



ANNUAL IMPACT REPORT 2015



Wind 

Waves 

Temperature 

Currents 

Delivering ocean information to the people who need it



NORTHEASTERN REGIONAL ASSOCIATION
of COASTAL OCEAN OBSERVING SYSTEMS

SYSTEM OPERATORS

 **University of New Hampshire**
Estuarine and coastal buoys

 **UMass | Dartmouth**
Ocean forecasting

 **UCONN**
UNIVERSITY OF CONNECTICUT
Long Island Sound
buoy array

 **THE UNIVERSITY OF RHODE ISLAND**
Estuarine
nutrient monitoring



Gulf of Maine buoy array,
HF-radar and satellite products

 **Gulf of Maine Research Institute**
Data/website management
and product development



Harmful algal
bloom sensors



Wave forecasting,
harmful algal bloom
and nutrient monitoring

SYSTEM SUPPORT

- Axiom Data Science** Data integration
- Charybdis Group** Tide gauges
- RPS Group** Cloud-based ocean forecasting
- Sea-Bird Coastal** Nutrient sensors
- WET Labs** Nutrient sensors

BECOME A MEMBER

Become a member of NERACOOS to support the production, integration, and communication of high-quality ocean information:

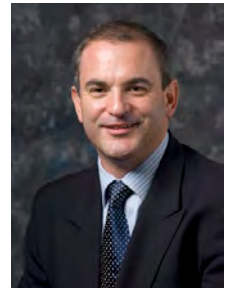
WWW.NERACOOS.ORG/MEMBERSHIP



LETTER FROM THE DIRECTOR

Dear Members, Partners, and Friends:

Thank you for your continued collaboration and support! Your partnership ensures that NERACOOS can continue to produce, integrate, and communicate high-quality ocean information throughout the Northeast.



Collaboration is critical to our work addressing ocean and coastal issues, as identified within our IOOS® theme areas, including: (1) marine operations, (2) coastal hazards, (3) climate variability and change, and (4) ecosystems, fisheries, and water quality. Within this report we've highlighted a few of our standout accomplishments from 2015. These stories demonstrate our commitment to ensuring safety, economic and environmental resilience, and sustainable use of the coastal ocean throughout the Northeast.

As always, we appreciate hearing from you, so please contact me if you have any questions.

Sincerely,

J. Ru Morrison, Ph.D.
Executive Director, NERACOOS

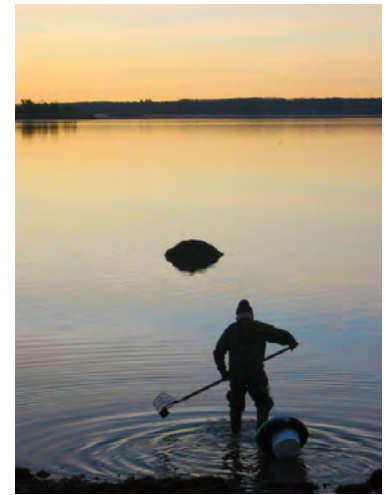


DEPLOYING NEXT-GENERATION TECHNOLOGY FOR MONITORING WATER QUALITY

An unprecedented view of nutrient levels in our coastal waters is now available to coastal managers, scientists, and policy makers. Over the past year, NERACOOS and its partners have begun the deployment of automated nutrient sensors throughout New England. The University of Maine and the University of New Hampshire have successfully deployed several of these high-tech sensors in the Gulf of Maine and in Great Bay, NH, respectively. In the next two years, this project will deploy even more sensors in the Gulf of Maine, Long Island Sound, and Narragansett Bay. This sensor network will form one of the largest real-time coastal nutrient observatories in North America. The unique data collected by the observatory will help inform the science and management community of critical issues like coastal eutrophication, harmful algal blooms, and ocean and coastal acidification. The IOOS Ocean Technology Transition program provides the funding for this project.

“Improving the water quality and overall health of the Great Bay Estuary is of utmost importance to us. The NERACOOS buoy in Great Bay delivers important information that is an integral piece of the clean water puzzle.”

Ted Diers, Watershed Management
Bureau Administrator
NH Department of Environmental Services



Harvesting oysters in Great Bay.

NEW LOBSTER FORECASTS RELY ON NERACOOS BUOY DATA

NERACOOS buoy data are being used by the Gulf of Maine Research Institute (GMRI) to create landing forecasts of Maine lobster. NERACOOS buoys provide the only real-time observations of water temperatures below the surface in the Gulf of Maine – information essential to GMRI’s ability to forecast the date when the lobster fishery will “switch on.” GMRI’s forecast provides a 2- to 3-month warning of conditions that could affect the Gulf of Maine’s most valuable fishery. This warning allows the market to be better prepared for the peaks in the lobster season, supporting the Northeast’s economy. More information is available at www.gmri.org/lobster-forecast.

“NERACOOS gives us a unique view of conditions in the ocean, and we’re excited about building other products like our lobster forecast that matter to people on the coast.”

