

## Supporting Education

### DATA AND RESOURCES for EDUCATORS

NERACOOS delivers real-time ocean and weather information, ocean forecasts and long term ocean information in the Northeast that support and enhance maritime commerce, safety, management, research and education- and makes it accessible through [www.neracoos.org](http://www.neracoos.org). Our education approach encompasses the following four components:

1. Regional Collaboration
2. Scientist-Educator Partnerships
3. Ocean Observing-Based Programs and Activities
4. Education Resources and Guidance

### REGIONAL COLLABORATION

NERACOOS provides information that helps audiences develop their own understanding of the ocean's influence on weather and climate and the relationship between oceans and humans. This "Ocean Literacy" is critical to sustaining our ocean and coastal regions. NERACOOS works closely with NEOSEC, the New England Ocean Science Education Collaborative, to promote Ocean Literacy. The Ocean Literacy Principles provide framework to engage people in education and outreach activities related to ocean observing.



### NEOSEC

New England  
Ocean Science  
Education Collaborative

NEOSEC and NERACOOS work together to partner with local and regional education organizations to bring cutting edge ocean information into programs and displays to educate the next generation of scientists and engineers.

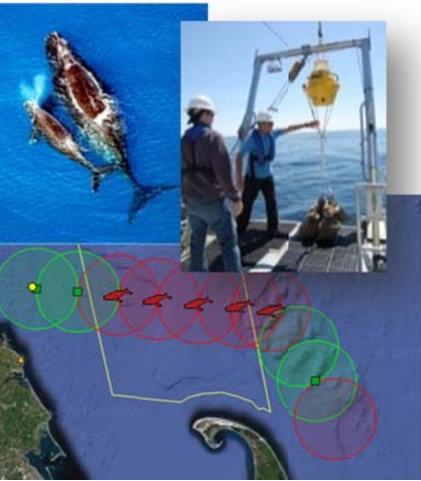
For example, the **Families By the Seaside** project was awarded to NEOSEC and its partners to create meaningful learning experiences for underserved/underrepresented families at informal science education centers by integrating technology into their programs.



NERACOOS helps to sponsor the **NEOSEC Biennial New England Ocean Literacy Summit**, which provide a unique opportunity for educators, scientists, and decision makers to gather for networking, presentations, and hands-on workshops that highlight educator and scientist collaborations.

### SCIENTIST-EDUCATOR PARTNERSHIPS

NEOSEC and its members are working to build regional capacity for implementing broader impact activities by ocean scientists, and working with educators to ensure that the content and products of current ocean science research efficiently reach a broad audience in a timely fashion.



One example of this effort is **Right Whales and Ocean Observing: An Exhibit that Connects People to Research**. Scientists from Stellwagen Bank National Marine Sanctuary (SBNMS) are working with staff from the Seacoast Science Center in Rye, NH and NERACOOS to create an exhibit that highlights Right Whale research in SBNMS, New England's only designated marine sanctuary. It will highlight how the research is done, tools that are used, and how the data is translated into policy and management.

## OCEAN OBSERVING-BASED PROGRAMS AND ACTIVITIES

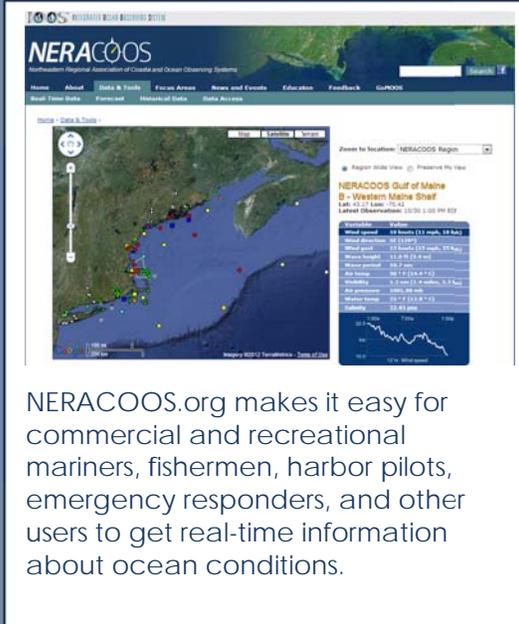
**NERACOOS real-time data and ocean forecasts can be used in displays, kiosks and online educational tools.**

The Seasons of the Sea exhibit at the Seacoast Science Center in Rye, NH encourages visitors to learn about the upwelling, seasonal migration through the Gulf of Maine and about phytoplankton blooms. A display installed at the Marine Science Magnet High School in Southeastern Connecticut displays data in Long Island Sound directly from the NERACOOS buoys.

