



## FY2010: Regional Integrated Ocean Observing System Development

NOAA continued a merit-based funding process in 2010 to enhance regional coastal ocean observing systems (RCOOS) and achieve three long-term outcomes: establishing coordinated regional observing and data management infrastructures, developing applications and products for regional stakeholders, and crafting regional and national data management and communications protocols. In addition, regional associations received planning grant awards designed to assist them in stakeholder engagement, education and outreach, and long-range planning activities.

### NORTHEAST ATLANTIC REGION

The Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) spans coastal waters from the Canadian Maritime Provinces to the New York Bight. NERACOOS provides weather and ocean data to fishers and commercial shippers determining if conditions are safe for passage and to emergency managers issuing storm warnings. They are also advancing efforts to use these data for water quality monitoring, harmful algal bloom predictions and warnings, and coastal flooding and erosion forecasting systems.

#### Funding:

The FY 2010 RCOOS award to NERACOOS is \$1,400,000, plus \$49,000 for High Frequency Radar support. The 2010 Regional Association (RA) Planning Grant award to this region is \$400,000.

FY 2009 (Year 3) - \$1,324,787 RCOOS, \$400,000 RA

FY 2008 (Year 2) - \$1,200,000 RCOOS, \$400,000 RA

FY 2007 (Year 1) - \$1,200,000 RCOOS, \$400,000 RA

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#### Regional Priorities and Objectives:

The Northeast region of the U.S. Integrated Ocean Observing System (IOOS<sup>®</sup>) is geographically complex, with five states and two Canadian Provinces, coastal waters and watersheds of the Scotian Shelf, Gulf of Maine, Southern New England Bight, and Long Island Sound. Regional user requirements identified inundation, harmful algal blooms, water quality, and living marine resources as specific concerns in the Northeastern Region. The NERACOOS project, as originally proposed in April 2007, had three goals: (1) operate a core of observing elements; (2) establish new observing capabilities for inundation, water quality, and harmful algal bloom, and; (3) develop the design for the user-driven core observing system. In response to the budget limitations, the focus for the past three years has been on continued operation of selected elements of the existing regional observing system, with a modest commitment to enhancement of observing capabilities.

In 2010, NERACOOS will continue the improvement and integration of the coastal ocean observing system through close collaboration with regional organizations, especially the Northeast Regional Ocean Council (NROC). The NROC is a state-federal partnership that provides a forum for tackling and prioritizing regional scale problems. This collaboration will help ensure that NERACOOS directly addresses pressing regional scale issues of societal benefit. To that end, NERACOOS adopted four NROC priority theme areas and formalized the collaboration with a Memorandum of Understanding. The existing highly-leveraged observing, modeling, data integration, and product development infrastructure provides practical operational capacity in each priority area and 2010 activities seek to maintain the capacity previously developed.

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The NROC and NERACOOS key themes for 2010 – and the associated NERACOOS activities - are as follows:

- **Maritime Safety and Security** – NERACOOS will provide real-time observations and forecasts directly for maritime operational safety, inform US and Canadian Coast Guard Search and Rescue Operations, and introduce new and enhance existing weather forecast products.
- **Ocean and Coastal Ecosystem Health** – NERACOOS will improve harmful algal bloom monitoring and forecasting, enhance monitoring and integration of water quality information, enable ecosystem based fisheries management and marine spatial planning, and monitor ocean acidification.
- **Ocean Energy** – NERACOOS will provide the necessary oceanographic information to facilitate the renewable energy sector and the Data Integration Framework required for a regional approach to facilities siting.
- **Coastal Hazards Resiliency** – NERACOOS will enhance and evaluate street-level inundation forecasting, expand forecasts for coastal flooding and erosion, and support emergency spill response.

Additionally, climate change and Coastal and Marine Spatial Planning are central and cross-cutting themes.

Finally, continued development and implementation of a Data Integration Framework is central to the delivery of information and products to users of the system, performance and evaluation metrics will enable tracking the return on investment, and education and outreach will engage NERACOOS users to ensure information and products meet their needs.

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