

CILER MINI-SUMMIT SUMMARY

SYNTHESIS AND REVIEW OF THE GREAT LAKES OBSERVING SYSTEM REQUIREMENTS.

AUGUST 31-SEPTEMBER 2, 2016, ANN ARBOR, MICHIGAN

Two dozen researchers and government representatives from the United States and Canada convened in a two day summit hosted by the University of Michigan. Over the course of two days, participants discussed how the Great Lakes Observing System can be improved to meet the management challenges of 1) resilient coastal communities, 2) healthy ecosystems and 3) climate adaptation and mitigation. Highlighted below are the key observations and recommendations for improving the system.

DATA GAPS

Winter Observations - There are no real-time observation for the Great Lakes during the winter. GLOS is the only regional association not gathering winter observations. Buoys are taken out of the water in the fall months before the lakes freeze and then are redeployed in the spring. These data are important for validating numerical models and predicting spill movements under ice.

Capturing lake data in non-CSMI years - The Cooperative Science and Monitoring Initiative (CSMI) is a binational intensive monitoring and assessment program conducted on each Great Lake annually on a rotational basis. GLOS can complement CSMI by 1) expanding temporal coverage in the other lakes in those other four years, and 2) provide the proper data management and QAQC services that needed for collection, storage and distribution of these data. Observation technology such as AUV can circumnavigate a lake in approximately a month time scale and gliders between fixed platforms can provide data in those non-CSMI years.

Nearshore Wave Forecasts – Improved nearshore wave forecasts are a high priority from a public safety and health standpoint. Boaters and beach goers need the best information available to plan their day. The most recent forecasts models have a bias in the nearshore based on wind direction, resulting in an underestimation of wave effects at the local level. Improvement requires upgrading existing buoy technology and standardizing that technology across the Great Lakes.

Nutrient Monitoring – The nutrient loads through the connecting channels between the lakes are unknown. Nearshore areas are not sampled. Capturing these data will enhance the coarse surveillances that are underway.

CHALLENGES

Funding –Technology exists to make GLOS a robust system informing the three management challenges of resilient coastal communities, healthy ecosystems and climate adaptation and mitigation. However, the GLOS is underfunded, hampering the Great Lakes monitoring programs. To enhance funding, GLOS is seeking more private partnerships (as exemplified by Enbridge and Cleveland Water) and in-kind partnerships with communities. In addition, GLOS members will be raising awareness among U.S. Congressional members of the value of GLOS within the NOAA International Ocean Observing System.

Translating Data into Decisions – Getting data (both real-time observations and remote sensing) into useable information that support decisions at the local, community level. The GLOS should leverage outreach and education opportunities with Sea Grant to get these data into the hands of community managers and Great Lakes recreational and beach users.