

Environmental and Socioeconomic Assessments of the Proposed Wisconsin-Lake Michigan National Marine Sanctuary

BIOGEOGRAPHY BRANCH

CENTER FOR COASTAL MONITORING AND ASSESSMENT

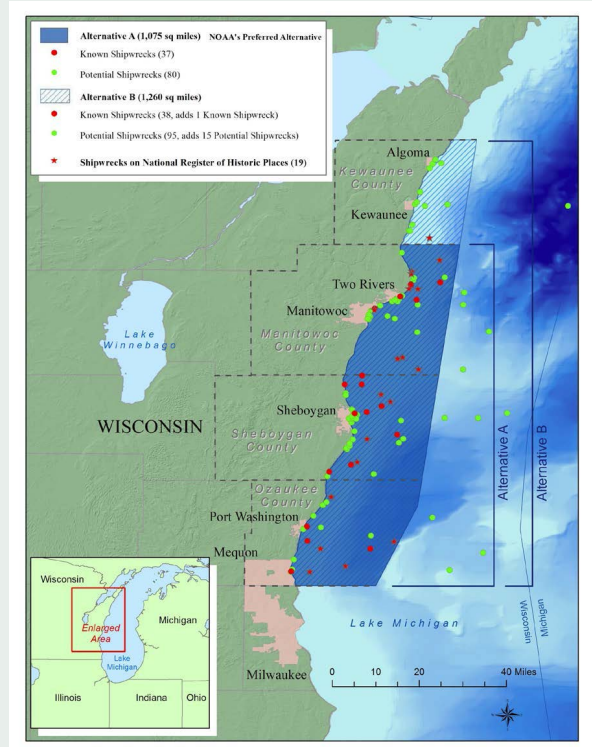
Background

In 2015, NOAA announced its intent to designate a new national marine sanctuary off the coast of Wisconsin in Lake Michigan. The proposed 1,075-square-mile sanctuary encompasses a nationally-significant collection of shipwrecks—including 37 known shipwrecks and as many as 80 shipwrecks yet to be discovered—and was nominated by the state of Wisconsin with broad community and bipartisan support. The sanctuary would focus on conserving maritime heritage resources, fostering partnerships with education and research partners, and increasing opportunities for tourism and economic development.

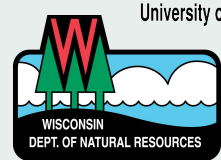
Project summary

To support the proposed Wisconsin-Lake Michigan National Marine Sanctuary, NOAA's National Centers for Coastal Ocean Science (NCCOS) is working with NOAA's Office of National Marine Sanctuaries (ONMS) as well as state and local partners to gather environmental and socioeconomic information in and around the proposed sanctuary. This research will support the sanctuary's long-term management plan to protect and preserve maritime heritage, provide the foundation for monitoring changes to heritage resources over time, and provide baseline information for local coastal zone management and planning of Lake Michigan resources and services.

This project is funded by NCCOS from 2016 to 2020. The project relies on partnerships among ONMS, NOAA's Great Lakes Environmental Research Laboratory, the Wisconsin Historical Society, Wisconsin Sea Grant, Wisconsin Department of Natural Resources, and others.



Wisconsin Historical Society

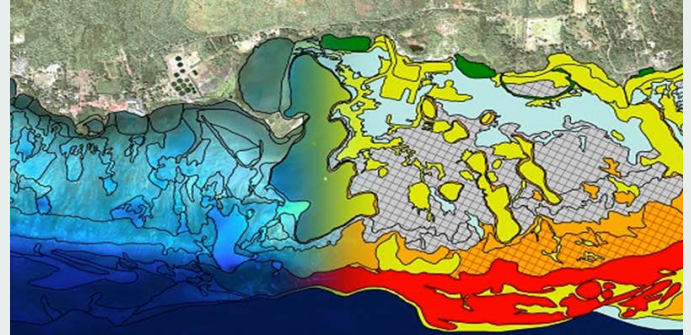


Project Components

Lakebed Mapping

The team will conduct new offshore lakebed mapping and interpret existing coastal topography-bathymetry data within the proposed sanctuary. The new surveys will take place in 2017 and 2018, and will make use of multibeam and sidescan echosounders to map the lakebed. These new bathymetry data and lakebed maps will update nautical charts, identify new habitats, and improve understanding of underwater maritime heritage.

To promote future lakebed mapping and engage lake mapping partners, the team will develop a unified mapping strategy for the proposed sanctuary. This includes gathering information from stakeholders using an interactive online survey prioritization tool; this effort will dovetail with a broader Great Lakes-wide mapping coordination initiative led by NOAA's Office for Coastal Management and the U.S. Geological Survey.



Seafloor mapping image from Hawaii - NCCOS

Socioeconomic Study

The team will collect socioeconomic data through a randomized household survey of Wisconsin state residents who recreate in the proposed sanctuary area. This study will: 1) document how residents use the region; 2) identify the social and cultural values that residents place upon the region and local maritime heritage; 3) estimate the economic value of relevant tourism in the region; and 4) develop demographic profiles of residents who visit and/or live in the region.



Lottie Cooper wreck in Deland Park - Wisconsin Historical Society

The survey will capture information on a variety of important topics, such as: awareness and perception of key resources and issues; participation in and expenditures related to relevant activities; social and environmental values; interest in and support of maritime heritage; sense of attachment to the lake and maritime history; and socioeconomic and demographic information.

Environmental Resource Assessments

Working with the broader Great Lakes science community, the team will use existing data to assess environmental factors affecting access to and the condition of underwater maritime heritage sites (i.e., beach closures, invasive mussels, sedimentation) within the proposed sanctuary. These assessments will provide information to sanctuary managers, as well as coastal managers and planners, so that they may better understand the range of factors that affect the quality of sanctuary resources and heritage.



Zebra mussels -
D. Jude, University of Michigan

NOAA National Centers for
Coastal Ocean Science
Charles Menza: 240-533-0372
Theresa Goedeke: 240-533-0383



NOAA Office of National Marine
Sanctuaries

Russ Green: 920-459-4425
Ellen Brody: 734-741-2270

NCCOS: <https://coastalscience.noaa.gov/>
Proposed Sanctuary: <http://sanctuaries.noaa.gov/wisconsin/>