

**GREAT LAKES ENVIRONMENTAL RESEARCH
LABORATORY
Ann Arbor, Michigan
&
Muskegon, Michigan**

The mission of Great Lakes Environmental Research Laboratory (GLERL) is to “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”. GLERL science helps protect life and property, economic well being, and sustain the ecosystem health of the Great Lakes and other U.S. coastal ecosystems. GLERL provides coastal constituents, private industry, the scientific community, and Federal, State and international decision and policy makers with scientific understanding of the sources, pathways, fates, and effects of toxicants; natural hazards such as severe waves, storm surges, and ice; ecosystems and food webs and their interactions including the threat and impact of invasive species; changes in water levels of the Great Lakes; and regional effects related to global climate change. GLERL’s research is mandated by 15 Federal statutes, one Executive Order, and the U.S.- Canada Great Lakes Water Quality Agreement. Additionally, through partnerships, GLERL conducts collaborative research with a wide array of over 150 research institutions at the state, regional, national and international levels.

GLERL is unique, relative to other labs and academic institutions, in its broad ecosystem capabilities ranging from physics to fish. GLERL’s long-term priorities and multi-disciplinary capabilities are focused on developing Ecosystem Forecasting capabilities within NOAA. This includes Physical Environmental Prediction (e.g. wave, ice cover, temperature, water levels, hydrodynamics, turbidity, water quantity, anoxia, water quality). Ecological Prediction (e.g. harmful algal blooms, fish recruitment, invasive impacts, fish production, contaminant levels in biota) and an Integrated Great Lakes Observing System. GLERL also has major responsibilities and congressional mandates on invasive species and currently is the headquarters for the NOAA National Center for Invasive Species Research.

Brief History

GLERL was officially created on April 25, 1974, to provide a focus for Federal research on all of the Great Lakes, *America’s fourth coast*. It was formed by merging staff from the Limnology and Computer Divisions of the Lake Survey Center of NOAA’s National Ocean Service with the Core of Engineers staff of the International Field Year for the Great Lakes (IFYGL) Office and has been a laboratory within OAR for over 25 years. The initial work of the lab focused on hydrology, lake physics (ice and circulation), and nutrient dynamics which has evolved to ecosystem-level capabilities. GLERL is NOAA’s only research laboratory in the Great Lakes region.

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Financial Profile (Dollars in Thousands)

Fiscal Year	Permanent Funding	Other NOAA	Non- NOAA	Pass Through	TOTAL
FY 2001	6806.7	1275.4	337.3	22.8	8442.2
FY 2002	7156.4	1211.6	394.6	54	8816
FY 2003	7255.4	1221.9	515	0	8992.3

Personnel Data

FY	FEDERAL EMPLOYEES	JOINT INSTITUTE	Contractors	TOTAL
FY 2000	56	22	2	80
FY 2001	56	20	1	77
FY 2002	53	22	3	78
FY 2003	54	20	1	75

Average Age Federal/Scientific/Engineering and Technical Staff 48
 Average Age of JI/Scientific/Engineering and Technical Staff 36

Federal Staff	PhD	30%	MS	28%
JI Staff	PhD	14%	MS	32%

Great Lakes Environmental Research Laboratory PARTNERSHIPS

PARTNERSHIPS	IDENTIFY (and explain)
JOINT INSTITUTES	Cooperative Institute for Limnologic and Ecologic Research (CILER), Cooperative Institute for Coastal Ocean Research (CICOR)
PARTNERSHIPS WITH OTHER LABS	NSSL, ARL
OTHER OAR PROGRAMS	Sea Grant (Michigan, Ohio, Minnesota, New York, Indiana-Illinois, Pennsylvania, Wisconsin), NURP
OTHER NOAA RELATIONSHIPS	COP, NOS Sanctuary, NWS, NCEP, NESDIS
OTHER FEDERAL AGENCIES	USGS Science Center, U.S. Fish and Wildlife (coop. Research facilities), EPA (LLRN/GLNPO), U.S. Coast Guard, Natl Park Services. Soil Conservation Service, U.S. Army Corps of Engineers (Detroit and Buffalo District), NASA, IJC
STATE AGENCIES	U.S.G.S. Water Survey in Michigan, Great Lakes Commission, Great Lakes Protection Fund, Michigan Department of Natural Resources (Coop, Research), New York Environmental Protection, Michigan Department of Agriculture.
LOCAL PARTNERSHIP	Dunn Geoscience, ERIM, ACRES International, Philpott Engineering, Great Lakes Carriers Association, National Wildlife Federation, Navy Club, Grand Haven (Waterfront Plan), South Haven (Maritime Museum), Fisheries
UNIVERSITY PARTNERSHIPS	University of Michigan, Michigan State University, Grand Valley State University, Eastern Michigan University, State University of New York, Ohio State University, Michigan State, and over 30 additional formal partners.
INTERNATIONAL	Great Lakes Fisheries Commission, International Joint Commission, Department of Energy (Canada) International Great Lakes St. Lawrence Ice Information Working Group and United States/ Canadian Joint Ice Working Group

