NOAA FISHERIES

Northwest Surveys

Northwest Fisheries Science Center surveys focus on West Coast groundfish and Pacific salmon populations. We use the biological and environmental data collected to sustainably manage commercial and recreational fisheries, protect salmon and killer whales under the Endangered Species Act, and understand broader environmental trends.

Surveys also help us understand and respond to the socioeconomic impacts from a changing ocean. From salmon fishing to whale watching, Oregon and Washington's marine-related industries rely on sustainable fish and protected resource populations.

Next generation technologies and techniques:

- ECHO SOUNDERS
- ENVIRONMENTAL DNA
- AUTOMATED IMAGING
- UNCREWED SYSTEMS

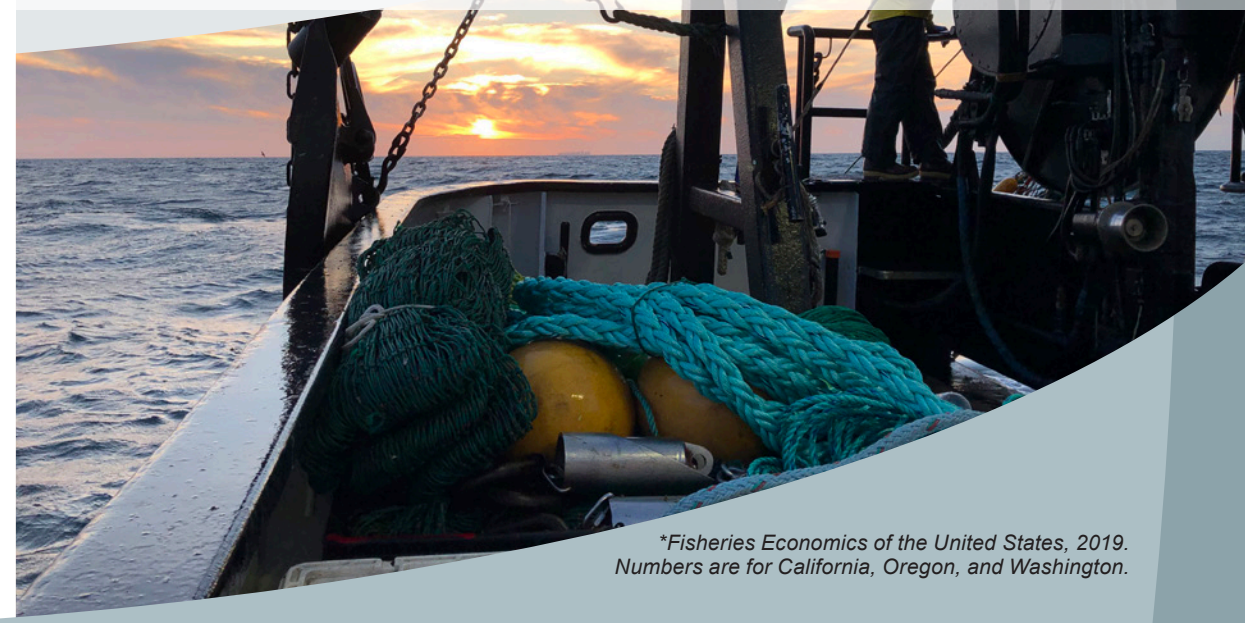
SURVEYS SUPPORT: NOAA Fisheries research surveys provide data critical to the stewardship of our nation's ocean resources and their habitat.

56,000 JOBS FROM RECREATIONAL FISHING AND THE SEAFOOD INDUSTRY*

$4.9 BILLION IN SALES FROM RECREATIONAL FISHING AND THE SEAFOOD INDUSTRY*

PROTECTION OF ENDANGERED SALMON AND KILLER WHALES

STRONG **ECOTOURISM** INDUSTRY



Fisheries Economics of the United States, 2019. Numbers are for California, Oregon, and Washington.

Groundfish Bottom Trawl Surveys

First survey conducted: 2003

Frequency: Annually from May to October

Species: More than 90 commercially fished species

What we do: We collect data on species abundance, distribution, and biology. We also conduct coast-wide environmental sampling to monitor change within the California Current Ecosystem.

