## Michigan Sea Grant College Program

# SUSTAINABLE FISHERIES AND AQUACULTURE

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 nonfederal 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.



Michigan Sea Grant supports the Great Lakes fisheries through teaching people about the region and the inextricable connection we have to the Lakes; through research that directly or indirectly has an impact on the fisheries; and through outreach, answering questions and staying on top of ongoing and emerging fisheries issues.

## ISSUE

The story of the Great Lakes fishery is the story of aquatic ecosystems, biodiversity, water quality, environmental change, degradation, and rehabilitation throughout the region. Today, recreational and commercial fisheries remain a vital part of Michigan's heritage, with the fisheries industry valued in excess of \$4-7 billion annually.

People use Great Lakes fishery resources in many different ways.

While sport and commercial fisheries are the major fisheries in the Great Lakes, subsistence and tribal fishing, as well as aquaculture, are also part of the landscape of the Great Lakes fishery.



Solid resource management begins with solid science. Michigan Sea Grant encourages sound scientific decision-making through fisheries science and fisheries management techniques. Scientists must understand how salmon, lake whitefish, trout, walleye, and other species are adapting to changing lake conditions.

#### **MICHIGAN SEA GRANT EXTENSION ACTION**

Michigan Sea Grant has informed and assisted stakeholders by:

- Organizing annual fishery workshops that explain the status of fish populations, the contribution of stocked and wild fish, and management directions. These workshops provide valuable information for anglers, charter captains, resource professionals, and other interested stakeholders.
- Developing citizen science programs, such as Salmon Ambassadors and the Great Lakes Angler Diary, where anglers gather data on their catches. The purpose of the program is to engage anglers in learning about their fishery and providing useful information on stocked and wild Chinook Salmon.
- Facilitating a survey of fishing organization members about their knowledge of current science, trust in that science, and beliefs regarding biological, social, and economic implications of reductions in stocking of salmon. Results were shared with organization leaders and management agencies.
- Coordinating with Michigan Department of Natural Resources to engage stakeholders in discussions related to development of a basin-wide management plan.
- Providing training for safe seafood processing procedures.

#### **IMPACTS**

- More than 500 individuals attended fishery workshops in 2016 to learn current research and information related to the regional status of Great Lakes fisheries.
- Since citizen science efforts began in 2013, more than 8,000
   Chinook salmon have been logged by Salmon Ambassadors
   around Lake Michigan and in northern Lake Huron. Volunteers
   measure the salmon and check for adipose fin clips that
   indicate stocked fish. Salmon Ambassadors commit to
   collecting data on each and every Chinook salmon caught
   during the fishing season.
- Michigan Sea Grant helps Great Lakes fish processors comply
  with federal regulations regarding seafood safety by conducting
  regular training workshops to explain Hazard Analysis Critical
  Control Point (HACCP) principles and provide model HACCP
  plans for fish processors. The trainings resulted in 42
  certifications in 2016. In addition, Michigan Sea Grant staff also
  conduct site visits throughout the state to evaluate the plans
  and provide technical assistance as needed.

## **PARTNERS**

- Michigan State University Extension
- Michigan Department of Natural Resources
- Wisconsin Department of Natural Resources
- Illinois Department of Natural Resources
- Indiana Department of Natural Resources
- Michigan Steelhead and Salmon Fishermen's Association
- Great Lakes Indian Fish and Wildlife Commission
- Wisconsin Sea Grant
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- NOAA Great Lakes
   Environmental Research Lab
- International Wildlife Refuge Alliance

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