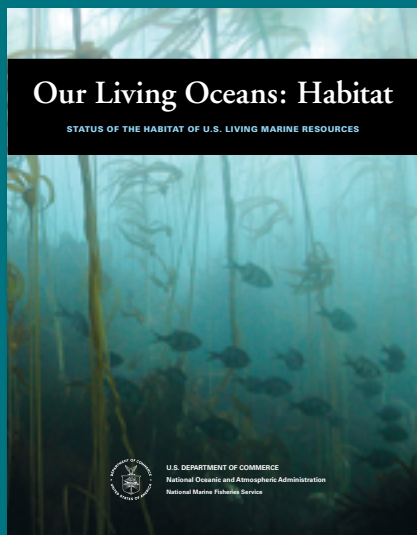


NOAA FISHERIES

*“One of the greatest long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats. **Habitat** considerations should receive increased attention for the conservation and management of fishery resources of the United States.”*

- Magnuson-Stevens Act

To download an electronic copy of the *OLO: Habitat*, visit:
<http://www.st.nmfs.noaa.gov/ecosystems/habitat/plans/olohabitat/index>



Our Living Oceans: Habitat Pacific Coast Region

The Pacific Coast Region lies adjacent to California, Oregon, and Washington, and encompasses about 7% (812,000 km² [237,000 nmi²]) of the total area of the U.S. Exclusive Economic Zone (EEZ). The **five** principal habitat categories found in the Region include: **1)** freshwater streams and rivers; **2)** bays and estuaries; **3)** the coastal continental shelf system to 200 m (656 ft); **4)** benthic habitats of the offshore continental slope to depths over 1000 m (3,281 ft); and **5)** the oceanic system, comprising pelagic habitats and extending to the sea floor. Two distinct zoogeographic provinces are within the Pacific Coast Region: the Oregonian Province lies within the Boreal (cold-temperate) Eastern Pacific and is bounded by the Strait of Juan de Fuca, Washington, to the north and Point Conception, California, to the south; the San Diego Province, which includes the warm-temperate California region, extends from Point Conception, California, south to Magdalena Bay, Baja California Sur, Mexico.



Anacapa Island in the Channel Islands archipelago, upper left. Kelp forest, upper right. Pink salmon spawning in Bacon Creek, Washington, lower left. Rocky habitat on the continental shelf, lower right.

The Pacific Coast Region includes five main watersheds - the Puget Sound, Columbia, Oregon-Washington Coastal, Klamath, and Sacramento - that drain into three major estuaries and embayments: San Francisco Bay, the Columbia River, and Puget Sound. Estuarine habitats include mudflats, freshwater and brackish marshes, seagrass beds, and shallow and deep channels.

Along the coast, nearshore benthic habitats include: rocky shores and sandy beaches, low-relief sand, gravel and cobble fields, rock outcrops and boulders, seagrasses and prominent kelp forests. Kelp and other marine algae, and surfgrass, provide structural habitat for many species and life stages occurring from the seafloor to the sea surface.

Offshore continental shelf habitats include patchy distributions of rock outcrops, pinnacles, and boulder fields surrounded by low-relief sand, mud, and cobbles. Most of the continental slope comprises expansive muddy sediments. Several submarine canyons, large banks, and seamounts also are part of the shelf and slope systems. All habitats on the Shelf and Slope include important structure-forming macroinvertebrates such as deepsea corals and sponges.

The oceanic habitat of the Pacific Coast region is dominated by the California Current.

Habitat Issues

Most estuarine habitats in the Pacific Coast Region have been significantly altered from historical diking, filling, and dredging, as well as from agriculture and other development. Nearshore marine habitats are threatened by shoreline armoring, energy development, and agricultural and urban runoff.

Fishing gear, particularly certain types of bottom trawls, has contributed to the destruction of seafloor habitats, including deep-sea corals and sponges. This type of impact can diminish the survival of valuable groundfish species, as well as reduce biodiversity of the entire seafloor community.

Many of the streams in the West Coast Region are no longer accessible to salmon due to large dams and reduced freshwater flow.

Habitat Needs

Information relating the density, growth, survival, reproduction, and production rates of species to their habitats is critical for understanding the ecological and economic value of marine habitats. Specific research needs for the West Coast include:

- Collecting high-resolution bathymetric data to characterize seafloor habitats on the Continental Shelf and Slope.
- Collecting habitat-specific life history information for all life stages of managed and protected species.
- Investigating the effects of climate change on the habitats of fishery and protected species.
- Determining the effects of fishing on benthic habitats and develop methods to reduce destructive fishing practices.
- Advancing the application of remote sensing of environmental variables to improve stock assessments.
- Evaluating the effectiveness of essential fish habitat (EFH) closures and other conservation areas to protect species and habitats.

Map of the Pacific Coast Region



Pacific Coast Highlights

Freshwater Habitat for Salmon

The Russian River watershed was selected as NOAA's first Habitat Blueprint Focus Area and is an example of the NOAA Habitat Blueprint's effectiveness and utility. The Russian River is a vital resource for agriculture, vineyards, and the local water supply, as well as critical habitat for endangered and threatened salmon species.

By combining expertise across NOAA in salmon ecology and habitat requirements, flood and weather forecasting, habitat protection and restoration, and coastal management, NOAA is more effectively addressing issues that face this watershed. Efforts currently underway in the Focus Area include restoration projects to reduce flooding, open coho salmon breeding grounds, and recover fish populations. Important lessons learned from this project will be applied elsewhere, both regionally and nationally.

A recent example of freshwater habitat restoration occurred in Washington State with the removal of the Elwha and Glines Canyon dams from the Elwha River. These projects represent the largest dam removals in U. S. history and will allow Chinook salmon to return to historical spawning grounds.

Groundfish Habitats on the Continental Shelf and Slope

NOAA Fisheries has conducted an initial assessment and 5-year review of EFH designation and the minimization of adverse impacts to shelf and slope habitats of 82 species of groundfishes, several having overfished status. This assessment represents a compilation of information on the status of habitats important to these species and the impact of fishing on those habitats. From this effort, the first coastwide maps of seafloor habitats and fishing effort have been developed and made publicly available through an online data catalog. Through this process, scientific justification was provided for implementing significant management measures to protect EFH from fishing, including a long-term reduction in fishing pressure, trawl gear modifications, and the designation of large coastwide closures. This habitat assessment serves as a national model for the mandated review of EFH for managed species.