opportunities for scientific research on many aspects of marine ecosystems. The diverse habitats are readily accessible to researchers. These institutions have a long history of research and large databases possessing a considerable amount of baseline information on the Bay area and its resources.

Six research facilities are located in the area: (1) The Hopkins Marine Station of Stanford University in Pacific Grove; (2) The Naval Postgraduate School in Monterey and the Center for Ocean Analysis and Prediction (NOAA); (3) Moss Landing Marine Laboratories of San Jose State University; (4) The Long Marine Laboratories and the Institute of Marine Sciences of the University of California at Santa Cruz; (5) Granite Canyon Marine Laboratory of the California Department of Fish and Game, located on the Big Sur coast and (6) The privately owned Monterey Bay Aquarium. Research is being conducted in many fields, including the ecology of the rocky intertidal zone, physical oceanography, aquaculture, and studies on cetaceans, pinnipeds, and sea otters. Managing the natural resources and qualities of the Monterey Bay area is essential for future research opportunities to continue.

The Monterey Bay aquarium is operated by a non-profit foundation, and conducts a variety of research through their Research Division. Research is primarily focused on the natural nearshore habitats of the Bay, especially the kelp forest communities and sea otters.

The Monterey Bay Aquarium Research Institute was incorporated in May 1987. It is planning an extensive research project to study

the Monterey Submarine Canyon. It will use the R/V Point Lobos to launch a remote-operated unmanned submarine to explore the deep waters of the canyon (S. Webster, personal communication, 1989).

Extensive marine and coastal education and interpretive efforts complement Monterey Bay's many research activities. For example, over 7 million visitors, assisted by 500 volunteer guides trained in interpreting the marine environment, have experienced the interpretive exhibits of the Monterey Bay Aquarium since it opened in fall of 1984. Over 70,000 school children participate in aquarium education programs each year (J. Packard, personal communication, 1989). A number of other institutions have highly successful interpretive programs as well. For example: Pt. Lobos Ecological Reserve, Elkhorn Slough National Estuarine Research Reserve, Long Marine Laboratory and Año Nuevo State Reserve all have excellent docent programs serving the public, and marine related programs for school groups and teachers (J. Packard, personal communication, 1989). In addition, marine related post-secondary and/or postgraduate education is available through three local colleges: the University of California Santa Cruz; Moss Landing Marine Laboratories and the Naval Postgraduate School.

(c) Recreation and Tourism

The primary recreational activities are sportfishing, boating, hiking, skindiving, sightseeing, nature observation, and surfing.

Recreational fishing is popular both in Monterey Bay and the exposed coastal areas. Fishing takes place from private boats,

partyboats, and from piers, jetties and the shore. Rockfish, Pacific sanddab, lingcod, and mackerel are some of the species caught. Clam digging occurs along many beaches, while shellfish such as limpets are collected from rocky tidepools.

Recreational boating activities originate primarily in the harbors of Santa Cruz, Monterey, and Moss Landing. Each harbor has a marina servicing recreational boaters, commercial fisherman, and partyboat charters. Approximately 2,100 boat slips are available in these harbors.

Nature observation occurs in the form of whale watching, viewing seabird nesting and roosting sites, and observing marine mammal pupping and haul-out areas. Partyboats are used for nature observation tours, including watching blue whale and migrating California gray whales. Rocky shorelines provide the hiker with the opportunity to view the fascinating flora and fauna associated with the rocky intertidal habitats. There are thirty-one state beaches, parks, refuges, reserves, and historic parks, operated by the California Departments of Parks and Recreation and Fish and Game, who manage these areas for their natural resource and nature observation qualities.

Skin and SCUBA diving is extremely popular throughout the Monterey Bay area. Popular diving spots range along the Monterey Peninsula to the various Underwater Parks and Reserves.

Surfing is a popular activity throughout the bay area especially from late summer through early spring. Santa Cruz has been a major surfing area since the turn of the century.

Monterey Bay has been a tourist attraction since the late 1800's. The Monterey Bay Aquarium opened in 1984 and currently attracts about 1.6 million visitors annually. Numerous protected areas of special environmental significance such as Point Lobos Ecological Reserve allow varying levels of public usage.

B. Inadequacy of Existing State and Federal Authorities to Ensure Coordinated and Comprehensive Conservation and Management

1. Need for Comprehensive Management and Protection

While Monterey Bay has thus far enjoyed the reputation as an internationally renowned scenic area with good water quality, such success can not realistically be expected in the future without deliberate protection.

So far the variety of human uses has not dramatically altered or damaged the resources of Monterey Bay. However, many people are concerned about the potential conflicts and cumulative effects as the area becomes more heavily populated and visited by increasing numbers of tourists. In addition to tourism and recreational increases, business, commercial and industrial uses of the area are also increasing. Oil and gas exploration, development and production in the northern Bay area is being considered with proposed Lease Sale #119. Thus far, only the "Call for Information" step has been completed by MMS for the proposed sale and no further activities are being carried out.

The Bay area also is a place for dredge and waste disposal. Two sites off Moss Landing are used for discharging dredge spoils. Point source pollution from municipal and industrial wastes are dumped into the waters at various outfalls and municipal plans for additional outfalls and discharges into Monterey bay are being considered. Non-point agricultural runoff also enters the Bay primarily from the major agricultural areas of the Salinas and Pajaro Valleys. To a large extent these activities are presently

regulated by existing management authorities; however, Sanctuary designation can provide additional monitoring, research and management coordination to ensure that these activities continue in a way that protects the natural and historical resources of the Monterey Bay area.

Making a more indirect use of the area are the commercial ships that regularly traverse the outer reaches of the area as part of the route from San Francisco to Los Angeles, with infrequent vessel traffic to Moss Landing, Santa Cruz, or Monterey. Although this traffic is not yet a major concern, contingency plans designed to react to oil spills resulting from tanker accidents are being formulated and can be coordinated with Sanctuary designation.

Existing programs to protect significant resources within the Monterey Bay area and to provide recreational and interpretive opportunities have placed considerable emphasis on the protection of coastal resources but have not given the same attention to marine resources. Such critical marine areas as the waters around Año Nuevo Island and over the Monterey Submarine Canyon receive no special attention by resource managers. The waters of the Big Sur and San Mateo coastline receive limited protection but lack a mechanism to establish research priorities and coordination and develop Emergency Response plans for potential accidents such as groundings and/or oil spills. With current resources of existing programs being limited, the coordination of resource protection and management programs is essential. The Monterey Bay Sanctuary could provide an important role in such coordination.

2. Existing Authorities

The proposed Monterey Bay National Marine Sanctuary is located in both Federal and State waters and is therefore under the jurisdiction of Federal and State of California statutes.

The Federal agencies with existing primary responsibilities in the area of Monterey Bay are: the National Marine Fisheries Service (NMFS) of the Department of Commerce; the Environmental Protection Agency (EPA); U.S. Fish and Wildlife Service (FWS) and the Minerals Management Service (MMS) of the Department of the Interior; the Corps of Engineers (COE), the Department of the Army and the Department of the Navy of the Department of Defense; and the U.S. Coast Guard (USCG) of the Department of Transportation.

i. Federal

The NMFS works with the California Department of Fish and Game (CDF&G), under the Magnuson Fishery Conservation and Management Act, on approving and enforcing Fishery Management Plans (FMPs) prepared by Regional Fishery Management Councils. Through a cooperative enforcement agreement, the CDF&G is also deputized to enforce FMPs beyond three miles from the State's coastal baseline.

NMFS shares responsibility with the FWS for implementation of the Marine Mammal Protection Act and the Endangered Species Act. The protection of cetaceans and pinnipeds is the responsibility of NMFS. The FWS is responsible for protecting endangered bird species and some marine mammals (such as the southern sea otter). Four of these bird species: the California brown pelican, the

American peregrine falcon, the short-tailed albatross, and the California least tern, are found in the vicinity of Monterey Bay as well as the majority of the entire population of southern sea otter.

The USCG, in addition to its enforcement of fishing regulations, is responsible for enforcing regulations under the Clean Water Act (CWA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to prevent pollution caused by discharges from vessels of oil, hazardous substances, or other pollutants. The USCG is also responsible for regulating vessel traffic, maintaining boater safety, and coordinating search and rescue operations.

The EPA and COE have regulatory responsibilities with regard to sewage outfalls, and ocean dumping. Sewage outfall regulation is governed under the Clean Water Act (CWA) via the National Pollutant Discharge Elimination System (NPDES), administered by the EPA. Under the NPDES program, a permit is required for the discharge of any pollutant from a point source into the navigable waters of the United States, the waters of the contiguous zone, or ocean waters. Within California state waters, EPA has delegated NPDES permitting authority to the State government. Title I of the Marine Protection, Research, and Sanctuaries Act prohibits the transportation of any materials from the United States for the purpose of dumping them into the territorial sea, the contiguous zone, and the ocean beyond without a permit from EPA.

The COE grant permits that are based on EPA guidelines for the

discharge of dredged materials into State waters. The COE has sole jurisdiction over marine construction, excavation or fill in any navigable waters of the United States.

Pursuant to the Rivers and Harbors Act, a permit must be obtained from the COE prior to any marine construction, excavation or fill activities in any navigable waters of the United States (33 U.S.C. § 403). The COE may refuse to issue permits on the basis of a threat to navigation or potential adverse effects on living marine resources.

The MMS is responsible for the overall management of offshore oil and gas exploration and development operations in accordance with the provisions of the Outer Continental Shelf Lands Act (OCSLA). These include enforcement of regulations pursuant to the OCSLA (30 C.F.R. Part 250) and the stipulations applicable to particular leases discussed above. This responsibility was formerly divided between the Bureau of Land Management and the U.S. Geological Survey.

The United States Army maintains an offshore restricted area extending approximately 8,000 yards offshore from its Fort Ord Military Installation. The restricted area functions as a safety buffer to protect the seagoing public from stray firearm rounds escaping from small arms firing ranges at Ford Ord. The ranges are used intermittently throughout the year. In addition, a U.S. Navy operating area exists in the northeast section of the Bay. This ocean space is reserved for mine sweeping practice maneuvers during specified months of the year.

ii. State Agencies

The California state agencies with existing primary jurisdiction in the area of Monterey Bay are: the Coastal Commission (CCA), the Regional Water Quality Control Board (RWQCB), the State Lands Commission (SLC), the Department of Fish and Game (CDF&G), the Department of Parks and Recreation (CDP&R), the Air Resources Board (ARB) and the Historical Resources Commission (HRC).

The California Coastal Act of 1976 (the CCA) is the foundation of the California Coastal Management Program. The CCA establishes the State Coastal Commission and various regional commissions to implement the Act, granting it permit authority until such time as local governments adopt local plans approved by the Commission. It establishes a comprehensive set of specific policies for the protection of coastal resources and the management of orderly economic development throughout the coastal zone. The CCA defines the coastal zone as the land and water area of the State, extending seaward to the outer limit of the State's jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean tide line. In significant coastal, estuarine, habitat, and recreational areas, it extends inland to the first major ridge line or 5.0 nm (8.0 km) from the mean high tide, whichever is less.

The State Lands Commission has jurisdiction over all state owned lands and State submerged lands extending seaward to 3.0 nm (5.6 km) from the mean high tide line. Administration of State

lands includes leasing of these lands for various legislatively authorized purposes; in particular, oil and gas exploration and development. In addition, as the State agency with sole responsibility for administering the trust, the SLC has adopted regulations for the protection and use of public trust lands in the coastal zone.

The CDF&G is responsible for enforcing California fishing laws in the 200-mile wide exclusive economic zone as well as in State waters of the territorial sea. The CDF&G also assists in the enforcement of Federal fishery regulations and works with other Federal and State agencies with water quality projects and environmental reviews.

In order to protect special marine resources and water-based recreational values in ocean waters within state jurisdiction and to expand coastal park units beyond the water's edge, the California Department of Parks and Recreation (CDP&R) has established an Underwater Parks Program which is managed in conjunction with CDF&G. CDP&R is also responsible along with the National Forest Service, U.S. Dept. of Agriculture for the management of the Los Padres National Forest.

