



# FY2009: Regional Integrated Ocean Observing System Development

NOAA continued a merit-based funding process in 2009 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 Region includes 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. The 2009 RCOOS award to this region is \$350,000. The 2009 Regional Association Planning Grant award to this region is \$400,000.

### Project Title:

Implementation of the Great Lakes Observing System

### Recipient/ Lead Principal Investigator:

Great Lakes Observing System, Jennifer Read ([jenread@umich.edu](mailto:jenread@umich.edu))

### Cost:

Funded: FY 2008 (Year 1) - \$350,000

FY 2009 (Year 2) - \$350,000

Proposed (subject to available funds): Year 3- \$1,381,500

### Performance:

The Great Lakes Observing System (GLOS) focused in the first year on four tasks that support regional observation priorities: 1) implementation of prototype nearshore buoys on lakes Superior, Michigan, Erie and Ontario to collect meteorological, wave information, and vertical lake temperature observations; 2) development of public domain 3D hydrodynamic modeling for the lakes Huron-to-Erie Corridor (HEC), including Lake St. Clair; 3) expansion of the development, user assessments and market analysis of customized integrated harbor specific products (Great Lakes HarborView), and; 4) implementation of the Great Lakes Modeling and Assessment Center (GLMAC). Year two extends and enhances the four primary tasks begun in year one, with the anticipation that increased funding in year three would lead to more extensive observations, providing system-wide coverage, and related user-defined products.

### Schedule:

#### 1. Year 1

- Deploy five prototype buoys to record temperature, meteorology, currents, and water chemistry
- Develop Huron to Erie Corridor (HEC) hydrodynamic models, including validation, and online products (hourly forecasts of levels, flows and currents) to support drinking water utilities, beach managers, recreational boaters, commercial navigation interests, oil/toxic spill responders and search/rescue operations

(over)

- Conduct detailed assessment of the acceptability of the HarborView pilot products by commercial and recreational boating communities
2. Year 2
    - Host workshop of GLOS PIs and resource managers in year 2 to discuss placement of observing platforms, and identification of observational parameters and models/tools to support decision-making
    - Implement changes to HarborView that will meet needs identified for the Upper St. Lawrence River and the St. Marys River.
  3. Years 1-2 (Activities deferred due to reduced funding support)
    - Develop customized HarborView products: web-based nearshore currents, winds, waves, and prevailing weather for all harbors on each of the five Great Lakes
    - Stand up the Great Lakes Modeling and Assessment Center as a clearinghouse for modeling tools and as a virtual center for running pre-operational models
    - Outreach, membership recruitment, curriculum development, Data Management and Communications, systems management workshops, and coordination efforts
    - Deploy a standardized set of 14 buoys to collect physical and chemical observations in close proximity to major municipal water intakes and public bathing beaches
    - Produce new products derived from airborne and satellite observations
    - Implement pre-operational assessments for the integrated HEC Waterways Forecasting System
    - Develop high resolution grids for nearshore areas adjacent to major metropolitan water intakes as part of the Great Lakes Coastal Forecasting System
  4. Year 3
    - Expand model development to other waterways, including St. Marys and St. Lawrence rivers
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