Andrew Pershing
Chief Scientific Officer and Ecosystem Modeler
Gulf of Maine Research Institute



SAFETY, RESILIENCE, STEWARDSHIP

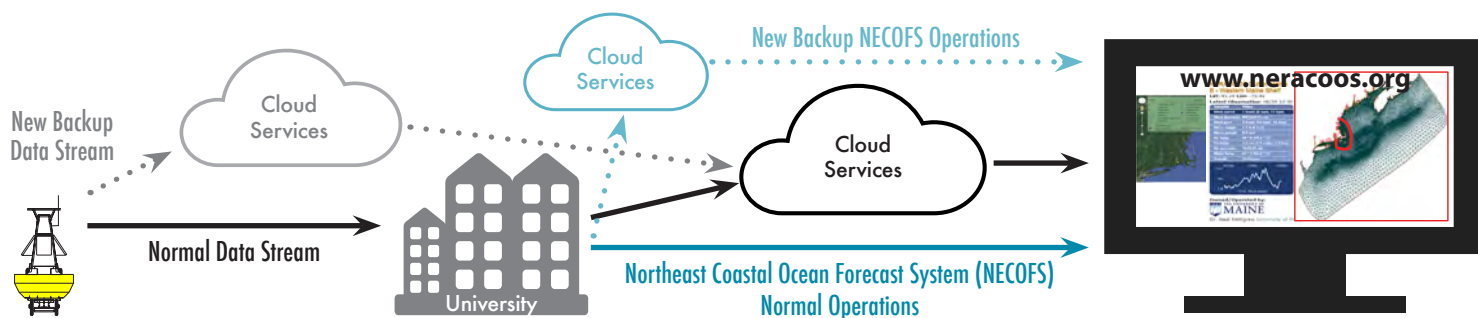
ENSURING FORECASTS AND REAL-TIME DATA IN ANY WEATHER

When coastal storms threaten the Northeast, many people – including fishermen, emergency managers, commercial mariners, U.S. Coast Guard personnel, and weather forecasters – turn to ocean data and forecasts from NERACOOS to help prepare and improve safety. In particular, National Weather Service (NWS) forecasters use data from NERACOOS buoys to assess the danger of coastal impacts from wave run-up. During Winter Storm Juno, in 2015, NERACOOS wind, wave, and water level data assisted the NWS in developing forecasts and warnings, and aided them in predicting coastal flooding. As a result, NWS forecasters delivered accurate forecasts to residents who could then take the proper precautions.

“ Wave forecasts and real-time buoy observations provided by NERACOOS were very helpful information for splash-over and erosion forecasts and hindcasts during the January 2015 blizzard. ”

John Cannon
Senior Meteorologist
National Weather Service

In 2015, NERACOOS and its partners made significant improvements to their data communications systems to help ensure the delivery of forecasts and real-time observations. Cloud-based solutions will deliver critical data and forecasts to neracoos.org during power outages and extreme weather events.



INSPIRING THE NEXT GENERATION

Providing opportunities for the next generation of ocean professionals is a critical component of NERACOOS. With support from New Hampshire EPSCOR, NERACOOS had the opportunity to work closely with two interns, Jennifer Halstead and Shelby Dillman, who immersed themselves in projects related to ocean acidification and ecosystem change throughout the summer of 2015. The interns expanded on skills related to outreach and education, data management, and collaboration, and were able to gain real-world experience working on coastal and ocean issues and projects. More importantly, Jen and Shelby felt inspired to make these coastal and ocean-related issues a more prominent part of their studies and futures after working with NERACOOS.



NERACOOS summer interns Jen and Shelby (both at right in photo) with their mentors.

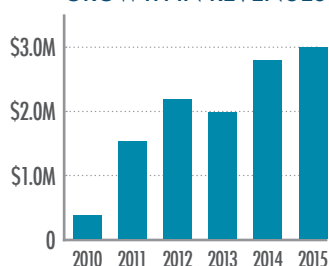
“ Having the opportunity to work alongside and learn from researchers who are dedicated to better understanding ocean acidification, I found myself inspired. I even changed my major to Marine, Estuarine, and Freshwater Biology. ”

Jennifer Halstead, Student
University of New Hampshire

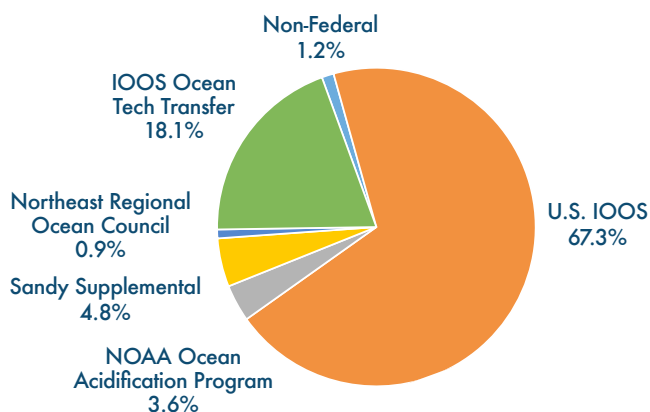
2015 FINANCIALS

NERACOOS is funded primarily by NOAA through the U.S. IOOS Program. In 2015 NERACOOS successfully brought in additional funding from the IOOS Ocean Technology Transfer Program, NOAA, and the Northeast Regional Ocean Council.