## EDUCATION RESOURCES AND GUIDANCE

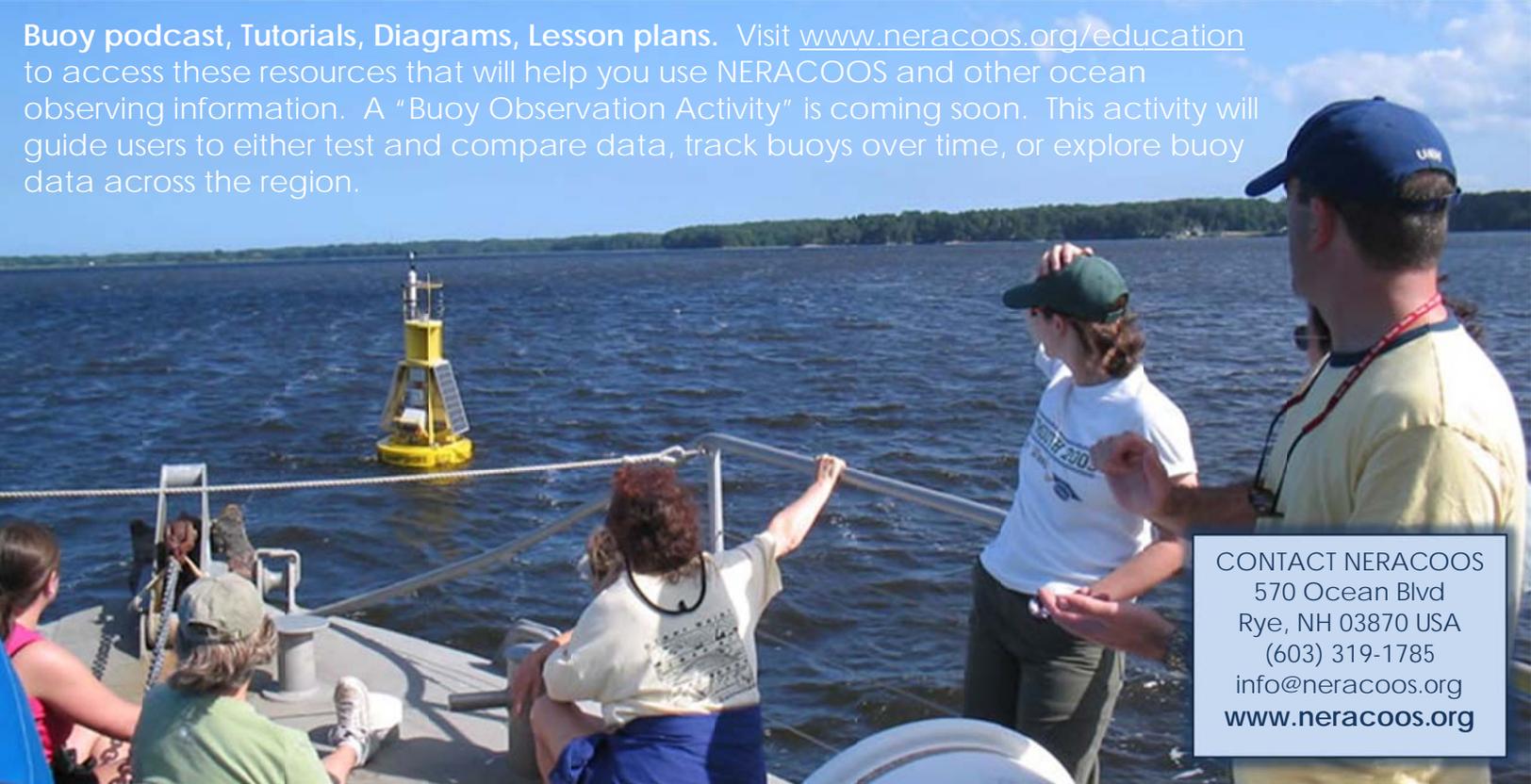
**NERACOOS is a resource for real-time and historical information about the ocean that can be used by educators and students:**

- Real-time data portal: An interactive map that shows the latest weather and ocean observations including winds, waves, air and water temperature, salinity, right whale presence and more.
- Graphing and Download Tool: Provides easy access to data on past conditions that can be viewed and analyzed.
- Text a buoy and Dial a buoy: Tools that allow mobile access to the latest weather and ocean observations.
- Wave Height and Direction Forecast: Maps depict predicted wave conditions across the Gulf of Maine 48 hours in the future.
- Coastal Flooding and Erosion Forecast: Decision support tool uses forecasts of water level and waves to predict coastal damage.
- Ocean Surface Currents: Maps show speed and direction of currents based on data from high-frequency radar.
- Ocean Climatology (coming soon): An interactive tool that displays the average ocean and weather conditions from buoy locations throughout the northeast.
- Satellite images for Chlorophyll and Sea Surface Temperatures: A "big picture" view of ocean conditions in the Northeast.



NERACOOS.org makes it easy for commercial and recreational mariners, fishermen, harbor pilots, emergency responders, and other users to get real-time information about ocean conditions.

**Buoy podcast, Tutorials, Diagrams, Lesson plans.** Visit [www.neracoos.org/education](http://www.neracoos.org/education) to access these resources that will help you use NERACOOS and other ocean observing information. A "Buoy Observation Activity" is coming soon. This activity will guide users to either test and compare data, track buoys over time, or explore buoy data across the region.



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