The Porter-Cologne Water Quality Control Act is designed to enhance and maintain water quality in State waters, including ocean waters, under the jurisdiction of the state. The State Water Resource Control Board (SWRCB) and the nine regional water quality control boards (RWQCB) have primary authority for regulating water quality in California. The authority to administer the NPDES

permits has been delegated by EPA to the SWRCB and by the State to the Regional boards.

The California Air Resources Board (ARB) is charged with the maintenance and enhancement of the ambient air quality of the State. The ARB has set air quality standards designed to meet EPA's National Ambient Air Quality Standards and delegated their implementation to local Air Pollution Control Districts (APCDs).

State preservation of representative and unique archaeological, paleontological, and historical sites in the land and water areas of the state is the responsibility of the California Historical Resources Commission. The Commission evaluates and makes recommendations to the State Historic Preservation Officer on nominations to the National Register. The Commission also recommends state registration of sites as landmarks and points of interest to the Public Resources Department which is responsible for maintenance of registered sites.

3. Inadequacy of Existing Authorities

Under the status quo Monterey Bay will not have the degree of management, protection, research or public education that is necessary for the protection of its significant resources. A variety of State and Federal governmental agencies and departments are responsible for regulating the proposed Sanctuary uses and managing individual resources situated therein. Generally, these arrangements -- jurisdictionally fragmented as they are -- serve single purpose goals based on specific legislation. These

regulatory activities are not performed in the context of a comprehensive management plan. No organizational structure exists to coordinate management and regulatory activities for the entire Monterey Bay area, and individual agency authorities do not appear to provide the area with sufficient long-term protection reflective of the exceptional diversity of natural resources found in the Monterey Bay coastal and offshore region. In fact, faced by prospects of more intense human activity threats, the capacity of existing agencies to perform effectively may deteriorate due to limited staffing, equipment, and enforcement funds.

In addition, because the complex web of existing authorities is characterized by quite narrowly defined missions, severe interjurisdictional policy conflicts have occurred and may worsen in the future. As use pressures mount, overall management effectiveness may suffer. At present no one institutional entity is able to facilitate conflict resolution in the interest of marine resource protection and management. The absence of such an integrative mechanism is of great concern to the community given the presence of so many resources, which in turn support a variety of valuable human uses. Some specific examples of inadequate management and protection follow.

The California Departments of Parks and Recreation, and Fish and Game manage 16 State beaches, 4 State reserves, 5 State Parks, 3 State refuges, and 2 State Historic Parks within the proposed Sanctuary area. These areas, along with the Elkhorn Slough National Estuarine Research Reserve and the Los Padres National

Forest, protect nearshore, intertidal and coastal resources but do not provide the same protection to marine areas such as the waters around Año Nuevo Island and over the Monterey Canyon. In reality, of course, marine mammals, seabirds, and other marine fauna depend on habitats and foraging areas far more extensive then those covered by existing protective regulations.

The California Department of Fish and Game shares jurisdiction over fishing operations in Monterey Bay waters with the National Marine Fisheries Service. The Magnuson Fishery Conservation and Management Act (MFCMA) provides for enforcement of Fishery Management Plans (FMP's) prepared by the Pacific Fishery Management Council and approved by the Secretary of Commerce after review by the National Marine Fisheries Service. Although the existing regime provides protection to Monterey Bay from the effects of overfishing, it is inadequate in preventing adverse effects to Bay resources from other activities.

Regulations exist that cover the contamination of ocean waters by discharges from a variety of sources, including: 1) discharges from point sources (which require a National Pollutant Discharge Elimination System permit); 2) discharges from non-point sources; 3) discharges of oil and hazardous substances; and 4) ocean dumping.

The CWA prohibits the discharge of oil and other hazardous substances "which may affect natural resources.....under the exclusive management authority of the United States" (33 U.S.C. §§ 1251-1367). The CWA also provides for the establishment of the

National Contingency Plan to contain, disperse, or remove oil and hazardous substances after a spill (see Part II, Section III). The CWA thus furnishes some protection to marine resources from the harmful effects of effluent discharges. The CWA, however, provides for a maximum penalty of only $10,000 for a single discharge incident without the initiation of a civil action. This does not provide a sufficient deterrent for protecting important Sanctuary resources; $50,000 is the maximum penalty allowed per day under the MPRSA. Moreover, without Sanctuary designation, there probably would be no specialized effort by USCG to enforce the CWA in the Monterey Bay area as distinct from other offshore waters.

The international agreement (Annex V, MARPOL) regulating garbage disposal from ships and other watercraft is now part of the amendments to the Act to Prevent Pollution from Ships (APPS). Animals and birds may eat or become entangled in floating or submerged wastes such as plastic packing materials or discarded fishing lines. An opportunity exists to help attain the goals of the APPS through the Sanctuary regulations prohibiting discharges and deposits.

Under the Outer Continental Shelf Lands Act, the Secretary of the Interior has the responsibility for regulating activities associated with oil and gas leasing. Lease Sale 119 is currently on hold but there is no guarantee that portions of the Sanctuary will be excluded from this or future Lease Sales.

The U.S. Departments of the Interior and Commerce each have the authority to designate and protect oceanic habitats if found to

be "critical," for species listed as "endangered" under the Endangered Species Act (ESA). The Marine Mammal Protection Act (MMPA) and the ESA prohibit the "taking" of marine mammals and threatened or endangered species. The Migratory Bird Treaty Act prohibits the taking of migratory birds. The term "taking" has been interpreted broadly by the administering agencies, so that the ESA and MMPA provide considerable protection. However, the potential threats to marine mammals and endangered species range from direct injuries to a specific animal or population to indirect or cumulative degradation of their habitats. Neither the MMPA nor the ESA fully address such degradation of habitats with the exception of Section 7(a) of the ESA, which does provide protection against actions which jeopardize endangered species or their critical habitats. However, this section applies only to activities authorized, funded or carried out by Federal agencies, not to private or state actions. There is no explicit provision for the designation or protection of marine mammal habitats under the MMPA.

Although the present management regime appears to be effective in regulating fisheries, it is inadequate in protecting Monterey Bay habitats from the effects of waste discharges. It is also weak in providing long-term protection from the effects of oil, gas and mineral activity. Moreover, because the agencies that now have regulatory responsibility in the area act independently on the basis of their own statutory mandates, there is little likelihood that the present management regime could organize the research and

monitoring program needed to identify environmental changes or that it would respond adequately to increased human activity on the basis of ecosystem or habitat issues.

Finally, these regulatory activities are not performed in the context of a comprehensive management plan and no organizational structure exists to coordinate research and regulation. There is no systematic environmental monitoring program nor is there a mechanism for applying research findings to the resolution of management issues.

C. Benefits and Effects of Sanctuary Designation

1. Ensuring Comprehensive Conservation and Management of the Area

The designation of the Monterey Bay National Marine Sanctuary would permit the implementation of a coordinated and comprehensive management plan resulting in long-term most cost-effective protection of Nationally significant natural and historical resources, critical habitats and qualities which generate tourism.

Sanctuary designation would promote resource protection in three ways: (1) it would bolster the existing regulatory and enforcement regime; (2) it would provide a coordinated research program to expand knowledge of the Monterey Bay environment and resources and thus provide the basis for sound, long-term management; and (3) it would include a broad-based interpretive program to improve public understanding of Monterey Bay's importance as habitat for a unique community of marine organisms and of the need for a long-term, comprehensive management framework to protect this habitat.

(a) Resource Protection

The following seven regulations are proposed governing: hydrocarbon activities; discharges and deposits (both from within and outside of Sanctuary boundaries); overflights; alteration of or construction on the seabed; historical resources; and marine mammals and seabirds. Two other activities are potentially subject to regulations: commerical (other than fishing) vessel traffic and operation of "thrill craft".

These activities are subject to regulation, including

prohibition, to the extent necessary and reasonable to ensure the protection and management of the conservation, ecological, recreational, research, educational, historical and esthetic resources and qualities of the area. The overall effect of these regulations, narrowly focused on specific activities, will be beneficial.

(i) Oil and Gas Activities

The first activity prohibited would be exploring for, developing, or producing oil, gas or minerals in the Sanctuary (Figure 11). The resources and qualities of the Monterey Bay area, particularly sea otters, sea birds, and pinnipeds that use the haul-out sites, kelp forests and rocks along the Monterey Bay coast, and the high water quality, are especially vulnerable to oil and gas activities in the area (Table 13 and 14). A prohibition on oil and gas activities within the proposed Sanctuary boundaries will provide partial protection from oil and gas activities for the resources and qualities within the proposed boundaries. A prohibition on mineral activities within the proposed boundaries is necessary to be consistent with the prohibition on alteration of, construction on, etc., the seabed as discussed below.

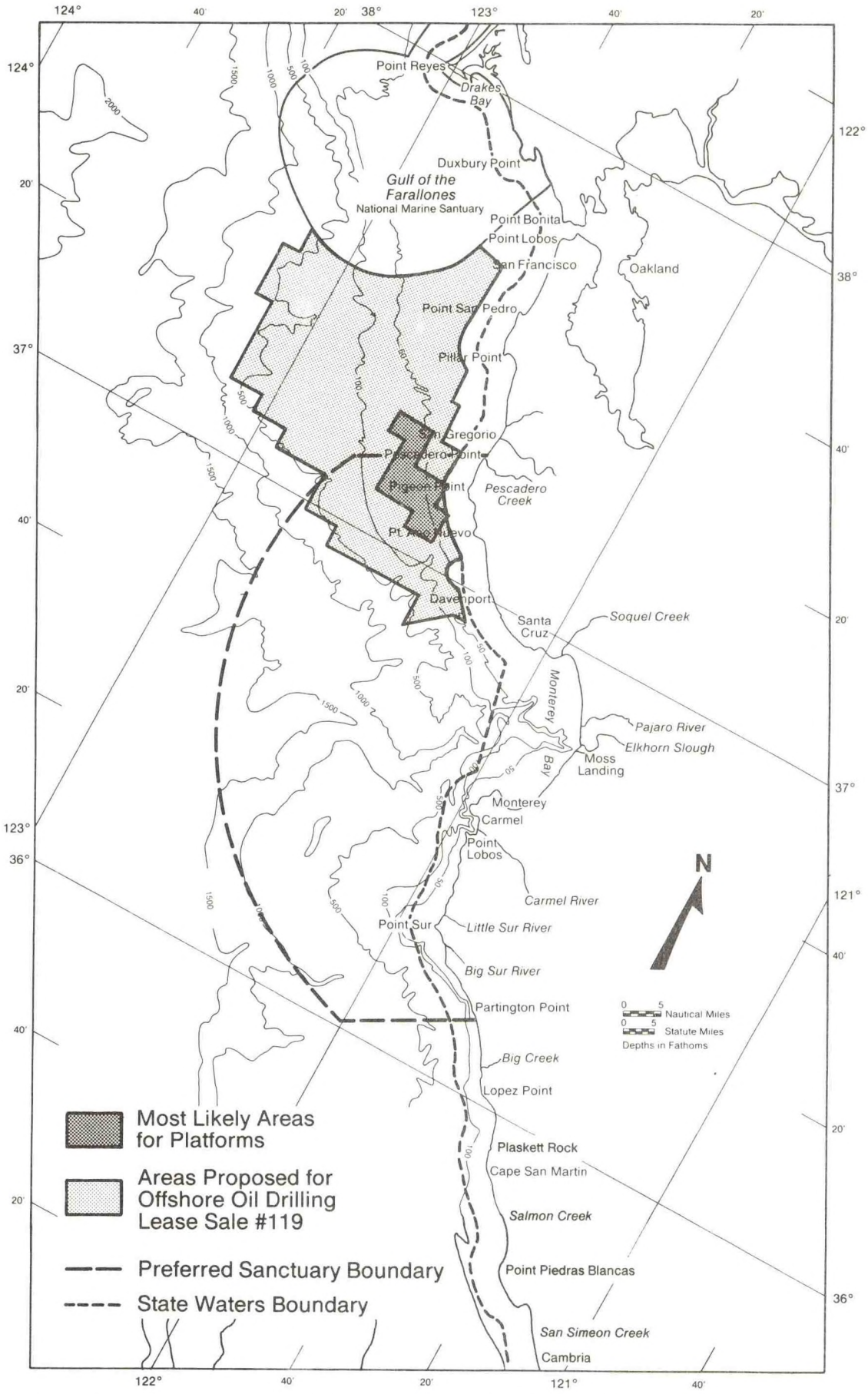


Figure 11. Potential Oil and Gas Development in the Vicinity of Monterey Bay.

