

The U.S. Integrated Observing System works with 11 Regional Associations covering the U.S. coast including the Great Lakes, Alaska, the Pacific Islands, and the Caribbean. That means when weather strikes, the RAs are in the thick of it with an in-place observing network and custom data tools sharing everything from raw data to new high-resolution models. These are just a few of the resources that were valuable during the bomb cyclone that kicked off January 2018.



The U.S. IOOS Regions offer **access to buoy data**, including oceanographic and meterological observations, for local weather forecasting offices (WFOs), for ports and ships, and anyone else who needs it. In the map (above, left), you can see platforms that the Northeastern Regional Association for Coastal Ocean Observing System (NERACOOS) gathers data from--those owned by NERACOOS along with federal and non-federal partner assets. The chart (above right) compares the NWS Wave Watch III forecast with the observed wave heights measured by the NERACOOS buoy circled in red. This offers not only real-time data to inform forecasts, but also time series and archival data that's essential for forecast validation.



High-frequency radar (HFR) arrays send back **sea surface current information** in real time and cover areas up to 200km from shore. In this image (left), sea surface current information from HFR arrays operated by the Mid-Atlantic Regional Association for Coastal Ocean Observing (MARACO-OS) has been laid into this landsat image as the storm continued moving north along the Atlantic coast.

ioos.noaa.gov | ioos.us





Real-time, accessible oceanographic data from observing stations including buoys, water gauges, high-frequency radar can be called up in a tailored view in moments using **regional data portals** (MA-<u>RACOOS</u>, above left and <u>NERACOOS</u>, above right). Historic and archival data are also available through these portals for greater analysis. If you need a combined or national view, U.S. IOOS offers a national and global perspective, integrating data from the 11 Regional Associations and our partners around the country and the world through the <u>Environmental</u> <u>Sensor Map</u>.

US National Weather Service Gray ME Published by Mike Chris (?? - 1 min - @) Portland reached its 3rd highest tide on record this afternoon. We had reports of flooding along the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest coast of Maine and coastal New Amount of the southwest Sometimes the support is more about the relationships than the technology. To the left is an image captured by NERACOOS' Tom Shyka during the peak of the blizzard for the local WFO. He ventured out in storm conditions to send back **photographs of high impact areas**. John Cannon of the Grey, Maine WFO said in his thanks to Tom and NERACOOS that "It's validation such as this that allows us to calibrate our warnings and assist emergency management and shoreline residents in the future."

A new CRADA between <u>U.S. IOOS and Surfline</u> is taking advantage of existing HFR installations around the U.S. to serve as vantage points for Surfline's **live cams**, with the first installed on a MARACOOS-operated station in Brigantine, New Jersey. This feed was available throughout the storm, including this freeze frame (right) showing waves crashing on the shore.



ioos.noaa.gov | ioos.us

January 2018