

Northwest Association Of Networked Ocean Observing Systems (NANOOS)

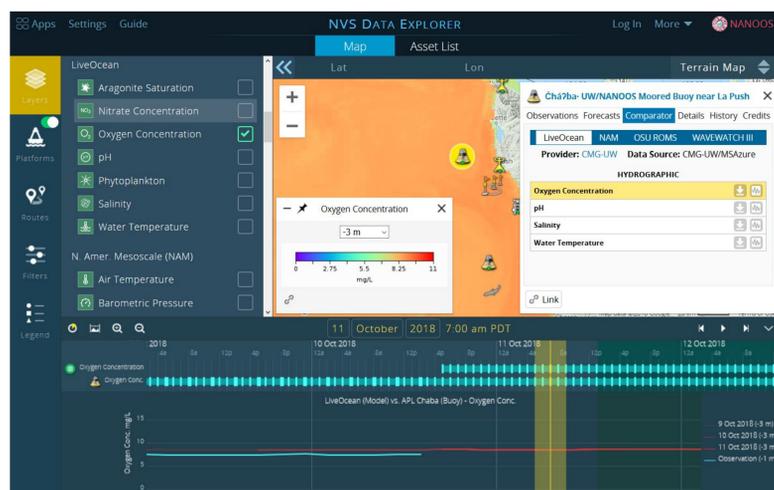
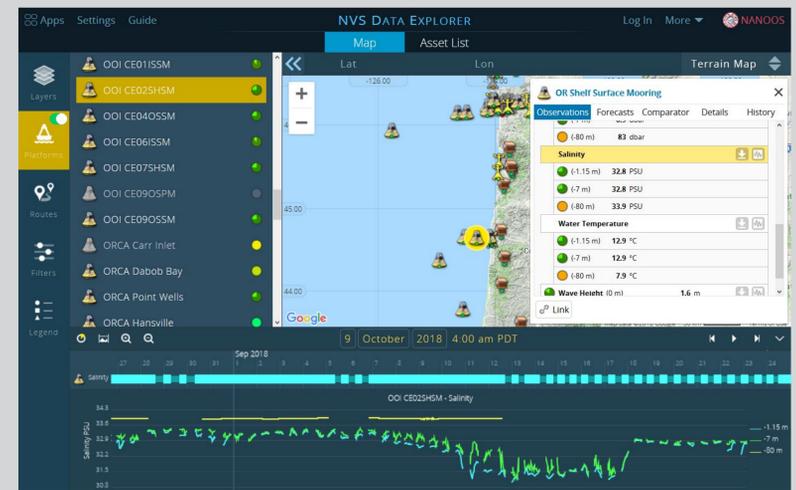
Ocean Observing In The Pacific Northwest

NANOOS is part of the U.S. Integrated Ocean Observing System (IOOS), a national effort designed to enable the broadest access to ocean data, tools, products, and knowledge.

Access Near Real-Time and Archived Data

The NANOOS Visualization System (NVS) is an online data portal giving easy access to observations and forecasts from a wide range of ocean observing assets. Real-time observations are measured from buoys, shore stations, satellites, and HF Radars. These data streams are from many providers, including academic, local, state, and federal agencies, tribes, and private industry, a fraction of which NANOOS directly supports. Also historical archived data for cruises, gliders, and other platforms are available.

NVS provides user-friendly data displays with sophisticated yet accessible capabilities. NANOOS has developed unique NVS applications that present customized views based on community feedback for specific uses, like tuna fishing and shellfish growing.