Table 13. Summary of Threats to marine mammals, seabirds, and marine organisms resulting from offshore oil resources development and production (modified from University of California, Santa Cruz, 1976.)

Activity/Facility	Chronic Hazard	Episodic/Catastrophic Events
Exploration		
Seismic Profiling	Noise, "startle effect"	Sub-surface noise, Concussion
Drilling		Siltation, Turbidity increase
Boat Traffic	Sub-surface noise and propeller hits	
Operation		
Offshore facilities		
Platforms	Intrusion	
Well head	Leakage/seepage	Blow-out
Support		
Supply boats	Sub-surface noise and propeller hits	
Aircraft	Noise in the air	
Transport		
Pipelines	Leakage	Rupture
Pumping buoys	Leakage	
Barges/Tankers	Bilge oil intrusion	Collision or grounding
Clean-up		
Oil on water	Intrusion	
Skimmers		
Burn-off		Pollution--air
Chemicals	Toxicity of Chemical	Pollution--water
Grounded oil		Pollution--sediments
Booms	Dispersants	Disturbance to sensitive bird and mammal populations on beaches by human intrusion and aircraft activity
Straw		
Chemicals		
Presence of crew and equipment		Habitat destruction

Table 14. Potential oil and gas development impacts mitigated by NOAA's preferred Sanctuary alternative.

REGULATION	PROTECTION PROVIDED
1. No future hydrocarbon exploration or exploitation within the designated Sanctuary.	--Creates a broader buffer area against potential oil spill threats and provides increased response time for cleanup efforts in case spills occur. --Increases distances between potential spill/pollutant discharge point (i.e. rigs, platforms and pipelines) sensitive and resources which allows natural weathering and dilution of contaminents bereaching important marine life concentration areas --Excludes noise and visual disturbances of routine operations from the vicinity of important marine life habitats. --Reduces potential visual intrusion on aesthetic values of the 31 Units of State Park, Beach, Reserves and Refuges and the proposed Sanctuary itself. --Reduces potential air pollution.

(ii) Discharges and Deposits within the Boundaries of the Sanctuary

The second activity prohibited would be depositing or discharging from any location within the boundaries of the Sanctuary materials or other substances except fish, fish parts, chumming materials or bait used in or resulting from normal fishing operations in the Sanctuary; biodegradable effluents incidental to vessel use generated by marine sanitation devices approved by the U.S. Coast Guard; water generated by routine vessel operations (e.g., cooling water and deck washdown) excluding bilge pumping; or engine exhaust (Figure 15). This prohibition is necessary in order to protect the Sanctuary resources and qualities from the effects of pollutants deposited or discharged into the Sanctuary.

(iii) Discharges or Deposits from Beyond the Boundaries of the Sanctuary

The third activity prohibited would be depositing or discharging, from beyond the boundaries of the Sanctuary, materials or other substances, except for the exclusions discussed above for the second activity, that subsequently enter the Sanctuary and injure a Sanctuary resource or quality (Figure 15). The intent of this prohibition is to protect the Sanctuary resources and qualities from the harmful effects of land and sea-generated non-point and point source pollution.

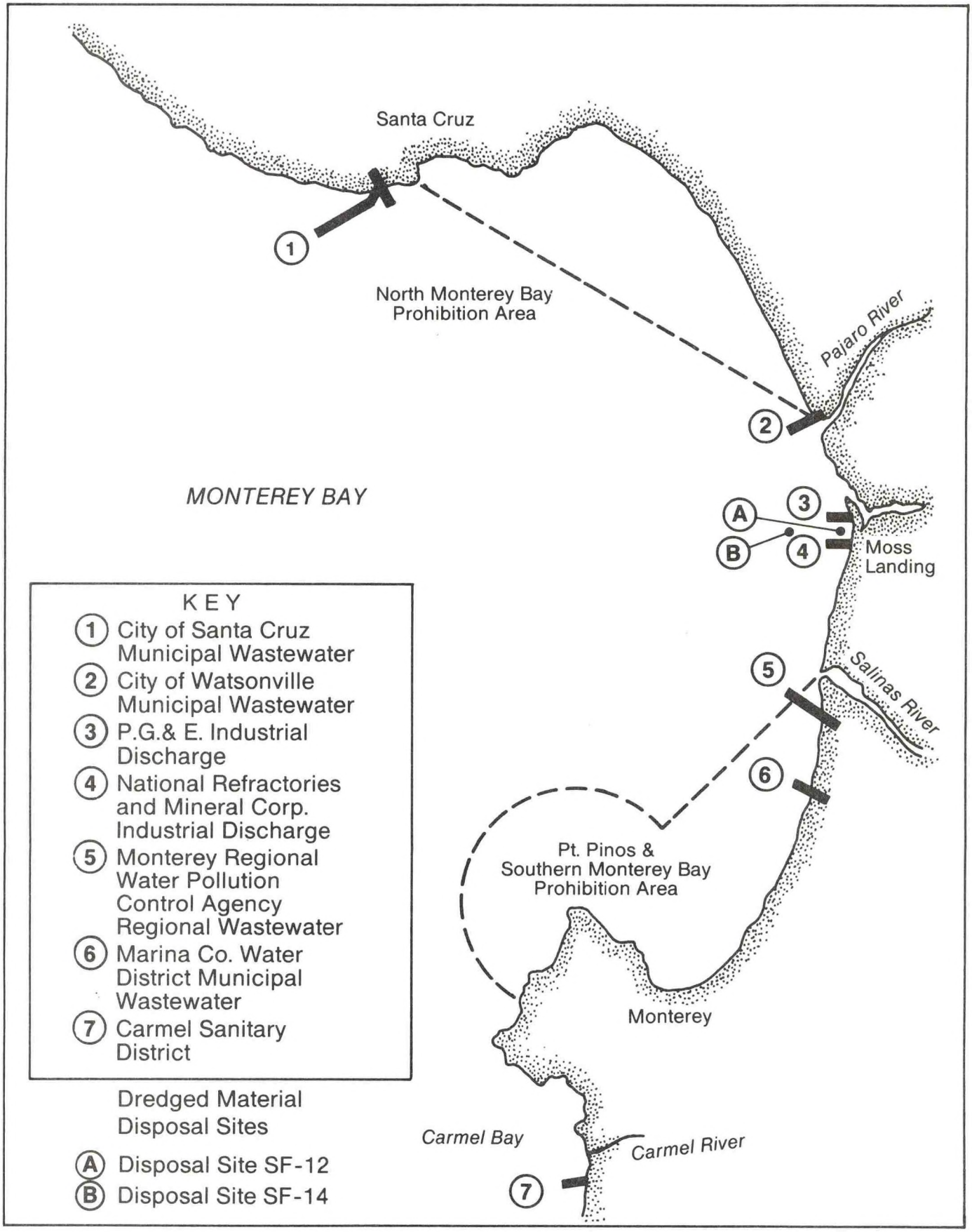


Figure 15. Existing Ocean Discharges and Dredged Material Disposal Sites in Monterey and Carmel Bays (Modified from Earth Metrics, 1986).

(iv) Historical Resources

The fourth activity prohibited would be moving, possessing, or injuring or attempting to move, possess, or injure a Sanctuary historical resource. Historical resources in the marine environment are fragile, finite and non-renewable. This prohibition is designed to protect these resources so that they may be researched and information about their contents and type made available for the benefit of the public. This prohibition does not apply to accidental moving, possession or injury during normal fishing operations.

(v) Alteration of, or construction on, the Seabed

The fifth activity prohibited would be drilling through, dredging or otherwise altering the seabed of the Sanctuary; or constructing, placing or abandoning any structure or material on the seabed of the Sanctuary, except as a result of: anchoring vessels; normal fishing operations; routine harbor maintenance; installation of navigation aids; maintenance of mariculture operations existing as of the effective date of these regulations; and the construction of docks and piers. The intent of this prohibition is to protect the resources of the Sanctuary from the harmful effects of activities such as, but not limited to, excavations for archeological purposes, drilling into the seabed, strip mining, ocean mineral extraction and dumping of dredge spoils.

(vi) Taking Marine Mammals and Seabirds

The sixth activity prohibited would be taking marine mammals in the Sanctuary or seabirds in or above the Sanctuary, except in accordance with and as permitted by regulations promulgated under the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA). The term "taking" includes all forms of harassment. The MMPA and the ESA both prohibit the taking of specific species protected under those Acts. Sanctuary enforcement officials may consider harassment cases pursuant to the MMPA and ESA. The proposed prohibition would overlap with the MMPA and ESA but also extend protection for Sanctuary resources on an environmentally holistic basis. It would include all marine mammals in the Sanctuary and seabirds in or above the Sanctuary.

(vii) Overflights

The seventh and final activity prohibited would be flying motorized aircraft at less than 1000 feet above the Sanctuary within three nautical miles of State of California designated reserves, parks, beaches or refuges, or the Los Padres National Forest. This prohibition is intended to protect marine birds and mammals from the disturbance and harassment of low-flying aircraft. For example, seabirds are often congregated near the shoreline and sea otters are distributed among the kelp beds within three nautical miles of the coastline.

The following two activities, operating commercial (other than fishing) vessels and operating thrill craft, may be regulated in

the future should evidence be presented that Sanctuary resources and qualities are threatened by these activities.

Vessel Operation

At present only a few, large commercial vessels visit the Monterey Bay region, mainly to dock at Moss Landing. The area has had a long history of safe vessel traffic but there may still remain a threat to the resources and qualities of the Monterey Bay area from possible collisions and possible spills of hazardous materials.

NOAA has considered and deferred considering regulation of vessel traffic, which may include, but is not be limited to: (1) routing of all coast-wise vessel traffic outside of the boundaries of the Sanctuary, (2) prohibiting oil barge traffic within the Sanctuary, (3) restriction of all large vessels inbound to and outbound from Monterey Bay to designated port access route(s), and (4) imposing special design requirements, such as double hulls, for petroleum and other hazardous substance transport vessels in the Sanctuary.

This preferred alternative will give NOAA the flexibility to work in the future with the U.S. Coast Guard on appropriate courses of action to protect the resources and qualities of Monterey Bay. The U.S. Coast Guard is currently working with the Fish and Wildlife Service on a section 7 consultation regarding possible impacts from rerouting vessel traffic off the coast of California on endangered species, specifically the Southern Sea Otter. As

information becomes available on specific probabilities of accidents, potential locations of accidents and estimates on which resources and qualities are at risk, NOAA will be able to propose to the U.S. Coast Guard appropriate mitigating measures.

USCG current, and proposed regulations also address construction standards for vessels as well as officer competency and bridge organization; these problems are more effectively dealt with on a nationwide basis. Given the difficulty in regulating staffing and construction standards for vessels in discrete areas, the on-going USCG study of traffic lanes and proposed regulations, and the speculative nature of the projected vessel traffic increase associated with OCS leasing, it seems premature to propose Marine Sanctuary regulations to deal with these issues.

NOAA will consult with DOI and USCG as studies continue and data becomes available and may propose action in the future for public review. In addition, NOAA will maintain close communication with the USCG to evaluate the need for additional regulations regarding vessel safety and/or emergency response plans and equipment.

Operation of "Thrill Craft"

"Thrill Craft" means any motorized vessel which is generally less than thirteen feet in length as manufactured, is capable of exceeding a speed of twenty miles per hour, and has the capacity to carry not more than the operator and one other person while in operation. The term includes but is not limited to jet skis, wet

bikes, surf jets, miniature speed boats, and hovercraft.

These craft can pose a serious threat to the resources of the Monterey Bay area. There is a potential for collisions with marine mammals and birds, injury to kelp beds, and disturbance, due to the noise and exhaust, by the craft to organisms near and on the surface at large distances from the craft. NOAA will monitor the activities of these "thrill craft" to determine, first, if indeed there is a threat to the resources and, second, if regulations should be promulgated prohibiting these activities in specified zones.

