



At the Heart of the Great Lakes

MICHIGAN SEA GRANT COLLEGE PROGRAM

Surrounded by four of the five Great Lakes, Michigan is at the heart of the largest surface fresh water system on Earth.

Through research, education and outreach, Michigan Sea Grant is dedicated to protection and sustainable use of the Great Lakes and coastal resources.

Michigan Sea Grant, a cooperative program of Michigan State University and the University of Michigan, is part of the National Sea Grant College Program. The network of 33 university-based Sea Grant programs in coastal states across the country is administered through the National Oceanic and Atmospheric Administration (NOAA). Federal funds are matched with funds from state, tribal, business and other non-federal sources to carry out the programs.

Michigan Sea Grant researchers, Extension educators and other specialists provide information about Michigan's coastal areas to residents, educators and stakeholders through publications, websites, displays, special projects, workshops and presentations.

Learn more at:
www.michiganseagrant.org

Michigan Sea Grant Extension helps apply research, conducts educational activities and is connected to more than 40 coastal counties. Extension educators provide technology transfer by interpreting scientific knowledge for decision-makers, public officials, community leaders, businesses and industries.



They also facilitate events, including workshops, training and educational programs. Educators provide targeted support focusing on marinas and other businesses, and work to restore coastal habitats and related industries, such as commercial and recreational fishing. In partnership with state and federal agencies, Extension educators are responsive and proactive in addressing local, regional and national issues relevant to Michigan. Our four focus areas include:

RESILIENT COMMUNITIES AND ECONOMIES

Michigan's coastal communities boast vibrant natural and cultural histories. However, many communities face challenges with aging infrastructures and resource management, and hope to develop new opportunities and diversify their local economies. Michigan Sea Grant works with many communities to assist in planning for economic initiatives. Some examples of recent work include:

- The Sustainable Small Harbors project, co-funded by Michigan Sea Grant and a host of partners, worked with six communities to identify the barriers preventing small harbors from becoming economically, socially and environmentally sustainable, and to equip coastal community leaders with the tools to assess and strengthen their own waterfront assets. The project team has created a guidebook for communities to help facilitate planning.
- Michigan Sea Grant helped create an interactive online birding trail website to encourage winter tourism along the shores of Lake Huron in the Upper Peninsula. The website (www.northhuronbirding.com) helps visitors find the local birding hotspots, and also describes unique natural habitats to help people understand the importance of shoreline habitat for bird migration and breeding. The North Huron Birding Trail has generated thousands of unique views since it debuted in 2016.

HEALTHY COASTAL ECOSYSTEMS

Michigan Sea Grant outreach and research specialists are helping communities and decision-makers enhance, improve and restore their riverfronts and coastal areas, and prepare for future weather events.



- Michigan Sea Grant is working with partners to restore fish spawning habitat for lake sturgeon, walleye and other native fish. In recent surveys, sturgeon eggs were found on four different constructed spawning reefs in the St. Clair and Detroit rivers.
- Michigan Sea Grant and partners are working to improve community resiliency across the Saginaw Bay watershed. Phase 1 of the project assessed key decision-makers' perceptions of storm hazards, stormwater runoff, and resiliency strategies. Phase 2 includes developing education and outreach materials focused on filling gaps in awareness, knowledge and technical capacity identified during the assessment.

ENVIRONMENTAL LITERACY AND WORKFORCE DEVELOPMENT

Michigan Sea Grant enhances student science, technology, engineering and math (STEM) skills in many ways, including facilitating:

- The annual 4-H Great Lakes Natural Resources Camp for teens.
- Place-based stewardship education programs in northeast Michigan. In 2016, more than 5,000 youth and 85 teachers participated in stewardship initiatives there.
- Schoolship and classroom education in southeast Michigan through the Great Lakes Education Program, Summer Discovery Cruises and the Water Conservation programs.
- The development of a Water School curriculum to help appointed and elected officials and others better understand water resource and water management issues.

SUSTAINABLE FISHERIES AND AQUACULTURE

Michigan Sea Grant has informed and assisted stakeholders and decision-makers by:

- Organizing annual fishery workshops explaining the status of fish populations, the contribution of stocked and wild fish, and management directions.
- Developing citizen science programs where fishers gather data on their catches to help inform decision-makers.

- Conducting outreach related to charter and tournament fishing economic impacts and evaluation indicating a greater appreciation for the value of a healthy Great Lakes ecosystem.

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