

SENSITIVE MARINE ENVIRONMENTAL AREAS

1. ENVIRONMENTAL CONSIDERATIONS. The PSS spans a large area containing multiple sensitive marine environmental areas and is home to threatened or endangered species.

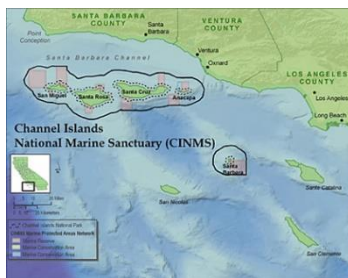
a. **Papahānaumokuākea Marine National Monument:** Encompasses an area of approximately 582,500 square nautical miles at the mouth of Massachusetts Bay. Papahānaumokuākea Marine National Monument has extensive coral reefs and are home to more than 7000 marine species

including many rare and endangered species including numerous species of whales, sea mammals, turtles, sea birds, invertebrates, and pelagic fish species.



b. **National Marine Sanctuaries:** The National Marine Sanctuaries Act authorizes the National Oceanic and Atmospheric Administration (NOAA) to designate, protect, and manage offshore areas of special national significance. The primary objective of NOAA is, “to protect marine resources, such as coral reefs, sunken historical vessels or unique habitats.” To complete their objective, NOAA issues regulations for each sanctuary that specify what activities can and cannot occur within the bounds of the sanctuary. The marking of waterways or any potential routing measures need to take into account impacts to marine sanctuaries or sanctuary resources. The following national marine sanctuaries are within the Pacific Seacoast System:

c. **Channel Islands:** Channel Islands National Marine Sanctuary is located off the coast of Santa Barbara and Ventura counties in CA, encompassing 1,110 square nautical miles (1,470 square miles) of water from mean high tide to six nautical miles offshore of Santa Barbara, Anacapa, Santa Cruz, Santa Rosa, and San Miguel Islands.

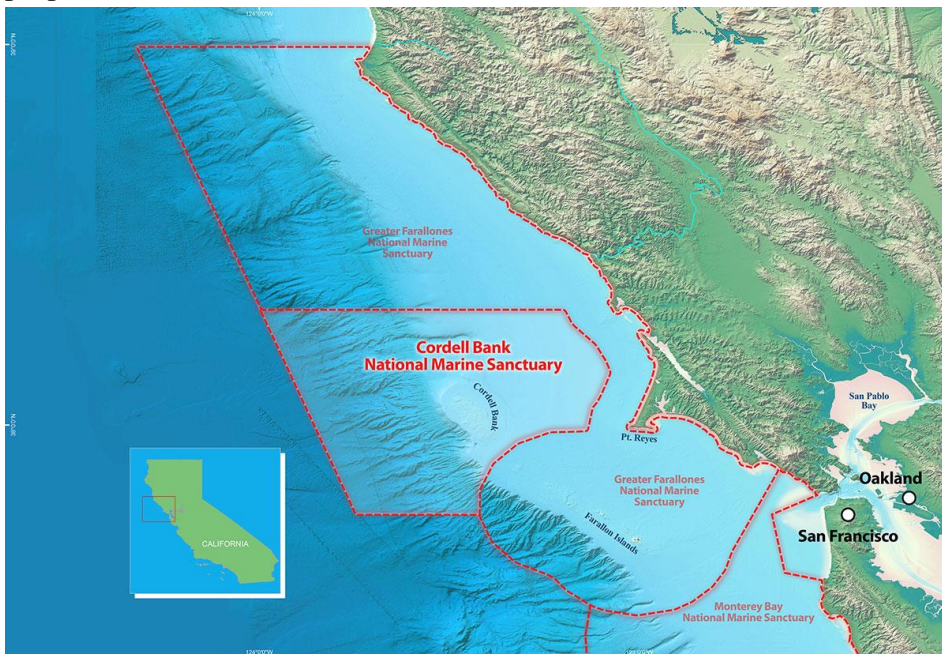


It is a special place for species close to extinction, sensitive habitats, shipwrecks and maritime heritage artifacts. Many valuable commercial and recreational activities, such as fishing,

shipping, and tourism occur in the sanctuary.

The sanctuary’s remote, isolated position at the confluence of two major ocean currents creates remarkable biodiversity. The mingling of cool, nutrient-rich waters from the north with warm currents from the south form a dynamic transition zone that is home to a myriad of sea life from microscopic plankton to blue whales.

