

Great Lakes SWIM Project (Spawning Whitefish and Invasive Mussels)

Invasive zebra and quagga mussels have been altering the Great Lakes region since they were introduced in the 1980s. Over the decades, the impacts of dreissenid mussels have become more serious while the options for control and asset mitigation remain limited. Multiple federal investments have been made during this time to support invasive mussel control priorities that are consistent with the Invasive Mussel Collaborative *Strategy to Advance Management of Invasive Zebra and Quagga Mussels* (2018; <https://bit.ly/IMC-Strategy>).

In January 2022, Great Lakes Restoration Initiative (GLRI) federal agency staff from U.S. Geological Survey (USGS), NOAA-Great Lakes Environmental Research Laboratory (GLERL), National Park Service (NPS), and USEPA-Great Lakes National Program Office (GLNPO) formed a working group to prioritize the continued implementation and comprehensive assessment of invasive mussel control technologies that show promise and enhance fish spawning and nursery habitats for lake whitefish. Through their engagement with the Lake Michigan and Huron Committees and the Invasive Mussel Collaborative, two priority reefs were identified as mussel control locations that would likely benefit lake whitefish larval survival: Thunder Bay reef complex in Lake Huron and Good Harbor Reef in Lake Michigan.

The federal working group has since expanded to include additional representatives who make up a Core Planning Team of Tribal Nations, state and academic entities who are receiving GLRI support to lead five implementation teams carrying out research on adult whitefish behavior, mussel control, whitefish embryo survival, habitat mapping, and Cladophora and benthic nutrients. Together, these agencies and organizations are undertaking a 5-year before-after-control-impact (BACI) experimental design with dreissenid mussel control occurring in year three and monitoring of other environmental variables occurring annually throughout. This new GLRI Experimental Mussel Control Project will be facilitated through a partnership between USGS, NOAA, NPS, and U.S. EPA with backbone support from the Great Lakes Commission.

Learn more about the Working Group at <https://www.glc.org/work/swim>.