# Great Lakes Observing System

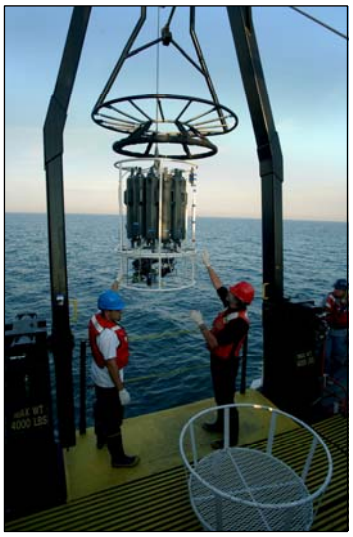
www.glos.us

## Background

The Great Lakes Observing System (GLOS) was established to provide public access to critical, real-time and historical information about the Great Lakes, St. Lawrence River and interconnecting waterways for use in managing, safeguarding and understanding these immensely valuable freshwater resources. GLOS is intended to gather and integrate chemical, biologic and hydrologic data, and monitor lake conditions and trends over time.

A nonprofit GLOS Regional Association (GLOS-RA) governs and guides the system to ensure that stakeholder needs are met and that optimal information-gathering tools are in place and secure. GLOS is one of 11 regional associations within the U.S. Integrated Ocean Observing System (IOOS), a multidisciplinary network designed to provide data required by decision-makers to address common societal goals. GLOS currently addresses these four goals:

- Improve predictions of climate change and weather and their effects on coastal communities and the nation;
- Improve the safety and efficiency of maritime operations;
- Reduce public health risks; and
- Protect and restore coastal ecosystems more effectively.



*Lake Erie. Photo: Bob Christy, Kent State Univ.*

## Progress to Date

Establishment of the GLOS-RA has been led since 2003 by representatives of key regional organizations and has assessed needs from more than 400 potential users of the system, ranging from maritime, environmental and industry interests to scientists and educators. In 2006, the GLOS-RA established itself as a nonprofit corporation with an independent board of directors. GLOS is developing a standardized and coordinated data management and communications platforms and is committed to being a well-known data and information source. GLOS is also leading development of a continuously running hydrodynamic model of the St. Clair – Detroit River system to protect drinking water supplies for more than 4 million people in the Lake Huron to Erie Corridor. This area has been shown to be at risk for oil and hazardous material spills. In 2008 GLOS also partially supported deployment of 5 marine observation buoys in Lakes Superior, Michigan, Erie and Ontario in nearshore regions which have to this point been largely unmonitored. GLOS researchers and technicians are also developing HarborView, an Internet-based decision-support tool for recreational boaters/commercial navigation, and an Observation viewer proto-type which allows Internet users to access the latest of a series of Great Lakes physical observations.

## Benefits to the Great Lakes Region

Observing systems, including sensors, stations, networks and field data collection are the primary means for gathering information on the chemical, biological and physical characteristics of the Great Lakes ecosystem. These observations are used in a host of monitoring programs to take the pulse of the Great Lakes, assess natural variability, drive ecosystem forecasting models, and assess the progress of restorations efforts. IOOS would help to facilitate the following: 1) a complete inventory of federal, state/provincial and municipal observation and monitoring activities; 2) spatial density of basic observations across the system; 3) coverage over varying time scales (real-time to historic) and over space (site-specific, watershed and regionwide); 4) uniform monitoring protocols; and 5) broad availability of information on Great Lakes conditions and trends to managers and other stakeholders.

**More Information**

Great Lakes Observing System (GLOS): www.glos.us

NOAA Integrated Ocean Observing System Program: ioos.noaa.gov

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