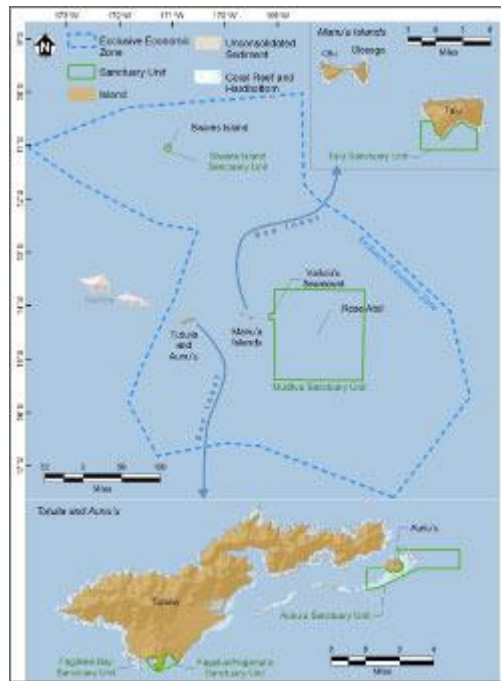
- d. **Monterey Bay:** Located in the Pacific Ocean off the central California coast, this vast area stretches almost 300 miles north to south, extends an average of 35 miles offshore, and encompasses over 6,090 square miles. The sanctuary is managed to balance recreational and commercial uses with protection of natural resources, water quality, habitats and its bountiful resident and migratory marine life. These habitats harbor an incredible variety of marine life, including 36 species of marine mammals, more than 180 species of seabirds and shorebirds, at least 525 species of fishes, and an abundance of invertebrates and algae
- e. **Cordell Bank:** A 1286 square mile feeding ground for many marine mammals and seabirds. The combination of ocean conditions and undersea topography creates a rich and diverse marine community in the sanctuary. The prevailing California Current flows southward along the coast, and the annual upwelling of nutrient-rich deep ocean water supports the sanctuary's rich biological community of fishes, invertebrates, marine mammals and seabirds, including Humpback whales, Pacific white-sided dolphins, Dall's porpoises and California sea lions.



- f. **Greater Farallones:** a diverse marine ecosystem that supports abundant wildlife and valuable fisheries, encompassing 3,295 square miles. The Farallon Islands, located in the south-central part of the sanctuary, are a national wildlife refuge, offering resting and breeding sites for marine mammals and seabirds. The sanctuary houses seals and sea lions, and is home to the largest concentration of breeding seabirds in the continental United States.
- g. **Olympic Coast:** 3188 mile sanctuary of the sanctuary are adjacent to wilderness beaches of Olympic National Park. The sanctuary protects a productive upwelling zone – home to

dozens of marine mammals and seabirds. Along its shores are thriving kelp and intertidal communities, teeming with fishes and other sea life. Communities of deep sea coral and sponges scatter the dark seafloor and form habitats for fish and other important marine wildlife. In addition to the diverse wildlife supported by the sanctuary, several reservations along the shoreline preserve the culture of the Quinault, Hoh, Quileute and Makah tribes. More than 200 shipwrecks have occurred in the sanctuary.

- h. **Hawaiian Islands Humpback Whale:** vital to the protection of the Humpback whale population, as it is the only place in the U.S. where Humpback whales reproduce.
- i. **National Marine Sanctuary of American Samoa:** supports one of the most diverse ecosystems in the National Marine Sanctuary System. Some of the marine life that finds a home in the sanctuary includes invertebrates, fishes, turtles, marine mammals and marine plants. The sanctuary protects extensive coral reefs, including some of the oldest and largest Porites coral heads in the world, along with deep water reefs, hydrothermal vent communities and rare marine archaeological resources. Located in the remote islands of Polynesia, it is also the only true tropical reef within the National Marine Sanctuary System. It encompasses 13,581 square miles around the culture-rich islands of American



Samoa.

- j. **Protected Species and Habitats:** Numerous endangered and threatened species and associated critical habitat are located within the Pacific Seacoast WAMS. Although the navigation of vessels and marking of waterways are unlikely to impact the majority of these resources, there are some species and habitat that could be impacted by seacoast navigation.

- k. **Corals:** The National Marine Fisheries Service has listed 7 species of corals found in the Pacific Seacoast system as endangered or threatened under the Endangered Species Act. Although the normal operation of vessels has negligible impact on corals, the potential for ship grounding and the siting of aids to navigation can have a major impact on protected corals. As such, vessel routing and the management of the aids to navigation system must take into account impacts on corals. More information on coral species can be found at: http://sero.nmfs.noaa.gov/protected_resources/coral/