The effects of Sanctuary designation on Emergency, Defense, Fishing, and Research and Education activities are described below:

Emergencies

Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss or injury, any activity, including those not listed in the scope of regulations, is subject to immediate temporary regulation, including prohibition, in accordance with the Administrative Procedure Act.

Defense Activities

No prohibition set forth in the Sanctuary regulations shall apply to activities that are necessary for national defense or law enforcement. Whenever an activity necessary for national defense or law enforcement would violate a prohibition set forth in the

Sanctuary regulations were it not necessary for national defense or law enforcement, the head of the agency taking the action shall notify the Secretary of Commerce or designate of the proposed activity if there is sufficient time to permit consultation without jeopardizing national defense or law enforcement. Such notification shall be sufficiently in advance of undertaking the activity in order to permit consultations as to how the activity could be conducted to minimize any adverse impact on Sanctuary resources and qualities without compromising national defense or law enforcement. Activities that are not necessary for national defense or law enforcement, such as training exercises and routine vessel operations, are subject to all prohibitions contained in the Sanctuary regulations.

Fishing Regulations, Licenses, and Permits

Fishing in the Sanctuary, including fishing for shellfish and invertebrates and mariculture, shall not be regulated as part of the Sanctuary management regime authorized by the Act. However, fishing in the Sanctuary may be regulated other than under the Act by Federal and State authorities of competent jurisdiction, and designation of the Sanctuary shall have no effect on any regulation, permit, or license issued thereunder, e.g., regulations promulgated under the California Fish and Game Code and regulations implementing Fishery Management Plans promulgated under the Magnuson Fishery Conservation and Management Act, 16 U.S.C. §§ 1801 et seq. Notwithstanding the above, discharges and deposits from

fishing vessels may be regulated pursuant to Article IV, section 1, paragraph (b); drilling through, dredging or otherwise altering the seabed of the Sanctuary or constructing, placing or abandoning any structure or material on the seabed of the Sanctuary in connection with fishing and mariculture activities may be regulated pursuant to Article IV, section 1, paragraph (d); and taking of marine mammals and seabirds may be regulated pursuant to Article IV, section 1, paragraph (e).

Research and Education

The Sanctuary research program would provide a coordinated effort to obtain vital baseline and monitoring data on the resources and on human activities at Monterey Bay. Information on water quality and circulation, species density and diversity, fisheries resources, marine mammals and seabirds would be gathered and catalogued for use in assessing the health of the Bay environment and the effects of human activity in the area. This would improve management's ability to develop long-term planning for the sanctuary and would provide data useful in responding to oil spills.

The Sanctuary education and interpretive program would improve public awareness of the importance and fragility of Monterey Bay's resources and qualities and thus engender support for resource protection efforts. The program would provide audiovisual materials, exhibits, and other information products for local residents, tourists, schools and other interested groups.

2. Negative Effects of Designation on Income Generating Activities

Fishing Activities

As there is no Sanctuary regulation regarding fishing, there would be no negative effects on this highly productive industry. The net effect of preserving habitat and water quality by controlling pollutants and disturbance of the seabed should be very positive for maintaining healthy and productive fish stocks.

Oil and Gas Activities

Given the wealth of sensitive renewable, natural resources within the proposed Sanctuary, the high tourism and commercial fishery value of the area, and the present indications of low National oil and gas resource potential, it is NOAA's judgment that the net economic effect resulting from a restriction on hydrocarbon operations is likely to be positive.

The net economic effect of the proposed regulation depends largely on: the amount of hydrocarbon reserves foregone, dollar value of the oil, the estimated value of the renewable resources, and the economic value of the tourist industry.

It is thought that the proposed regulation will have positive economic effects in the long-run by contributing to the preservation and health of renewable sources of income, such as fishing and recreation, due to the long-term protection to such activities from potential oil spills, discharges and visual and acoustical disturbance. In addition, the Sanctuary research and education programs will have long-term benefits by enabling natural

resource managers to make better informed decisions regarding the preservation, enhancement and possible additional economic benefits of the area's natural resources and uses.

Lease Sale 119 is currently on hold in the early phase of the pre-lease sale process. Thus far, only the "Call for Information" has been completed by MMS for the proposed sale and no further activities are being carried out. Current industry interest in these specific tracts is unknown. MMS estimates that the high case conditional mean estimate of the undiscovered, economically recoverable oil resources for the entire Central California Planning area is 530 million barrels (Personal Communication, MMS, March, 1990). The FEIS for the proposed 5-Year OCS Oil and Gas Leasing Program Mid-1987 to Mid-1992 (MMS, 1987) states that one sale in the Central California planning area will produce approximately 153 million barrels of oil and 286 billion cubic feet of gas. More recent estimates from MMS Pacific Region is that Lease Sale 119 contains conditional resources of approximately 180 million barrels of oil. Finally, it is estimated (Personal Communication, MMS, March, 1990) that the portion of the Central California Planning Area included in the preferred Sanctuary boundary has a conditional resource potential of 110 million barrels of oil and 180 billion cubic feet of gas with an estimated net economic value of 280 to 370 million dollars.

At the current rate of U.S. oil consumption (17.5 million barrels/day, API, Personal communication, 1989) the projected resources of the oil within the proposed boundary amounts to less

than seven days worth of energy. On should bear in mind the fact that on the California OCS, the average oil and gas production over the past 21 years was only 33.1 million barrels of oil and 32.8 billion cubic feet of gas per each of the producing fields (Personal Communication, MMS, March, 1990). In addition, it is estimated that only 6 percent of all OCS resources (discovered and undiscovered) are in fields containing more than 3 days of supply of oil for the Nation and over 80 percent of all OCS sources to be discovered are in fields containing 1 day's or less supply of oil (Personal Communication, MMS, March, 1990).

All of the above estimates are based on conditional estimates of resources and no estimates of reserve quantities can be determined until drilling occurs. As a result one cannot compare one estimate to another as each is derived from conditional probabilities. Projections on quantity and quality of oil reserves may be modified, based on the findings resulting from exploration pursuant to OCS Sale #119 and other factors which may make recovery more or less economically feasible, such as increases or decreases in the price of imported oil or prohibitive costs of or environmental restrictions on alternative energy sources. Thus, reliable estimates of the amount and value of hydrocarbon resources affected in the Central California OCS are not available. The proposed regulation would also affect the availability of oil and gas resources and State income from the leasing of tracts located in State waters. Data on the quantity of State oil and gas OCS resources in the central California area are not available.

Currently, however, there is a State moratorium on such leasing.

Finally, only approximately 60 of the lease tracts in the area south of the Gulf of the Farallones selected for consideration under Lease Sale #119 fall either totally or partially within the proposed marine Sanctuary. Oil and gas resources to the north in Lease Sale 119 would still be available as well as any tracts that are part of future Lease Sales outside of the proposed boundary and within the Central California Planning Area.

It is possible that the proposed prohibition would reduce U.S. Treasury income from offshore leasing royalties and that the industry bids on tracts affected by the prohibition would be lost in future lease sales. The total amount of lost revenue estimated by MMS from these conditional resource estimates may be modified by the results of petroleum development pursuant to actual results from drilling associated with some future Lease Sale, as well as an analysis of economic feasibility and environmental and regulatory constraints. Economic feasibility is determined solely by the oil industry based on lease sale costs at the time of sale, current oil prices, proposed project costs, and environmental reviews and mitigation costs. Oil development costs and expected returns per investment are considered confidential information by the oil industry. Once again, environmental and regulatory constraints are impossible to identify due to the lack of experience of the Central California Planning Area with offshore oil and gas development.

Discharge and Ocean Dumping Activities

The regulation prohibiting discharges and deposits of any material or substance also would prohibit the disposal of litter and other solid wastes such as fishing lines and nonbiodegradable plastic or metal objects which animals and birds in the Sanctuary could eat or in which they could become entangled. The impact of this regulation on vessel operations is expected to be minor. Oil discharges are presently regulated under the Clean Water Act. Where it pertains to oil discharges, this regulation would increase the penalties for violations.

The regulation would also prohibit dumping and the disposal of dredge material within the sanctuary (Figure 15). The negative impacts of ocean dumping and dredge disposal include smothering of benthic organisms, increased water column turbidity resulting in potential damage to industry that requires pollutant-free water (such as for cooling purposes, refractories etc.), mariculture operations, shellfish harvesting, commercial and sport fishing and the negative aesthetics due to odor and water discoloration to contact and non-contact water recreation. A study on the release of dredged material over a 100 fathom contour site near the Farallon Islands found a relatively abundant but not diverse benthic macrofauna. The study concluded that most of the dumped material went straight down and covered the bottom at an average depth of about 1 foot (0.3 m). Depending on use levels of such a disposal site, smothering and oxygen depletion could significantly harm the benthic community in the area (COE, 1975). However, in

the case of Monterey Canyon the continuous natural disturbance at the Canyon head causes a naturally resilient benthic population (COE, 1977). Community resilience is correspondingly lower in the more complex and stable communities of deeper water (COE, 1977). The environmental complexities of sediment, water and biological interactions means that it is necessary to analyze the natural disturbance regime at the potential dredging or disposal site and its relation with the associated benthic communities for effective management.

NOAA is consulting with EPA, the State Water Resources Board and Regional Water Quality Control Board and Harbor Masters regarding existing dredge and disposal activities within the vicinity of the proposed Sanctuary. Dredging activities in harbors will not be affected by Sanctuary designation as harbors are not included within the Sanctuary boundaries. Current disposal practices within the Sanctuary are regulated by the Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements (WDR's) under the authority of the Clean Water Act. NOAA can work within this existing process to ensure that these requirements are in place, enforced and adequate to protect the resources of the Sanctuary. In addition, the regulations under Title I of the MPRSA prohibit ocean disposal of dredged material which proves to be toxic to the organisms of the disposal site. The Sanctuary requirement of certification of existing permits will assure review for possible impacts without imposing undue burdens.

Discharges and deposits from the land (Figure 15), pursuant to

any permit executed as of the effective date of these regulations, are allowed subject to all prohibitions, restrictions and conditions validly imposed by any other authority of competent jurisdiction, provided however, that NOAA may regulate the exercise of these existing permits as necessary to achieve the purposes for which the Sanctuary was designated. In consultation with scientific institutions and local, State and regional organizations such as the Association of Monterey Bay Area Governments, NOAA will consult with the permittees and the relevant permitting authorities of these activities to determine means of achieving the Sanctuary purposes. If additional constraints are necessary, NOAA will work with the permittees and permitting authorities to determine the necessary level of conditions to provide adequate protection of the proposed Sanctuary's resources and qualities.

The requirement of NOAA certification of existing permits for municipal sewage outfalls will ensure NOAA consideration of potential impacts on Sanctuary resources and qualities. The NOAA certification process will be coordinated with EPA and State and Regional Water Quality Control Boards. Procedures to ensure efficient administration of NOAA certification and other approval processes are laid out in the proposed Sanctuary regulations.

The impact of this regulation on most Sanctuary users is expected to be minor; non-biodegradable and other potentially harmful trash will have to be kept on boats and disposed of at proper facilities, most likely on the mainland. The impact of this regulation on vessel operations is expected to be minor. The

exceptions to this regulation are designed to allow continued use of the Sanctuary by vessels. Fish, fish parts, and bait used in or resulting from normal fishing operations within the Sanctuary, exhaust, vessel cooling waters, and approved marine sanitation wastes are exempted specifically from the prohibition.

The regulation does not prohibit existing sewage outfall discharges or dumping and the disposal of dredge material within the Sanctuary (Figure 15) pursuant to permits existing prior to the date of Sanctuary regulations, provided however, that NOAA may regulate the exercise of these permits as necessary to achieve the purposes for which the Sanctuary was designated. In addition, holders of permits, licenses, or other authorizations issued after the effective date of Sanctuary designation allowing the discharge of municipal sewage or the discharge of dredged material will be subject to Sanctuary regulatory prohibitions unless approved by the Director of the Office of Ocean and Coastal Resource Management.

