

MICROPLASTICS IN THE GREAT LAKES: TOWARDS ESTABLISHING A LONG-TERM MULTIDISCIPLINARY RESEARCH PLATFORM TO ASSESS THE IMPACT OF MICROPLASTICS ON LAURENTIAN GREAT LAKES ECOSYSTEM HEALTH

The Water Center is working to enhance freshwater research activities at the University of Michigan by fostering cross-disciplinary collaborations, encouraging new linkages to freshwater issues in research and courses, and providing more opportunities to study and learn about the Great Lakes and other large freshwater systems.

Through this funding effort, the Water Center is increasing U-M's capacity to contribute solutions to the protection and restoration of freshwater systems.

FOR MORE INFORMATION

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PROJECT SUMMARY

Recently, plastic has been documented in the Great Lakes at the highest concentrations seen anywhere on the planet. Yet, too little is known about the fate of this plastic and its role in ecosystem dynamics to predict the inevitable impacts on one fifth of the world's fresh water and one of our most valuable national security assets.

To address this critical knowledge gap, this project takes a cross-disciplinary and multiscale approach to define the ecological and environmental health risks of plastics in the Great Lakes. Regionally, the project team will quantify and identify plastics in Lakes Erie, SE Huron and Superior, improve circulation models to better predict transport of plastics through the Laurentian system, contribute to remediation plans, and disseminate knowledge through school curriculum. On the micro-scale, the team will quantify and qualify the degree of plasticbound organic pollutants and explore plastic-dwelling microbial community dynamics and function, a virtually unexplored topic.

The Great Lakes offer an opportune test bed to develop a systems-wide understanding of the impact of microplastics on ecosystem health. The diverse expertise assembled for this project leverages the University Michigan towards becoming an epicenter for microplastic research in the Great Lakes, and in fact the world, with many of the anticipated findings relevant to better understanding implications of plastics in all aquatic environments.



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revitalize...**PURE BLUE**



The Water Center is part of the University of Michigan's Graham Sustainability Institute. It is supported by funds from the Fred A. and Barbara M. Erb Family Foundation and the University of Michigan.