

## GOALS AND MISSION

The Great Lakes Center is a multidisciplinary research, education, and service institute with a primary focus on the Great Lakes. The Center is committed to providing the best possible science for understanding the physical, chemical, biological, and social dimensions of the Great Lakes and their watersheds.

The Great Lakes Center mission is to improve the quality of the environment by providing the best possible science to decision-makers concerned with the health and sustainability of resources, with a primary focus within the Great Lakes and their watersheds. This is accomplished through high quality research, informed and current graduate and undergraduate education, and dissemination of information to the public through outreach.

## FACILITIES

- State-of-the-art laboratories at the Field Station on Lake Erie;
- Fleet of research vessels capable of operating in the open Great Lakes and their contributing waters;
- Point Peter Brook Experimental Watershed for research and teaching;
- Environmental Toxicology Laboratory;
- Aquatic Ecology Laboratory;
- Variety of sampling and analytical equipment to support the research and educational missions.



Fish and plankton are cultured in over 180 tanks (5 to 900 gallons) with either static or automated flow-through capabilities. Flow-through units are controlled and monitored by a PC-based Aquanode® system with network, telephone connections.



GLC open-water research vessels are capable of deploying a variety of water and biological sampling devices, electronic monitoring equipment and lake bottom imaging devices. Smaller boats, including one equipped for electro-shocking, are used on inland lakes, rivers, and wetlands for a wide range of sampling and monitoring missions.

## ACTIVITIES

The Great Lakes Center and its staff are engaged in three broad areas: research, education, and outreach. Research expertise within the Center includes:

- Fisheries, plankton, and benthic ecology;
- Aquatic invasive species;
- Land-use impacts on surface water quality;
- The transformation and health effects of environmental contaminants;
- Lake and watershed carbon and nitrogen dynamics;
- The effects of global climate change on aquatic systems.



Over the last six years, the Center:

- published 86 papers,
- presented over 100 conference talks,
- submitted 112 grants,
- received over \$4 million in funding.

All of the Center resources were used extensively to train undergraduate and graduate students.



Public outreach and education represent the third critical function of the Great Lakes Center. The Center promotes boating safety and training to youth primarily through its participation with the Sea Scouts. Additionally, nearly 100 students, on average, tour the field station facility and research vessels.





#### PERSONNEL:

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**Mark Clapsadl**, Field Station Manager & Research Scientist (Great Lakes predator prey dynamics; food web transfer of contaminants; early life history of fishes; unionids). clapsamd@buffalostate.edu

**Hastings, Kathleen**, Technician (Monitoring of the lower food webs in Lake Erie). hastinkl@buffalostate.edu

**Subodh Kumar**, Interim Director of Environmental Toxicology and Chemistry Lab (Mechanism of action of environmental carcinogens and estrogens; cancer prevention; cancer management). kumars@buffalostate.edu



**Jagat Mukherjee**, Research Scientist (Toxicology and mechanism of chemical carcinogen-induced tumorigenesis). mukherjj@buffalostate.edu

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**Charlotte Roehm**, Assistant Professor of Geography and Planning (Carbon and nutrient cycling in freshwater and wetland ecosystems; watershed terrestrial-aquatic linkages; climate change and greenhouse gas dynamics in natural and disturbed systems; energy mobilization, transport and transformation; watershed pollution). roehmcl@buffalostate.edu

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THE GREAT LAKES CENTER  
44 years of research  
(1966-2010)



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