The regulation may impose additional costs by requiring the use of more expensive dredge disposal or dumping sites or methods as discussed above. The regulation could also result in additional costs if the Director were to determine that a higher level of treatment or other, more expensive sewage disposal methods were preferable to disposal in the Sanctuary. It is difficult to predict accurately the economic impact of this regulation without analyzing specific proposals. The application of this regulation to dumping and dredge disposal adds further protection of the resources to that afforded by the existing legislation. The

requirement of Sanctuary certification or other approval of permits for municipal outfall and dredge disposal will ensure that these potentially harmful activities receive special consideration from the Sanctuary viewpoint.

Another positive effect of the regulations will be that data from existing studies can be used to make better informed management decisions. For example, DDT and its degradation products have been found in the tissues of all eight species of marine fishes caught and analyzed from Monterey Bay (Shaw, 1972). The California Department of Fish and Game in cooperation with the California Department of Health Services is conducting an aquatic toxicology evaluation program in Monterey Bay (Welden, 1988). The main objectives of the program are to determine the average chemical contaminants found in a range of the most common commercial and sport-caught fish in the bay and to give a current risk-assessment of the effects of consuming them. This study was scheduled to be released in the fall of 1989 but has not yet been released. Sanctuary management can use this data to attempt to formulate management measures to address and possibly mitigate the source of the pollution to assist in achieving a more healthy and productive fishery.

Another positive impact of the regulation on water quality is on existing aquaculture facilities and research institutions which require a high water quality standard for raising organisms and conducting experiments that need relatively uncontaminated background seawater supplies.

Altering of, or Construction on, the Seabed including Dredging Activities

Dredging activities are not extensive within the preferred alternative's proposed Sanctuary boundaries; nevertheless, unrestricted alteration of, construction on, or drilling of the seabed represents a threat to marine resources. Foremost among these adverse impacts would be increased turbidity levels, disruption or displacement of benthic and intertidal communities, and human intrusions near marine bird and marine mammal concentrations. The suggested regulatory restriction above will allow limited and ecologically sound dredging (particularly along the mainland and in harbors) at levels fairly certain not to harm breeding grounds, haul out areas, and foraging areas.

This regulation will enhance resource protection by reducing the presence and operation of large, and often noisy, dredging machinery. Thus, both over the short and long term, human intrusion upon marine wildlife, along with potentially adverse impacts on their food supplies, e.g., benthic and pelagic fish resources, will be minimized. No severe economic impacts upon commercial firms are expected. Dredging exceptions would allow for installation of navigation aids, and the maintenance of existing harbors and mariculture. The regulation of projects for docks and piers in the nearshore area will remain the responsibility of the existing regulatory authorities. Activities regarding the construction and placement of pipelines approved by the Director of the Office of Ocean and Coastal Resource Management are allowed. Sand mining activities will specifically be examined to first,

determine the degree of impact (if any) on the resources of the Monterey Bay area and second, discuss with the permittee any mitigating measures or permit conditions that may be necessary to protect the resources of the area.

The activities exempted from this regulation will be monitored by the Sanctuary manager, based on information supplied by the COE and the California Coastal Commission. If the data collected demonstrate that a greater degree of Sanctuary oversight is appropriate, amendments to the regulations could be proposed.

Vessel Operation

There will be no economic effects on vessel traffic as NOAA has considered and deferred considering regulation of vessel traffic, that may include, but not be limited to: (1) routing of all coast-wise vessel traffic outside of the boundaries of the Sanctuary, (2) prohibiting oil barge traffic within the Sanctuary; (3) restriction of all large vessels inbound to and outbound from Monterey Bay to designated port access route(s); and (4) imposing special design requirements, such as double hulls, for petroleum and hazardous substance transport vessels in the Sanctuary.

At present only a few, large commercial vessels visit the Monterey Bay region, mainly to moor at Moss Landing. The area has had a long history of safe vessel traffic but there still remains a possible threat to the resources and qualities of the area from possible collisions and possible spills of hazardous materials.

NOAA will consult with USCG as studies continue and data

becomes available and may propose action in the future for public review. In addition, NOAA will maintain close communication with the USCG to evaluate the need for additional regulations regarding vessel safety and/or emergency response plans and equipment.

3. Socioeconomic Effects of Designation

The regulations proposed for the sanctuary are not likely to result in:

(1) an annual effect on the economy of $100 million or more;

(2) a major increase in costs or prices for consumers, individual industries, Federal, state or local government agencies or geographic regions; or,

(3) significant adverse effects on competition, employment, investment, productivity, innovation or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

The net environmental and socioeconomic effects of designating the Sanctuary and implementing the Sanctuary Management Plan and regulations are estimated to be positive. While such effects are difficult to quantify, the purpose of the Sanctuary in part will be to maintain or improve water quality, fisheries, aesthetics and tourism without causing any adverse effects.

The proposed Sanctuary regulations would allow all activities to be conducted in the proposed Sanctuary other than a relatively narrow range of prohibited activities. The procedures proposed in these regulations for applying for National Marine Sanctuary

permits to conduct otherwise prohibited activities, for requesting certifications for existing leases, licenses, permits, approvals, other authorizations or rights authorizing the conduct of a prohibited activity, and for notifying NOAA of applications for leases or other authorizations to conduct a prohibited activity would impose a cost in time and effort on the part of applicants for such permits or certifications and those subject to the notification requirements. However, NOAA will keep such costs to a absolute minimum by working closely with State and Federal regulatory and permitting agencies to avoid any duplication of effort and will set strict guidelines for reviewing applications in as brief a time as possible.

Estimates of revenue foregone by the proposed prohibition of oil, gas and mineral activities within the Sanctuary boundary has been presented in detail under the socioeconomic consequences for this proposed regulation. Balancing the foregone revenue would be preventing adverse socioeconomic effects by the proposed prohibition of and oil, gas and mineral activities. For example, the proposed prohibition may alleviate or remove matters ranging from costs to local communities for developing on-shore facilities to political and legal action resulting from public controversy and apprehension concerning proposed oil and gas activities.

It is not possible to quantify the positive socioeconomic effects of prohibiting OCS oil and gas activities. The recent NAS study (1989) on the Adequacy of Environmental Information For Outer Continental Shelf Oil and Gas Decisions: Florida and California

found that "few data have been collected by MMS or anyone else to address the social and economic impacts of OCS activities".

The regulation prohibiting discharges and deposits and alteration of or construction on the seabed may require permit holders for such activities to seek other areas of disposal or apply higher levels of treatment. All measures, terms and conditions applied to existing activities will be done in consultation with the affected party and the appropriate management agency. The proposed regulations prohibiting discharges within or beyond the boundaries of the Sanctuary, with certain exceptions, complements the existing regulatory system established by EPA, the State Water Resources Board and the Regional Water Quality Control Board.

D. Manageability of the Area

The proposed sanctuary is designed to protect the highly productive waters and the diverse habitats and resources of the coastal and ocean waters in and surrounding Monterey Bay and the submerged lands thereunder. The preferred boundary encompasses a total of approximately 2,200 square nautical miles, in and around Monterey Bay, off the central coast of California. The proposed Sanctuary boundary includes the coastal and ocean waters over, and the submerged lands under, the entire Monterey Canyon between the northern boundary of Pescadero Marsh, 2.0 nautical miles north of Pescadero Point, and the southern boundary of Julia Pfeiffer Burns Underwater Park and Area of Special Biological Significance (ASBS), 2.5 nautical miles southeast from Partington Point, and extending from the mean high tide line from these sites seaward approximately 18 nautical miles on a southwesterly heading of 240°. These southern and northern boundaries are joined by an arc drawn from Moss Landing, with a radius of 46 nautical miles, over the entire Monterey Canyon complex out to the abyssal plain at 1500 fathoms (approx 3000 m) (Figure 18). Santa Cruz, Moss Landing and Monterey Harbors are all excluded from the Sanctuary boundaries. Bathemetric contours and easily identifiable points on land were chosen to provide easily defined Sanctuary boundaries.

The boundary encompasses many important coastal, nearshore, open ocean and submarine canyon resource zones and integrates them into one management regime. It includes 31 units of the California Beach, Park, Reserve and refuge system. Also, five Areas of

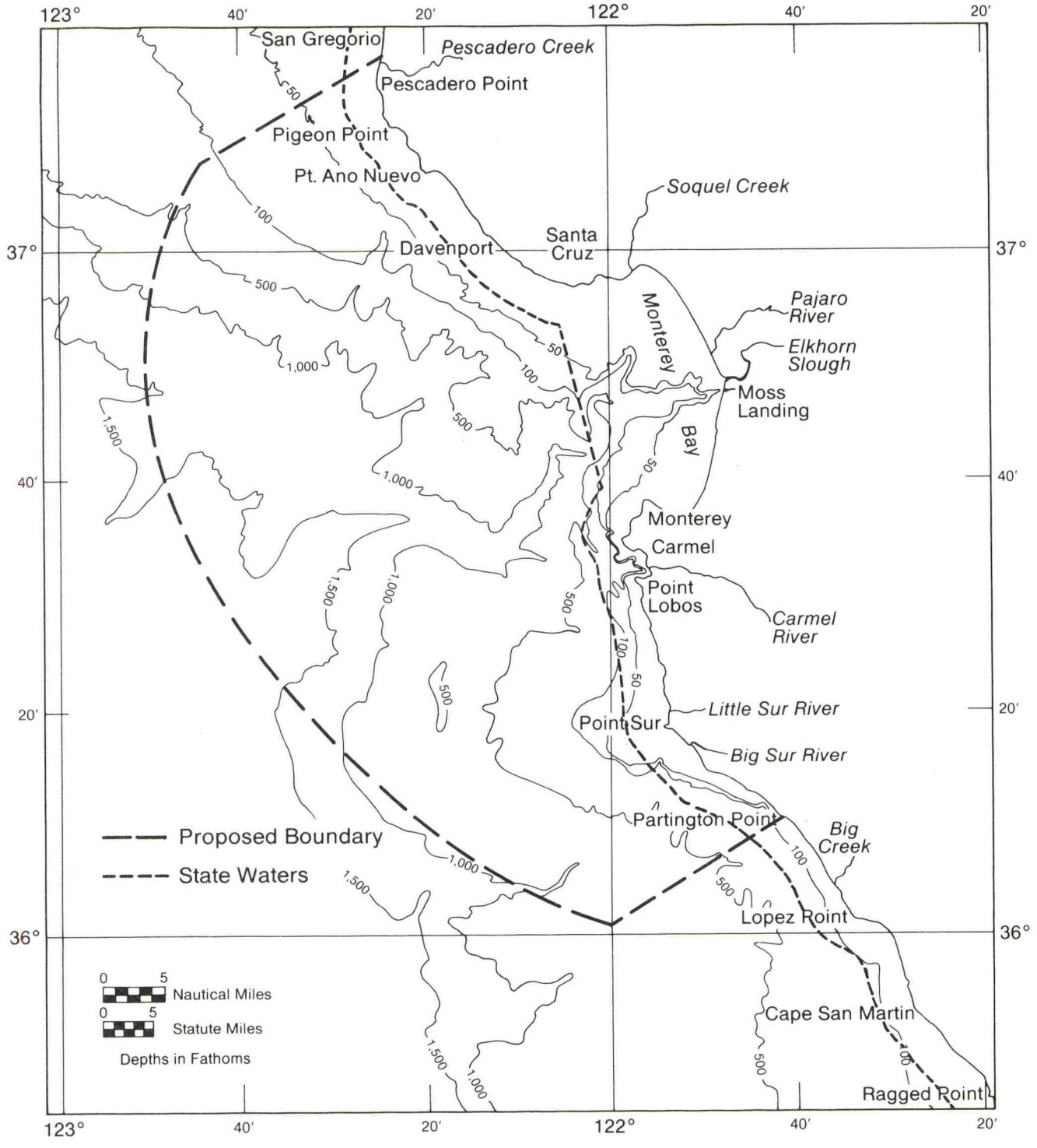


Figure 18. Proposed Monterey Bay National Marine Sanctuary Boundary Alternative #2.

Special Biological Significance established by the State, and all six major research institutions in the region are included within the boundaries. Critical habitats for whales; sea otters; sealions; elephant, fur, and harbor seals - many species of which are listed as endangered or threatened are protected within these boundaries.