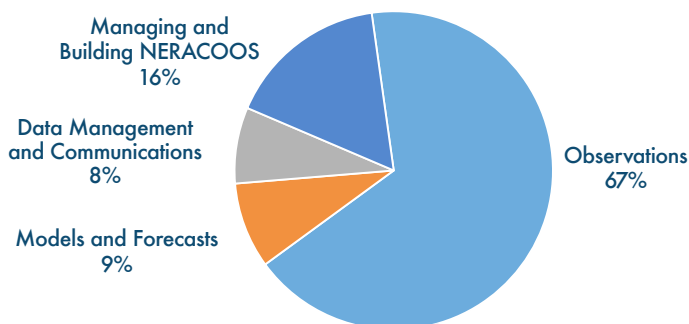
GROWTH IN REVENUES



REVENUES: \$2,994,551



EXPENSES: \$3,301,593



The amounts presented here are derived from NERACOOS' audited financial statements for the year ending September 30, 2015. Complete copies of the audited financial statements are available at www.guidestar.org.



NERACOOS is the Northeast regional entity of the Integrated Ocean Observing System (U.S. IOOS), which is a federally authorized program and works with

regional and federal partners to ensure compatible and consistent ocean and coastal data collection, management, and information products across the nation.



The IOOS Association is a non-profit organization formed by the Regional Associations (RAs) for Coastal and Ocean Observing in support of the U.S. IOOS. It works with the 11 RAs, the U.S. IOOS Program Office in NOAA, and other partners to address the nation's need for coastal observing and information.

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 - Thomas Taylor** Cooke Aquaculture**
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 - Andy Pershing** Gulf of Maine Research Institute
 - Robert Stankelis** Narragansett Bay National Estuarine Research Reserve*
 - Paul Stacey** Great Bay National Estuarine Research Reserve**
 - Curtis Bohlen** Casco Bay Estuary Partnership
 - Melville Coté** Environmental Protection Agency (*Non-voting Member*)
 - Nicole Bartlett** NOAA Northeast Fisheries Science Center (*Non-voting Member*)
- *Board Member until December 2015 **New Board Member as of December 2015

MEMBERS

Sustaining

- Massachusetts Water Resource Authority
- University of Connecticut
- University of Maine
- University of Massachusetts Dartmouth
- Cooke Aquaculture
- University of New Hampshire

Supporting

- Gulf of Maine Research Institute
- Seacoast Science Center
- Provincetown Center for Coastal Studies
- Bigelow Laboratory for Ocean Sciences
- Malcolm Spaulding
- Woods Hole Oceanographic Institution
- Bar Harbor Whale Watch Co.

Associate

- Casco Bay Estuary Partnership
- Connecticut Department of Energy and Environmental Protection
- Melville Coté
- Educational Passages
- Fisheries and Oceans Canada
- Institute of Marine Innovation, Research, and Sustainability
- Maine Coastal Program
- Maine Lobstermen's Association
- Maine Department of Marine Resources
- Marine & Oceanographic Technology Network
- Massachusetts Lobstermen's Association
- RPS Group
- St. Lawrence Global Observatory
- Jim Taylor
- Waterview Consulting

AFFILIATES

- Gulf of Maine Council on the Marine Environment
- Massachusetts Office of Coastal Zone Management
- Narragansett Bay Research Reserve
- Massachusetts Bays National Estuary Program
- U.S. Environmental Protection Agency
- New Hampshire Department of Environmental Services

STAFF

- Ru Morrison** *Executive Director*
- Tom Shyka** *Communications Specialist*
- Cassie Szymiest** *Program Manager*
- Rob Cardeiro** *Finance Director*
- Jackie Ball** *Program Coordinator*
- Hannah Blondin** *Project Assistant*

CONTACT US

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- Email** info@neracoos.org
- Web** www.neracoos.org





NORTHEASTERN REGIONAL ASSOCIATION
of COASTAL OCEAN OBSERVING SYSTEMS

“ Protecting Long Island Sound is critical to Connecticut’s economy and our culture. It generates billions for the state annually in tourism, fishing, and boating. It’s home to hundreds of diverse species of wildlife, and its 1,300 square miles of coastline are the site of happy memories for my family and countless others across the state. Whether it’s the Coast Guard or lawmakers, researchers or advocates, people across Connecticut rely on NERACOOS’ data to make the best decisions to protect our oceans and boost coastal resiliency. On behalf of all of Connecticut, I thank NERACOOS for their critical work. ”

U.S. Senator Chris Murphy (CT)

Our mission is to produce, integrate, and communicate high-quality information that helps ensure safety, economic and environmental resilience, and sustainable use of the coastal ocean.

STAY CONNECTED

VISIT OUR WEBSITE FOR REAL-TIME OCEAN AND WEATHER DATA AND UPDATES ON NERACOOS ACTIVITIES

www.neracoos.org



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