Partners: Universities in the Northwest

Data uses and benefits: This survey provides critical data for managing the regional groundfish fishery and its ecosystem. It supports a commercial fishery with landings valued at $41 million in 2021*.

**Preliminary Draft Socioeconomic Analysis for the 2023–2024 Harvest Specifications and Management Measures, 2022*

Joint U.S.-Canada Integrated Ecosystem and Pacific Hake Acoustic Trawl Surveys

First survey conducted: 2003

Frequency: Every odd-numbered year in June to September

What we do: We collect data on Pacific hake abundance and distribution using acoustic instruments known as echo sounders, which transmit and receive sound. We use fishing nets to validate identified schools and size and age composition. We also conduct coast-wide environmental sampling to monitor change within the California Current Ecosystem using eDNA.

Partners: Fisheries and Oceans Canada

Data uses and benefits: Survey findings support sustainable management of the Pacific hake fishery, which had landings valued at $61 million in 2021*.

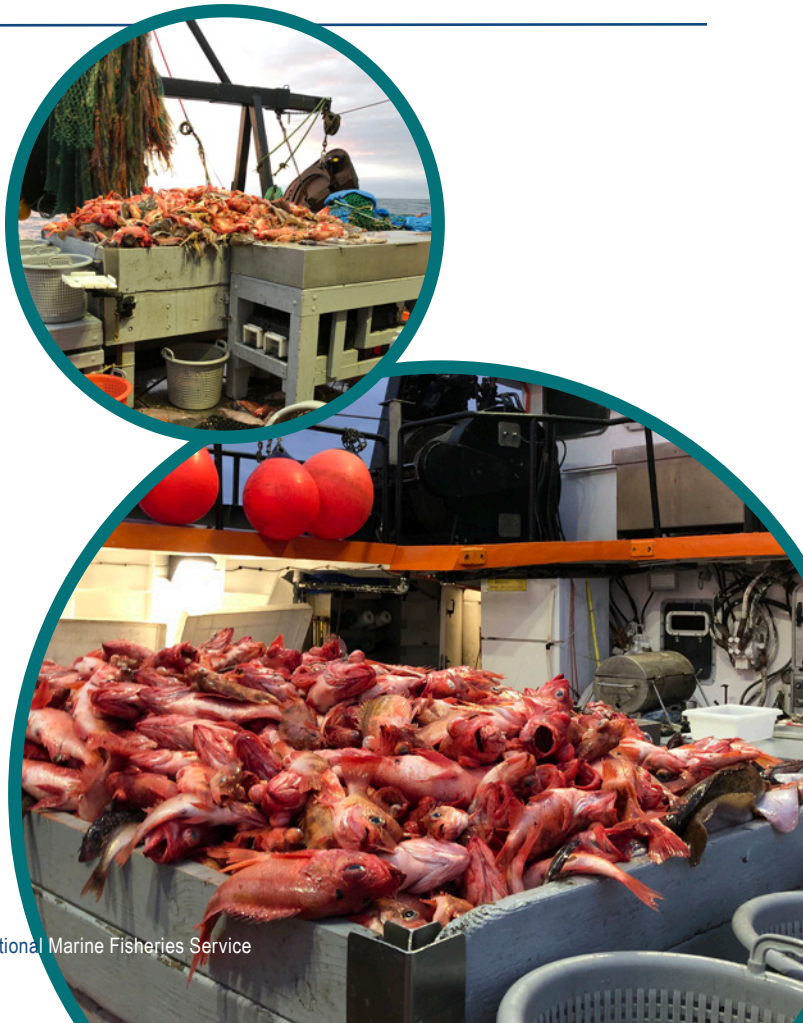
Newport Hydrographic Line Surveys

First survey conducted: 1999

Frequency: At least once a month

What we do: We collect physical, chemical, and biological data to track the connection between ocean climate and ecosystem changes in the California Current Ecosystem.

Data uses and benefits: The continuous data from this survey allows us to monitor and study climate variability and climate change. Our scientists distill the data into ocean ecosystem indicators used to characterize juvenile salmon habitat and survival. These indicators have also shown promise for understanding other valuable commercial stocks, such as sablefish, rockfish, and sardine.



Read about other surveys in the Northwest: www.fisheries.noaa.gov/west-coast/science-data/research-surveys-pacific-northwest