Habitats can be characterized by their water depth, distance from shore, and the type of substrate. The habitats in the Monterey Bay area are unusual because of the many diverse types which are found together in a relatively confined area. The five types of habitats found in the Bay area are: 1) submarine canyon habitat, 2) nearshore sublittoral habitat, 3) rocky intertidal habitat, 4) sandy beach intertidal habitat, and 5) kelp forest habitat.

The Sanctuary Management Plan (Attachment 1) recognizes the need for cooperation and coordination with the existing Federal, State, and local agencies and organizations to ensure effective management of the Sanctuary. The Marine and Estuarine Management Division (MEMD) would be responsible for managing the Sanctuary. The MEMD would help to coordinate the management efforts of other programs by providing program support through funding, staffing, and other means that may be available and appropriate. The MEMD will coordinate its on-site enforcement activities through cooperative agreements with the California Department of Fish and Game and U.S. Coast Guard and may provide funds for additional enforcement agents within the Sanctuary. MEMD will also rely on

fishing and whale watching vessels and other users to monitor abuses of Sanctuary regulations and report to the Sanctuary Manager. The Sanctuary Manager's headquarters will be in the Monterey Bay area.

Proposed Mechanisms to Coordinate with Existing Regulatory and Management Authorities within the Area

PART III: PROPOSED MECHANISMS TO COORDINATE EXISTING REGULATORY AND MANAGEMENT AUTHORITIES WITHIN THE AREA

MEMD is in consultation with EPA, as well as both the State and Regional Water Quality Control Board, regarding discharges into Monterey Bay, and has already worked out preliminary mechanisms for reviewing NPDES permits. These mechanisms, which are intended to work within the existing administrative framework of review and approval, place minimal additional administrative burdens on holders or owners of, or applicants for NPDES permits. The proposed mechanisms are described in the proposed regulations. These processes will be formalized after Sanctuary designation.

MEMD is consulting with the EPA, the State Water Resources Board and Regional Water Quality Control Board and Harbor Masters regarding dredge and disposal activities within the vicinity of the proposed Sanctuary. Dredging activities in harbors will not be affected by Sanctuary designation as harbors are not included within the Sanctuary boundary. Current disposal practices within the Sanctuary are regulated by the Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements (WDR) under the authority of the Clean Water Act.

Responses to spills of oil and other hazardous materials requires close coordination of responsible agencies. Under the National Contingency Plan for the removal of oil and hazardous substances in coastal and marine areas of EPA's Region IX (California, Nevada and Arizona), remedial action to control or remove this type of material that could endanger the public health

is the responsibility of U.S. Coast Guard (USCG) directed Regional Response Teams acting through an On-Scene Coordinator and a Regional Response Center.

The Eleventh Coast Guard District, based in San Francisco, will provide Regional Response Center facilities. The On-Scene Coordinator will receive scientific support from NOAA and assistance as necessary from the Regional Response Team and other appropriate Federal and state agencies.

Assistance is also possible from private groups and industry. All of the relevant public and private agencies that would assist in a clean-up have Oil Spill Contingency Plans on file in the USCG Monterey Bay Office which are required to undergo periodic updates and approval by the USCG.

A Marine Safety Office Contingency Plan is currently under review at the Coast Guard station in Monterey Bay. It is designed to incorporate and coordinate the above plans, resources and equipment in the event of a spill in the Monterey Bay region.

To provide further protection for Monterey Bay resources, the Sanctuary staff will assess the state of preparedness of the relevant parts of the contingency plans as they relate to the Sanctuary. This action will entail exchanging information with government and industry response teams and seeking their support in assessing detection and clean-up capabilities that can be used to protect Bay resources and a possible trial simulation in Monterey Bay. In addition, and consistent with the National Marine Sanctuary Program Regulations (15 CFR Part 922), NOAA will provide

the necessary resources and impetus to develop and implement a site-specific contingency and emergency-response plan designed to protect the Monterey Bay Sanctuary's resources. The plan shall contain alert procedures and actions to be taken in the event of an emergency such as a shipwreck or an oil spill.

An MEMD-level contingency and emergency-response plan has been prepared for the Channel Islands and Key Largo National Marine Sanctuaries. A similar plan for the proposed MBNMS will be created that will:

- Describe emergency-response procedures and coordination requirements for MEMD and Sanctuary staff;
- Provide a geographic information system depicting resources at risk;
- Outline procedures for emergency research; and
- Provide damage assessment guidelines.

In conjunction with this plan, agreements may be formulated to improve spill detection programs and augment containment capabilities (i.e., with additional equipment, staff, and deployment plans). These efforts will be closely coordinated with similar efforts to protect the Elkhorn Slough NERR.

In order to ensure that research projects are directed to the resolution of management issues and concerns pertaining to Monterey Bay, the research program for the Sanctuary will be coordinated with the research programs at the existing research institutions in the Monterey Bay area, including Elkhorn Slough NERR. In preliminary discussions with university faculties, all of the existing marine research centers expressed strong interest in the

coordination role that the Sanctuary could play in research.

Education and interpretive programs exist, for example, at Monterey Bay Aquarium, Point Lobos, Año Nuevo amd Elkhorn Slough NERR and during whale watching excursions. Various programs for those visiting the Sanctuary headquarters, and outreach programs for interested groups not visiting the Sanctuary, will be carried out in coordination with programs already sponsored by existing interpretive programs.

The management of the proposed Sanctuary would integrate and utilize all aspects of the program to provide for the preservation of the special values of this unique marine area. Research and education, coordination, long-term planning and necessary regulations are described in the enclosed Management Plan.

The management program for the proposed Sanctuary will be developed and implemented by NOAA and the on-site manager in conjunction with existing agencies in order to benefit from existing expertise and personnel. These include those of the California Departments of Fish and Game and Parks and Recreation, the National Park Service, and perhaps other agencies.

NOAA will also investigate mechanisms to promote State and Federal interagency coordination and cooperation, particularly with the National Park Service, the USCG, and the NMFS. A particularly useful mechanism for coordination would be a Sanctuary Advisory Committee, including members from Federal agencies, such as the National Park Service, the USCG, the NMFS; State agencies such as the Coastal Commission, the Departments of Parks and Recreation and

Fish and Game, the State Lands Commission, as well as commercial and private interests and the public.

The Sanctuary manager will promote coordination among all the authorities concerned with the Sanctuary and will particularly stress consideration of the special value of the Sanctuary's living resources in the formulation of policies affecting the area. The greater understanding of Sanctuary resources and the effects of human use gained as a result of the research and monitoring will enable NOAA to provide valuable assistance to other authorities in their determinations relating to the level of protection for the resources of the Sanctuary.

The Sanctuary Advisory Committee (SAC) would be an especially useful coordinating mechanism. The SAC could ensure an exchange of information, advise the Sanctuary manager on permit applications and certifications, research priorities, amendments to the regulations, and other matters.

PART IV: THE SANCTUARY MANAGEMENT PLAN

(see attachment 1)

PART V: AN ESTIMATE OF ANNUAL SANCTUARY OPERATING COSTS

A. Personnel and Administration

Given the complexity, size and location of the Sanctuary, and the need to implement the Sanctuary program rapidly to cultivate the public support gained during the designation process MEMD would want to provide full staffing in the following positions and approximate salaries:

Sanctuary Manager	$42,000
Deputy Sanctuary Manager	35,000
Research Coordinator	29,000
Education Coordinator	29,000
Site Manager for Enforcement	24,000
Clerical	16,000
	$175,000

These positions may be phased in over two years, in which case the first year's annual cost for Sanctuary personnel probably would be closer to $100,000.

B. Facilities and Equipment

Sanctuary headquarters and administrative offices will be established at a suitable location within the Monterey Bay area. Barring the possibility that MEMD would be offered existing Federal, State, local or university facilities at low or no cost, MEMD would need to rent facilities for a headquarters. Based on what MEMD pays in rent at other west coast Marine Sanctuaries the

cost of renting could be $40,000 annually.

Equipment needs for setting up an office are estimated to cost approximately $30,000 in the first year and probably $5,000-10,000 in succeeding years. Initial equipment would include office furniture, computers (2), portable radios and other specialized equipment.

C. Resource Protection

MEMD plans to augment current enforcement activities by the California Department of Fish and Game, the U.S. Coast Guard and the National Marine Fisheries Serivce by providing funds through a cooperative agreement. Based on MEMD's experience over the past ten years in the Channel Islands and Gulf of the Farallones National Marine Sanctuaries, enforcement could cost up to $150,000 annually. MEMD also would provide a properly equipped, ocean-going vessel which is estimated to cost approximately $100,000. The maintenance and operating costs of the vessel are included in the $150,000 figure referred to above.

D. Research and Education

Research and education program activities are variable and often depend upon the availability of appropriated funds in the National Marine Sanctuary Program Budget.

Fortunately, there is already a strong and relatively well-funded research community surrounding Monterey Bay. It will be the Sanctuary's role to help coordinate the existing research projects

by establishing a coordinating mechanism. It will also be the Sanctuary's role to focus the attention of the researchers on management problems that affect the protection of resources. On an annual basis MEMD may be able to contribute $50,000 to this effort.

In education as in research, existing institutions provide numerous opportunities for the public to be informed about the marine life and ecology of Monterey Bay. The Sanctuary's role in education initially will be to gather information on what is already available and provide that information to the public. Later on, the Sanctuary may find educational needs that are not being met and provide some funds to fill the gaps. It is estimated that approximately $40,000 may be needed for that purpose.

Summary

When all these anticipated costs are brought together, the annual budget for operating the Sanctuary is estimated to be $515,000. The breakdown is as follows:

Personnel and Administration	$175,000
Facilities and Equipment	50,000
Resource Protection	150,000
Research and Education	90,000
Manager's Fund	50,000
TOTAL	$515,000

This estimate is approximately $125,000 higher than the Channel Islands National Marine Sanctuary (CINMS). The CINMS is the largest existing Sanctuary but is only half the size of the proposed Monterey Bay National Marine Sanctuary.

PART VI: EVALUATION OF THE ADVANTAGES OF COOPERATIVE STATE AND FEDERAL MANAGEMENT

Reference has been made throughout this Prospectus to the advantages that accrue to the Sanctuary when there is cooperative management. This idea is applicable in every facet of the Sanctuary in: resource protection, research and, education. Given the inclusion of State waters along the entire coastal boundary of the Sanctuary and the pressure of multiple State agencies, eg. California Coastal Commission, California Department of Fish and Game, California Department of Parks and Recreation, Regional Water Quality Control Board, it will greatly benefit MEMD if all of these agencies are brought into partnership and are asked to play a major role in the management of the Sanctuary.

PART VII: DRAFT ENVIRONMENTAL IMPACT STATEMENT

(see attachment 1)

PART VIII: PROPOSED SANCTUARY REGULATIONS

15 CFR Part 944 is proposed as follows:

PART 944 - MONTEREY BAY NATIONAL MARINE SANCTUARY

Sec.

Authority: Sections 302, 303, 304, 305, 307 and 310 of Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 16 U.S.C. §§ 1431 et seq.

§ 944.1 Purpose.

The purpose of the regulations in this Part is to implement the designation of the Monterey Bay National Marine Sanctuary by regulating activities affecting the Sanctuary consistent with the terms of that designation in order to protect and manage the conservation, ecological, recreational, research, educational, historical and esthetic resources and qualities of the area.

§ 944.2 Boundaries.

The Monterey Bay National Marine Sanctuary consists of an area of approximately 2,200 square nautical miles of coastal and ocean waters, and the submerged lands thereunder, in and surrounding Monterey Bay, off the central coast of California. The boundary encompasses the coastal and ocean waters over the entire Monterey Canyon between the northern boundary of Pescadero Marsh, 2.0 nautical miles north of Pescadero Point, and the southern boundary of Julia Pfeiffer Burns Underwater Park and Area of Special Biological Significance, 2.5 nautical miles south from Partington Point, and extending from the mean high tide line from these sites seaward approximately 18 nautical miles on a southwesterly heading of 240° and joined by an arc with a radius of 46 nautical miles drawn from Moss Landing over the entire Monterey Canyon complex out to the abyssal plain at 1500 fathoms (approximately 3000 meters). The Monterey Bay National Marine Sanctuary does not include Santa Cruz, Moss Landing, or Monterey Harbors. The precise boundaries of the Sanctuary appear in

Appendix I following section 944.11.