Compare Forecasts to Observations

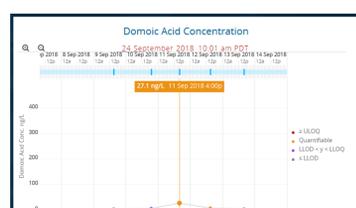
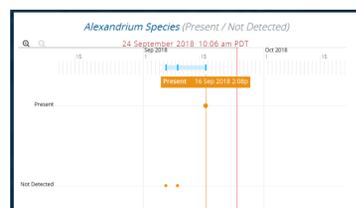
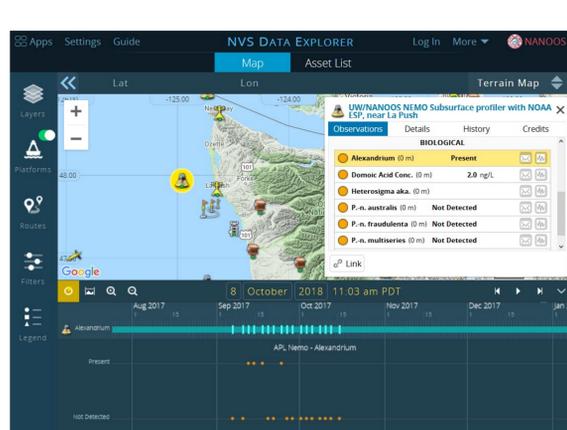
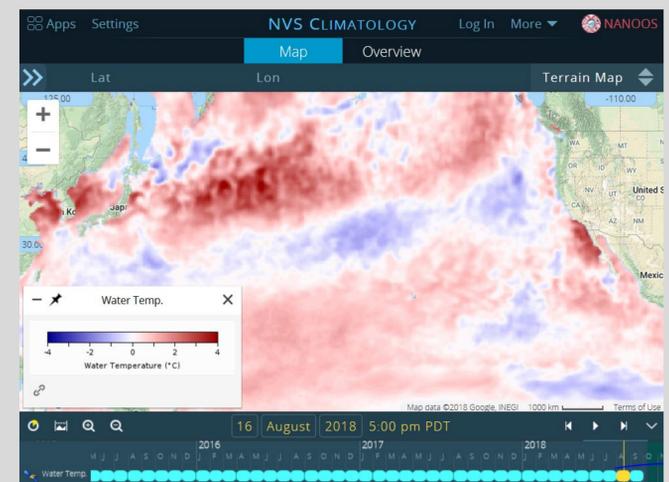
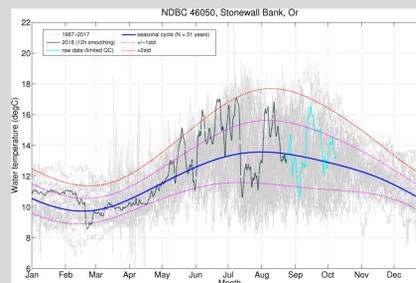
A variety of hydrodynamic and atmospheric computer models are served by NVS to forecast and hindcast conditions on a regional scale. The “Comparator” feature within the NVS Data Explorer application superimposes model outputs onto observed data at a given asset’s location. This is particularly useful for visualizing accuracies of computer models in order to optimize forecasting of oceanographic and atmospheric parameters.

The models presented are from NANOOS-supported efforts as well as federal and other partners. As new models are developed, these can be incorporated.

Monitor Ocean and Atmospheric Climatology

The NVS Climatology App compares present observations with data from previous years. These include data from satellites, buoys and weather stations, showing long-term average conditions (climatology) and the departure from that mean (anomaly), enabling a quick understanding of how different current conditions are from typical.

The web app presents two data types: point data from buoys, shore, and land stations; and overlays from satellite remote sensing. For the fixed assets, climatologies over the annual cycle are shown, with standard deviations and the real-time data.



Respond to Harmful Algal Blooms

NANOOS provides timely information on harmful algae in the Pacific Northwest through the NVS Data Explorer and the Real-Time HABs web page app. Remote measurements are made autonomously by an underwater robot, the Environmental Sample Processor (ESP), which detects certain phytoplankton species that are known to be harmful at times, as well as the toxin that they produce.

Detecting both the potentially harmful phytoplankton species and the toxin they produce, the ESP gives us early warning of these events. Coupled measurements of currents help scientists and managers see if the blooms will come onshore.