



great lakes observing system

GLOS serves the needs of data providers by curating and serving their findings, and serves information consumers by establishing quality control and offering convenient tools and easy access.

Ocean Data Types:

- Biological- algal blooms
- Chemical- nutrient tracker
- Physical- Air temperature and pressure, cloud and ice cover, water current, water level, water temperature at surface, wave height, wind direction and gust and bathymetry.
- Meteorological- Air pressure and temperature, cloud cover, dew point, water temperature at surface, wind direction and gust.

Relevant Tools:

- Data Portal, <http://portal.glos.us/>
Description: The Data Portal provides access to near-real-time as well as archived past observations of the Great Lakes. Users can search through stations or categories at certain dates and locations and download data and plots.
- Great Lakes Buoys, <http://greatlakesbuoys.org/>
Description: Real-time observations from buoys and monitoring stations in the Great Lakes provide data every ten minutes and each has a page with downloadable data.
- Boaters' Forecast Tool, <http://habs.glos.us/map/>
Description: This tool enables boaters to view current conditions of the major lakes and surrounding bodies of water and forecasts of conditions, enabling boaters to be safe and prepared. Marina services and boat launches are also available.



GLOS covers Lake Superior, Lake Michigan, Lake Huron, Lake Erie, Lake Ontario, the Huron-Erie Corridor, and the St. Lawrence River.



Screenshot from the HABs monitoring system which provides information about harmful algal blooms to enable stakeholders to make decisions regarding the safety of drinking water and water quality.

Regional Example:

GLOS is hosting a Great Lakes Data Challenge to inspire involvement of the public, broaden the community and create partnerships. Summer 2016 will challenge people to use the data available to them on GLOS and develop new, innovative ways to harness, analyze or manage data and problem solve issues in the Great Lakes.

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Waves



Temperature



Wind



Currents



Water Level



U.S. Integrated Ocean Observing System (IOOS®)

Our Eyes on the Ocean, Coasts, and Great Lakes

Ocean Data Types:

- Biological- chlorophyll
- Chemical- pH, CO₂, dissolved oxygen
- Physical- wind speed and direction, ocean currents, wave height and period, air temperature, water temperature, salinity, air pressure, and water level.
- Biodiversity – Species presence/absence/abundance: phytoplankton, zooplankton, fish, coral, marine mammal, sea turtles, and more.

Relevant Tools:

- Data Catalog: <http://data.ioos.us/>

Data portals integrate real-time observations with historical records, revealing climate variability and long-term trends. Ocean temperatures, sea level, and the saturation state (ocean acidification) are among the many climate variables that can be accessed through coastal ocean data portals. Using real-time observations, teachers can link their curricula and lesson plans to events in the news.

- Data Tools: <http://www.ioos.us/>

Access the IOOS Data Catalog and data tools, such as the Data Assemble Centers (DACs), the Environmental Sensor Map, the Coastal and Ocean Modeling Testbed, and much more.

- Educational Resources:

<https://ioos.noaa.gov/community/education/>

Description: Access to ways to use real data in the classroom, lesson plans, and links to regional resources.

Description:

IOOS is our eyes on the ocean, coasts, and Great Lakes. We are an integrated network of people and technology gathering observing data and developing tracking and predictive tools to benefit the economy, the environment, and public safety at home, across the nation, and around the globe.



U.S. IOOS is the national integrated ocean observing system, working with Regional Associations across the U.S., Caribbean, and Pacific.



U.S. IOOS Director Zdenka Willis talks to ocean observing students about their presentations while visiting Rutgers University.

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