This presentation also details the work done by Gary Fahnenstiel.

Unlike a “monitoring” project, we put an emphasis on both documenting and understanding changes by linking long term observations with process studies and ecological modeling within the group.
Ecosystem Forecasting: Ecosystem forecasting predicts the effects of biological, chemical, physical, and human-induced changes on ecosystems and their components. These forecasts, both qualitative and quantitative, offer scientifically sound state-of-the-art estimations of likely outcomes.

GLERL mission: conduct high-quality research and provide scientific leadership on important issues in both Great Lakes and marine coastal environments leading to new knowledge, tools, approaches, awareness and services.

Long-term Ecological Research Program physically located on Lake Michigan

Addresses concepts and issues that reach beyond Lake Michigan

But given the importance and size of Lake Michigan, one could argue for the importance of studying Lake Michigan for its own sake.
Press release generated wide interest

Associated Press story published by 15 media outlets, many outside the Great Lakes region

2 public radio stations in Great Lakes Basin ran stories
Measure process rates (primary production), not just state variables (chlorophyll), different from what Environmental Protection Agency is doing.


High frequency sampling (biweekly to monthly) at one spatial location to capture temporal variation.

Miss important temporal features if you don’t sample with high frequency at one location.

Results collected at the same time throughout the region as at our offshore site suggest our site is representative of the offshore region (see Mida, J.L., D. Scavia, G.L. FAHNENSTIEL, S.A. POTHOVEN, H.A. VANDERPLOEG, and D.M. Dolan. Long-term and recent changes in southern Lake Michigan water quality with implications for present trophic status. Journal of Great Lakes Research 36:42-49 (2010).
Customers

1) Informed resource managers and policy makers
   - State Department of Natural Resources (MI, WI, IL)
   - Great Lakes Fishery Commission
   - International Joint Commission

2) Informed public
   - Sea Grant fishery workshops
   - Healing Our Waters
   - Michigan United Conservation Club
   - Sport fishing clubs
   - Commercial fishermen

3) Information to research partners
   - U.S. Geological Survey, U.S. Environmental Protection Agency
   - NOAA National Estuarine Research Reserve System
   - University of Michigan, Michigan State University, University of Wisconsin,
     Purdue University, Grand Valley State University

Invited to address policy groups; Great Lakes Fish Commission and technical committees

Highlight commercial fisherman, and Sea Grant connection

Long-Term Vision

Continue capability to understand impacts of ongoing and future ecosystem stressors

- Integration of technology with current sampling
- Integration of physical measurements
- Further develop integration with other agencies
- Data/sample archiving
- Organism “health” - condition indices