

AOOS

Alaska Ocean Observing System

The AOOS mission is to provide coastal and ocean observations, forecasts and data information products to meet agency and stakeholder needs.

Ocean Data Types:

- Biological- chlorophyll, essential fish habitat, species distribution
- Chemical- pH, CO₂, dissolved oxygen
- Physical- wind speed and direction, wave height and period, air temperature, water temperature, salinity, air pressure, and water level.

Relevant Tools:

- Ocean Data Explorer, <http://portal.aos.org/>
Description: Data portal contains scientific and management information including real-time sensor feeds, operational oceanographic and atmospheric models, satellite observations and GIS data sets that describe the biological, chemical and physical characteristics of Alaska and its surrounding waters.
- Data Download, <http://portal.aos.org/>
Description: Most data is available for download through the portal in several formats including images, graphs or shape files.
- Data Applications, <http://portal.aos.org/>
Description: AOOS convenes stakeholder groups to coordinate and facilitate the development of data applications designed to assist in ecosystem-based management.



AOOS covers over 44,000 miles of coastline and three distinct ecosystems; the Gulf of Alaska, the Bering Sea, and the Arctic Ocean.



Screenshot from the AOOS Cook Inlet Response Tool application showing real-time sensors and locations with linked geographic response strategies. Inset includes Shorezone imagery of shoreline at mount Augustine in Cook Inlet Alaska.

Regional Example:

AOOS convened workshops in response to regional concern over ocean acidification and based on stakeholder feedback is developing the Alaska Ocean Acidification Network to help connect scientists and stakeholder communities surrounding this important issue facing Alaska's marine ecosystems.

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Waves



Temperature



Wind



Currents



Water Level



U.S. Integrated Ocean Observing System (IOOS®)

Our Eyes on the Ocean, Coasts, and Great Lakes

Ocean Data Types:

- Biological- chlorophyll
- Chemical- pH, CO₂, dissolved oxygen
- Physical- wind speed and direction, ocean currents, wave height and period, air temperature, water temperature, salinity, air pressure, and water level.
- Biodiversity – Species presence/absence/abundance: phytoplankton, zooplankton, fish, coral, marine mammal, sea turtles, and more.

Relevant Tools:

- Data Catalog: <http://data.ioos.us/>

Data portals integrate real-time observations with historical records, revealing climate variability and long-term trends. Ocean temperatures, sea level, and the saturation state (ocean acidification) are among the many climate variables that can be accessed through coastal ocean data portals. Using real-time observations, teachers can link their curricula and lesson plans to events in the news.

- Data Tools: <http://www.ioos.us/>

Access the IOOS Data Catalog and data tools, such as the Data Assemble Centers (DACs), the Environmental Sensor Map, the Coastal and Ocean Modeling Testbed, and much more.

- Educational Resources:

<https://ioos.noaa.gov/community/education/>

Description: Access to ways to use real data in the classroom, lesson plans, and links to regional resources.

Description:

IOOS is our eyes on the ocean, coasts, and Great Lakes. We are an integrated network of people and technology gathering observing data and developing tracking and predictive tools to benefit the economy, the environment, and public safety at home, across the nation, and around the globe.



U.S. IOOS is the national integrated ocean observing system, working with Regional Associations across the U.S., Caribbean, and Pacific.



U.S. IOOS Director Zdenka Willis talks to ocean observing students about their presentations while visiting Rutgers University.

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