



Supporting Collaborative Research That Improves Water Resource Decisions

The University of Michigan Water Center addresses critical and emerging water resource challenges. We are driven by the desire to ensure management of our water resources is informed by the best possible science.

Our mission is to improve the policy and management decisions that affect our waters by integrating decision makers and other end users into collaborative research projects. This integration fosters learning by all participants and the co-production of high-quality, usable, science-based information that can lead to innovative solutions. We also design and implement innovative grant-making processes that support collaborative research.

THE WATER CENTER APPROACH

The Water Center supports and assists with applied, collaborative research. All projects incorporate the following common strategies:

- Identify and engage potential users of the research as projects are first conceptualized. Input from users, such as natural resource managers and local decision makers, helps ensure that results are relevant and usable within the current policy and management context;
- Incorporate multi-disciplinary and multi-sector perspectives;
- Include regular opportunities for consultation with users and adjust project approach based on this feedback;
- Consider and plan for long-term, post-project needs related to data accessibility, compatibility, and other elements;
- Ensure that project results reach a targeted audience through skilled science translation, outreach, engagement, education, and convening; and
- Continually evaluate projects and processes to improve outcomes.

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ABOUT

Established in 2012, with initial seed funding from the University of Michigan and the Fred A. and Barbara M. Erb Family Foundation, the Water Center has provided more than \$5 million in grants for collaborative research projects. In 2014, the Water Center began managing the National Estuarine Research Reserve System's Science Collaborative, and is supporting collaborative research and science transfer projects that improve coastal management throughout the nation. The Water Center is part of the U-M Graham Sustainability Institute, which fosters collaborative sustainability solutions through translational knowledge, transformative learning, and institutional leadership.

PROGRAMS & PROJECTS

The Water Center's collaborative approach is applied across a range of projects related to our current focus areas: water quality, water quantity, climate change, and habitat.

Water Quality: Clean water in lakes, rivers, streams, and estuaries supports healthy aquatic communities and provides clean drinking water, recreational opportunities, and more. Teams address complex issues such as legacy pollutants, urban and agricultural discharges, and emerging contaminants of concern. For example, the Water Center is supporting researchers who are currently developing watershed models to evaluate multiple options for reducing nutrient run-off into Lake Erie.

Water Quantity: Competing uses for limited freshwater can stress surface and groundwater resources and cause tensions among users, especially during periods of drought. Teams engage diverse stakeholders, and seek creative approaches to adaptation, conservation, and resource management. The Water Center is supporting an integrated assessment that will help coastal communities adapt to current and future variability in Great Lakes water levels.

Climate Change: The effects of climate change on freshwater and estuarine systems include a range of ecological, economic, and social impacts. Teams are helping communities and decision makers better understand climate change impacts and develop viable strategies for mitigation and adaptation. In collaboration with the National Oceanic Atmospheric Administration, the Water Center is supporting vulnerability assessments and climate scenario planning that will help coastal communities in Alaska and New England adapt to climate change.

Habitat: Freshwater and estuarine systems provide life-sustaining benefits to humans and wildlife but these interconnected systems are sensitive to disturbances. The Water Center supports a number of research projects with the goal of making aquatic habitat management and restoration more efficient and effective. For example, our specialists are working with agency partners to adaptively plan and implement a series of restoration projects that re-create lost fish spawning habitat in the St. Clair and Detroit rivers.

EXPERTISE AND SERVICES

The Water Center team is experienced in collaboration, convening, science translation, and program evaluation. Targeted workshops, networking events and project consultations help build bridges between resource management practitioners and academic researchers at the University of Michigan and beyond.

Our specialists guide the development of new project ideas, engage appropriate researcher and non-academic participants, identify unique funding opportunities for applied research, and develop effective outreach strategies and communication tools. The Water Center is also developing the next generation of water resources professionals by engaging U-M students in classes and internships on campus and in the field, to build a portfolio of transferrable skills and experiences.

