



# 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.

## GREAT LAKES REGION

The Great Lakes Observing System provides coverage for the coastal zone within the states of New York, Pennsylvania, Ohio, Indiana, Illinois, Wisconsin, Minnesota, and Michigan, bordering on the Great Lakes and St. Lawrence River.

### Funding:

The 2010 RCOOS award to the regional association is \$1,080,815 while an additional \$1,896,185 is going GLOS partner, the Cooperative Institute for Limnology and Ecosystem Research, and \$313,000 is staying within NOAA for complementary observing and modeling activities. The 2010 Regional Association (RA) Planning Grant award to this region is \$400,000. Much of the increased funding for Great Lakes activities in 2010 is coming through a \$3 million award to GLOS that NOAA is administering from the Environmental Protection Agency for observing activities associated with the Great Lakes Restoration Initiative.

FY 2009 - \$350,000 RCOOS, \$400,000 RA

FY 2008 - \$350,000 RCOOS, \$400,000 RA

### Point of Contact:

- Jennifer Read, Executive Director ([jenread@umich.edu](mailto:jenread@umich.edu))
- [www.glos.us](http://www.glos.us)

### Regional Priorities and Objectives:

The Great Lakes Observing System (GLOS) is dedicated to providing access to real-time and historic data on the hydrology, biology, chemistry, geology and cultural resources of the Great Lakes, its interconnecting waterways and the St. Lawrence River to meet the following regional priorities:

- Improve early identification of climate change impacts on the thermal structure and chemistry of the Great Lakes;
- Reduce risks of contaminated water supplies and improve predictive capabilities to protect public use of bathing beaches;
- Enhance understanding of nutrient dynamics, algal blooms and other factors adversely affecting a viable fishery, and;
- Reduce loss of life and property damage to commercial navigation and recreational boating, while increasing economic efficiencies of commercial navigation operations.

Since 2008, GLOS has focused on four primary tasks:

- Implementation of prototype near-shore buoys on lakes Superior, Michigan, Erie and Ontario to collect meteorological, wave information, and vertical lake temperature observations;

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- Development of public domain three-dimensional hydrodynamic modeling for the lakes Huron-to-Erie Corridor (HEC), including Lake St. Clair;
- Expansion of the development, user assessments and market analysis of customized integrated harbor specific products (Great Lakes Harbor View), and;
- Implementation of the Great Lakes Modeling and Assessment Center (GLMAC).

In 2010, GLOS will use Integrated Ocean Observing System (IOOS<sup>®</sup>) funds, as well as funds received through the Great Lakes Restoration Initiative, to continue these activities. Critical information needs for the four GLOS priorities will be addressed by implementation of an array of integrated observations including new moorings and additional sensors, AUV/gliders technologies, cross-lake ferry instrumentation, and satellite remote sensing products. In addition, hydrodynamic model development will be advanced in key interconnecting waterways between the lakes and along near-shore areas where protection of public health and maritime safety is of high concern. The proposed work will include coordination of existing information resources and implementation of service-oriented data integration and delivery approaches. Finally, an outreach and education program will be conducted, including curricula development, teacher education, GLOS product promotion and periodic user needs assessments.

Activities for 2010 were selected because they build on successes already achieved under the cooperative agreement, help meet priorities identified in the GLRI Action Plan, initiate the implementation of high priorities of the cooperative agreement that have not yet been addressed due to funding constraints, and have emerged as high priority initiatives in the GLOS Strategic Planning process with stakeholders. This work will provide significant benefits to a wide array of users across the region and are critical components of the region's long-term vision for advancing resource management and use.

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**NOAA IOOS Program Office Contacts:**

Gabrielle Canonico ([Gabrielle.Canonico@noaa.gov](mailto:Gabrielle.Canonico@noaa.gov)), Regional Coordination  
Dave Easter ([Dave.Easter@noaa.gov](mailto:Dave.Easter@noaa.gov)), Regional Coordination  
Regina Evans ([Regina.Evans@noaa.gov](mailto:Regina.Evans@noaa.gov)), Grants Administrator