§ 944.3 Definitions.

(A) "Act" means Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended (16 U.S.C. §§ 1431 et seq.).

(B) "Administrator" or "Under Secretary" means the Administrator of the National Oceanic and Atmospheric Administration/Under Secretary of Commerce for Oceans and Atmosphere.

(C) "Assistant Administrator" means the Assistant Administrator for Ocean Services and Coastal Zone Management, National Oceanic and Atmospheric Administration.

(D) "Director" means the Director of the Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration.

(E) "Commercial vessel" means any vessel engaged in the trade of carrying cargo, including but not limited to tankers and other bulk carriers and barges; vessels used in seismic surveys; and vessels engaged in the trade of servicing offshore installations.

(F) "Effective date of Sanctuary designation" means the date the regulations implementing the designation of the Sanctuary become effective.

(G) "Historical resource" means a resource possessing historical, cultural, archaeological or paleontological signifi-

cance, including sites, structures, districts, and objects significantly associated with or representative of earlier people, cultures, and human activities and events.

(H) "Injure" means to change adversely, either in the long- or short-term, a chemical or physical attribute of, or the viability of.

(I) "Person" means any private individual, partnership, corporation, or other entity; or any officer, employee, agent, department, agency, or instrumentality of the Federal Government or any State or local unit of government, or any foreign government.

(J) "Sanctuary" means the Monterey Bay National Marine Sanctuary.

(K) "Sanctuary quality" means a particular and essential characteristic of the Sanctuary, including but not limited to water quality and air quality.

(L) "Sanctuary resource" means any living or nonliving resource of the Sanctuary that contributes to its conservation, recreational, ecological, historical, research, educational or aesthetic value, including, but not limited to, the substratum of the Bay, corals and coralline algae, benthic invertebrates and algae, plankton, fish, birds, marine mammals and historical resources.

(M) "Taking any marine mammal or seabird" means harassing, hunting, capturing, collecting, or killing, or attempting to harass, hunt, capture, collect, or kill, any marine mammal or

seabird, including, but not limited to, any of the following: collecting dead marine mammals or seabirds, or parts thereof, restraining or detaining any marine mammal or seabird, no matter how temporary, tagging a marine mammal or seabird, operating an aircraft or vessel or doing any other act that result in the disturbing or molesting of marine mammals or seabirds.

(N) "Thrill craft" means any motorized vessel that is generally less than thirteen feet in length as manufactured, is capable of exceeding a speed of twenty miles per hour, and has the capacity to carry not more than the operator and one other person while in operation. The term includes but is not limited to jet skis, wet bikes, surf jets, miniature speed boats, and hovercraft.

(O) "Vessel" means watercraft of any description capable of being used as a means of transportation in the waters of the Sanctuary.

Other terms appearing in the regulations are defined at 15 C.F.R. § 922.2 or in the Act.

§ 944.4 Allowed activities.

All activities except those prohibited by section 944.5 may be undertaken subject to any emergency regulation promulgated pursuant to section 944.6 and all prohibitions, restrictions, and conditions validly imposed by any other authority of competent jurisdiction. If any valid regulation issued by any Federal, State, or local authority of competent jurisdiction, regardless

of when issued, conflicts with a Sanctuary regulation, the regulation more protective of Sanctuary resources and Sanctuary qualities shall govern.

§ 944.5 Prohibited activities.

(a) Except as specified in paragraphs (c) through (i) below, the following activities are prohibited and thus unlawful for any person to conduct or cause to be conducted:

(1) Exploring for, developing, or producing oil, gas or minerals in the Sanctuary;

(2) Discharging or depositing, from within the boundaries of the Sanctuary, any material or other substance except:

(i) fish, fish parts, chumming materials or bait used in or resulting from normal fishing operations in the Sanctuary;

(ii) biodegradable effluents incidental to vessel use generated by marine sanitation devices approved by the U.S. Coast Guard;

(iii) water generated by routine vessel operations (e.g., cooling water and deck washdown) excluding bilge pumping; or

(iv) engine exhaust.

(3) Discharging or depositing, from beyond the boundaries of the Sanctuary, materials or other substances, other than those listed in (2)(i), (ii), (iii) and (iv) above, that subsequently enter the Sanctuary and injure a Sanctuary

resource or Sanctuary quality.

(4) Moving, possessing or injuring, or attempting to move, possess, or injure, a Sanctuary historical resource. This prohibition does not apply to accidental moving, possession or injury during normal fishing operations.

(5) Drilling through, dredging or otherwise altering the seabed of the Sanctuary; or constructing, placing or abandoning any structure or material on the seabed of the Sanctuary. This prohibition does not apply if any of the above results from: anchoring vessels; normal fishing operations; routine harbor maintenance; installation of navigation aids; maintenance of mariculture operations existing as of the effective date of these regulations; and the construction of docks and piers.

(6) Taking any marine mammal or seabird in or above the Sanctuary, except in accordance with and as permitted by regulations promulgated under the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA).

(7) Flying motorized aircraft at less than 1000 feet above the Sanctuary within three nautical miles of State of California designated reserves, parks, beaches or refuges, or the Los Padres National Forest.

(b) The prohibitions in paragraph (a) apply to United States-flag vessels and to persons who are citizens, nationals or resident aliens of the United States; and to foreign-flag vessels and persons not citizens, nationals, or resident aliens of the

United States to the extent consistent with generally recognized principles of international law, and in accordance with treaties, conventions, and other agreements to which the United States is a party.

(c) The prohibitions in paragraph (a)(2)-(7) do not apply to any activity necessary to respond to an emergency threatening life, property, or the environment.

(d) The prohibitions in paragraph (a)(2)-(7) do not apply to activities that are necessary for national defense or law enforcement. Whenever an activity necessary for national defense or law enforcement would violate a prohibition set forth in the Sanctuary regulations were it not necessary for national defense or law enforcement, the head of the agency taking the action shall notify the Secretary of Commerce or designate of the proposed activity if there is sufficient time to permit consultation without jeopardizing national defense or law enforcement. Such notification shall be sufficiently in advance of undertaking the activity in order to permit consultations as to how the activity could be conducted to minimize any adverse impact on Sanctuary resources and qualities without compromising national defense or law enforcement. Activities that are not necessary for national defense or law enforcement, such as training exercises and routine vessel operations, are subject to all prohibitions contained in the Sanctuary regulations.

(e) The prohibitions in paragraph (a)(2)-(7) do not apply to any activity authorized by a permit issued pursuant to section

944.8 of these implementing regulations.

(f) The prohibitions in paragraph (a)(2)-(7) do not apply to any activity authorized by a valid lease, permit, license, approval, or other authorization issued as of the effective date of Sanctuary designation by any Federal, State, or local authority of competent jurisdiction, or by any valid right of subsistence use or access in existence as of the effective date of Sanctuary designation, provided that the owner or holder of such authorization or right notifies the Director of the existence of such authorization or right in accordance with the requirements of section 944.9 of these regulations and requests certification of such authorization or right, and provided that the owner or holder complies with any terms and conditions on the exercise of such authorization or right imposed by the Director as he or she deems necessary to achieve the purposes for which the Sanctuary was designated.

(g) The prohibitions in paragraph (a)(2)-(7) do not apply to any activity authorized by any lease, permit, license, approval, or other authorization issued after the effective date of Sanctuary designation, if the Director was notified of the application for such authorization by the applicant in accordance with the requirements of section 944.10 of these implementing regulations and the Director did not object to the issuance of such authorization, and such authorization contains, and the owner or holder complies with, such terms and conditions as the Director deems necessary to protect Sanctuary resources and

Sanctuary qualities.

(h) Notwithstanding paragraphs (e), (f), and (g) above, in no event may the Director issue a National Marine Sanctuary permit authorizing, or otherwise approve, the exploration for, development or production of oil, gas or minerals in the Sanctuary, and any leases, licenses, permits, approvals, or other authorizations authorizing the exploration, development, or production of oil, gas or minerals in the Sanctuary issued after the effective date of Sanctuary designation shall be invalid.

§ 944.6 Emergency regulations.

Where necessary to prevent or minimize the destruction of, loss of, or injury to a Sanctuary resource or quality, or minimize the imminent risk of such destruction, loss or injury, any and all activities are subject to immediate temporary regulation, including prohibition, in accordance with the Administrative Procedure Act.

§ 944.7 Penalties for commission of prohibited acts.

(a) Each violation of the Act, any regulation in this Part, or any permit issued pursuant thereto, is subject to a civil penalty of not more than $50,000. Each day of a continuing violation constitutes a separate violation.

(b) Regulations setting forth the administrative procedures governing the assessment of civil penalties, enforcement hearings and appeals, permit sanctions and denials for enforcement

reasons, and the issuance of written warnings are governed by 15 CFR Part 904.

§ 944.8 National Marine Sanctuary permits - application procedures and issuance criteria.

(a) A person may conduct an activity otherwise prohibited by section 944.5(a)(2)-(7) if authorized by a permit issued under this section.

(b) Applications for such permits should be addressed to the Director of the Office of Ocean and Coastal Resource Management; ATTN: Marine and Estuarine Management Division, Office of Ocean and Coastal Resource Management, National Ocean Service, National Oceanic and Atmospheric Administration, 1825 Connecticut Avenue, N.W., Washington, D.C. 20235. An application must include a detailed description of the proposed activity including a timetable for completion of the activity and the equipment, personnel, and methodology to be employed. The qualifications and experience of all personnel must be set forth. The application must set forth the anticipated effects of the activity, if any, on Sanctuary resources and Sanctuary qualities. Copies of all other required licenses, permits, approvals, or other authorizations must be attached.

(c) Upon receipt of a complete application, the Director or designate, at his or her discretion, may request such additional information from the applicant as he or she deems necessary to act on the application, may seek the views of any persons and may

hold a public hearing.

(d) The Director, at his or her discretion, may issue a permit, subject to such terms and conditions as he or she deems appropriate, to conduct an activity otherwise prohibited by section 944.5(a)(2)-(7), if the Director finds that the activity will: further research related to Sanctuary resources; further the educational, natural or historical resource value of the Sanctuary; further salvage or recovery operations in or near the Sanctuary in connection with a recent air or marine casualty; assist in managing the Sanctuary; have only negligible, short-term adverse effects on Sanctuary resources and Sanctuary qualities; or further salvage or recovery operations in connection with an abandoned shipwreck in the Sanctuary title to which is held by the State of California. In deciding whether to issue a permit, the Director may consider such factors as: the professional qualifications and financial ability of the applicant as related to the proposed activity; the duration of the activity and its effects, the appropriateness of the methods and procedures proposed by the applicant for the conduct of the activity; the extent to which the conduct of the activity may diminish or enhance the qualities for which the Sanctuary was designated; the end value of the applicant's activity; and such other matters as the Director deems appropriate.

(e) A permit issued pursuant to this section is nontransferable.

(f) The Director may amend, suspend or revoke a permit

issued pursuant to this section or deny a permit application pursuant to this section, in whole or in part, for good cause. Any such action shall be communicated in writing to the permittee or applicant and shall set forth the reason(s) for the action taken. Procedures governing permit sanctions and denials for enforcement reasons are governed by Subpart D of 15 CFR Part 904.

(g) It shall be a condition of any permit issued that the permit or a copy thereof be displayed on board all vessels or aircraft used in the conduct of the activity.

(h) It may be a condition of any permit issued that any data or other information obtained under the permit be made available to the public.

§ 944.9 Certification of leases, licenses, permits, approvals, other authorizations, or rights to conduct a prohibited activity issued or in existence as of the effective date of Sanctuary designation.

(a) The prohibitions in section 944(a)(2)-(7) do not apply to any activity authorized by a valid lease, permit, license, approval or other authorization issued as of the effective date of Sanctuary designation by any Federal, State, or local authority of competent jurisdiction, or by any valid right of subsistence use or access in existence as of the effective date of Sanctuary designation, provided that the owner or holder of such authorization or right notifies the Director, in writing, within 90 days of the effective date of Sanctuary designation, of

the existence of such authorization or right, and simultaneously requests certification of such authorization or right, and provided that the owner or holder complies with any terms and conditions on the exercise of such authorization or right imposed, as a condition of certification, by the Director as necessary to achieve the purposes for which the Sanctuary was designated.

(b) The owner or holder of a valid lease, permit, license, approval or other authorization issued as of the effective date of Sanctuary designation by any Federal, State, or local authority of competent jurisdiction, or of any valid right of subsistence use or access in existence as of the effective date of Sanctuary designation, authorizing an activity otherwise prohibited by section 944.5(a)(2)-(7) may conduct the activity without being in violation of section 944.5(a)(2)-(7) pending final agency action on a timely certification request.

(c) Requests for certifications should be addressed to the Director, Office of OCean and Coastal Resource Management; ATTN: Marine and Estuarine Management Division, Office of Ocean and Coastal Resource Management, National Ocean Service, National Oceanic and Atmospheric Administration, 1825 Connecticut Avenue, N.W., Washington, D.C. 20235. A copy of the lease, permit, license, approval or other authorization must accompany the request.

(d) After receipt of a request for certification, the Director may either issue a decision within 120 days of receipt

of the request or, within 30 days of receipt of the request for certification, request additional information from the applicant as he or she deems necessary to condition appropriately the exercise of the certified authorization or right to achieve the purposes for which the Sanctuary was designated. The applicant then has 30 days to supply the requested information. Failure to supply the requested information within 30 days shall cause the applicant to be immediately subject to the prohibitions in section 944.5(a)(2)-(7). The Director, in his or her discretion, may seek the views of any persons on the certification request. The Director, at his or her discretion, will then issue a decision within 120 days of receipt of the requested information or may, within 60 days of receipt of the requested information, issue a notice in the Federal Register of the intent to hold a public hearing. The public hearing will then be held within 30 days of the publication of the notice in the Federal Register. The Director will then have 60 days to make a decision from the close of the public hearing, if any. As a condition of certification, the Director may impose such terms and conditions on the exercise of such authorization or right as he or she deems necessary to achieve the purposes for which the Sanctuary was designated.

(e) Any certification called for in this section shall be presumed without the imposition of conditions or terms unless the Director acts on the certification request within 120 days of receipt thereof or, if the Director has requested additional

information, within 120 days of receipt thereof, or 60 days from the close of any public hearing held.

(f) The Director may amend, suspend, or revoke any certification made under this section whenever the continued conduct of the activity would violate any terms or conditions of the certification. Any such action shall be communicated in writing to both the holder of the certified lease, permit, license, approval, or other authorization and the issuing agency and shall set forth the reason(s) for the action taken.

(g) Either the holder, owner or the issuing agency may appeal any action conditioning, amending, suspending, or revoking any certification in accordance with the procedure provided for in section 944.11.

(h) Any amendment, renewal or extension not in existence as of the date of Sanctuary designation of a lease, permit, license, approval, other authorization or right shall be subject to the provisions of section 944.10.

§ 944.10 Notification of applications for leases, licenses, permits, approvals, or other authorizations to conduct a prohibited activity.

(a) The prohibitions set forth in section 944(a)(2)-(7) do not apply to any activity authorized by any valid lease, permit, license, approval or other authorization issued after the effective date of Sanctuary designation by any Federal, State, or local authority of competent jurisdiction, provided that the

Director is notified of the application for such authorization within fifteen days of the date of application or of the effective date of Sanctuary designation, whichever is later, and that the Director or designate does not object to the issuance of such authorization and that such authorization contains, and the owner or holder complies with, such terms and conditions as the Director deems necessary to protect Sanctuary resources and Sanctuary qualities.

(b) Any person applying for a lease, permit, license, approval or other authorization from any Federal, State, or local authority to conduct an activity that would be prohibited under section 944.5(a)(2)-(7) must notify the Director in writing, within 15 days of the date of application or of the effective date of Sanctuary designation, whichever is later, of the filing of the application. Any applicant may request the Director to issue a finding as to whether an activity for which an application to any Federal, State, or local authority of competent jurisdiction for a lease, permit, license, approval, or other authorization is proposed to be made or has been made would be prohibited by section 944.5(a)(2)-(7) unless the Director is notified and does not object to issuance.

(c) Notification of the filing of an application must be addressed to the Director, Office of Ocean and Coastal Resource Management; ATTN: Marine and Estuarine Management Division, Office of Ocean and Coastal Resource Management, National Ocean Service, National Oceanic and Atmospheric Administration, 1825

Connecticut Avenue, N.W., Washington, D.C. 20235. A copy of the application must accompany the notification.

(d) Upon receipt of a notification, the Director may request such additional information from the applicant as he or she deems necessary to determine whether to object to issuance of such lease, license, permit, approval, or other authorization, or what terms and conditions such authorization must contain in order to protect Sanctuary resources and Sanctuary qualities. The Director, in his or her discretion, may seek the views of any persons and hold a public hearing on the application.

(e) The Director shall notify the agency to which application has been made within the time period allowed for comment on the application of whether he or she has an objection to issuance or what terms and conditions he or she determines such lease, license, permit, approval, or other authorization must contain in order to protect Sanctuary resources and Sanctuary qualities.

(f) If the Director fails to notify the agency to which application has been made within the time period allowed by that agency for comment on the application of his or her objection to issuance or of the terms and conditions he or she has determined such lease, license, permit, approval, other authorization or right must contain, then his or her concurrence to issuance without terms or conditions to protect Sanctuary resources and Sanctuary qualities shall be presumed.

(g) The applicant may appeal any objection by, or terms or

conditions imposed by, the Director to the Assistant Administrator or designate in accordance with the procedure set forth in section 944.11.

§ 944.11 Appeals of administrative action.

(a) Except for permit actions taken for enforcement reasons (see Subpart D of 15 CFR Part 904 for applicable procedures), an applicant for a section 944.8 permit, a section 944.8 permittee, a section 944.9 certification requester, or a section 944.10 applicant (hereinafter appellant) may appeal to the Assistant Administrator or designate: 1) the grant, conditioning, amendment, denial, suspension or revocation of a National Marine Sanctuary permit by the Director under section 944.8; 2) the conditioning, amendment, or revocation of a certification under section 944.9; or 3) the objection to issuance or the imposition of terms and conditions under section 944.10. Such appeal must be in writing, state the action(s) appealed and the reason(s) therefor, and be received within 30 days of the action(s) by the Director. Appeals must be addressed to the Assistant Administrator, National Ocean Service; ATTN: Marine and Estuarine Management Division, Office of Ocean and Coastal Resource Management, National Ocean Service, National Oceanic and Atmospheric Administration, 1825 Connecticut Avenue, N.W., Washington, D.C. 20235.

While the appeal is pending appellants requesting certification pursuant to and otherwise in adherence with section

944.9 may continue to conduct their activities without being in violation of the prohibitions in section 944.5(a)(2)-(7). All other appellants may not conduct their activities without being subject to the prohibitions in section 944.5(a)(2)-(7).

(b) Within 30 days of receipt of an appeal, the Assistant Administrator or his or her designate may request the appellant or any person to submit such information as the Assistant Administrator or his or her designate deems necessary in order for him or her to decide the appeal. The appellant shall then have 30 days from receipt of the request for additional information from the Assistant Administrator or his or her designate to supply the additional information. The Assistant Administrator or his or her designate, at his or her discretion, may hold an informal hearing on the appeal. If the Assistant Administrator or his or her designate determines that an informal hearing should be held, he or she may designate an officer before whom the hearing shall be held. Notice of the time, place, and subject matter of the hearing shall be published in the Federal Register within 120 days of receipt of the appeal. Such hearing shall be held no later than 30 days following publication of the notice in the Federal Register, unless the hearing officer extends the time for reasons he or she deems equitable. The appellant and the Director may appear personally or by counsel at the hearing and submit such material and present such arguments as deemed appropriate by the hearing officer. Within 60 days after the record for the hearing closes, the hearing officer

shall recommend a decision in writing to the Assistant Administrator or his or her designate.

(c) The Assistant Administrator or his or her designate shall decide the appeal based on the record before the Director and the record of the appeal. If a hearing has been held before a hearing officer, the Assistant Administrator or his or her designate may adopt the hearing officer's recommended decision, in whole or in part, or reject or modify it. In any event, if a hearing is held, the Assistant Administrator or his or her designate shall notify the appellant and other interested persons of his or her decision and the reason(s) therefor in writing within 60 days of receipt of the recommended decision of the hearing officer. If an informal hearing is not held, the Assistant Administrator or his or her designate shall notify the appellant and other interested persons of the final decision and the reason(s) therefor in writing, normally within 60 days of the date of the receipt of adequate information to make the decision. The Assistant Administrator's or his or her designate's decision shall constitute final agency action for the purposes of the Administrative Procedure Act.

(d) Any time limit prescribed in this section may be extended by the Assistant Administrator or his or her designate for good cause for a period not to exceed 30 days, either upon his or her own initiative or upon written request from the appellant stating the reason(s) therefor.

Appendix I. Proposed Monterey Bay National Marine Sanctuary Boundary Coordinates.

(Appendix I will set forth the precise boundaries based on the comments received on the DEIS/MP).

PART IX: REFERENCES

Bonnell, M.L., M.O. Pierson, and G.D. Farrens. 1983. Pinnipeds and Sea Otters of Central and Northern California, 1980-1983: Status, Abundance, and Distribution. Prepared by Center for Marine Studies, Univ. of California, Santa Cruz, for the Pacific OCS Region, Minerals Management Service, U.S. Dept. of the Interior. OCS Study MMS 84-0044. 220 pp.

Breaker, L.C. and W.W. Broenkow. 1989. The Circulation of Monterey Bay and Related Processes. Moss Landing Marine Laboratories Tech. Pub. 89-1.

Bureau of Land Management (BLM). 1980. Final Environmental Impact Statement, OCS Lease Sale No. 53, Vol. 1.

Dohl, T.P. 1983. Marine Mammals and Seabirds of Central and Northern California, 1980 - 1983; Synthesis of Findings. Center for Marine Studies, Univ. of Calif., Santa Cruz. Report on Contract No. 14-12-0001-29090 to Pacific OCS Region, Minerals Management Service, U.S. Department of the Interior, Washington, D.C.

Gordon, B.L. 1977. Monterey Bay Area: Natural History and Cultural Imprints. Boxwood Press, Pacific Grove, CA. 321p.

Loughlin, T.R., D.J. Rugh, and C.H. Fiscus. 1984. Northern Sea Lion Distribution and Abundance: 1956-1980. J. Wildl. Manage. 48 (3):729-740.

Meighan. C.W., 1965. Pacific Coast Archaeology. The Quaternary of the United States. Princeton (eds. H.E. Wright and D.G. Frey).

Minerals Management Service, U.S. Department of the Interior. 1987. 5-year Outer Continental Shelf Oil and Gas Leasing Program. Mid-1987 to Mid-1992: Final Environmental Impact Statement. Minerals Management Service, Washington, D.C.

NOAA. 1983. National Marine Sanctuary Site Evaluations. Recommendations and Final Reports. Prepared by, Chelsea International Corporation for NOAA, Office of Ocean and Coastal Resource Management, Sanctuary Programs Division. Contract No. NA-82-SAC-00647.

Saunders, R.T. 1989. Overview of the California Sea Otter Population: Biology, Status, and Threats. In Information Submitted by Friends of the Sea Otter to NOAA's Marine and Estuarine Management Division.

U.S. Army Corps of Engineers. 1975. Dredge Disposal Study, San Francisco Bay and Estuary. Appendix L. Ocean Disposal. September, 1975.

U.S. Army Corps of Engineers. 1977. Patterns of Succession in Benthic Infaunal Communities Following Dredging and Dredged Material Disposal in Monterey Bay. Prepared by J. Oliver, P. Slattery, L. Hulberg and J. Nybakken, Moss Landing Marine Laboratories, Moss Landing, CA. Final Report. Technical Report D-77-27, Under Contract No. DACW39-74-C-0151.

U.S. Department of the Interior. 1987. Proposed 5-year Outer Continental Shelf Oil and Gas Leasing Program: mid-1987 to mid-1992; Final Environmental Impact Statement. Minerals Management Service, Washington, D.C.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1990 — 261-915/20631