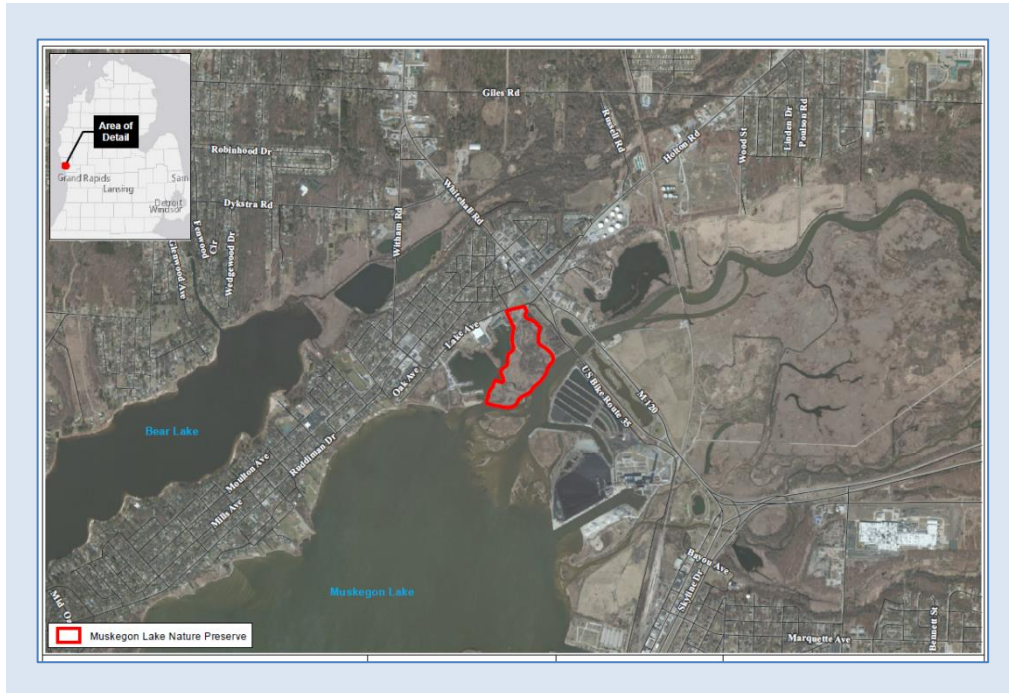




Muskegon Lake Area of Concern Habitat Restoration

The **Muskegon Environmental Research and Education Society** habitat restoration will improve habitat for fish and wildlife by restoring coastal wetlands and natural shoreline at Muskegon Lake Nature Preserve.



Project Highlights

Restore approximately 7.9 acres of wildlife habitat

Remove 6,331 metric tons of unnatural fill materials

Funding is provided by the Great Lakes Restoration Initiative (GLRI) and U.S. Environmental Protection Agency through the National Oceanic and Atmospheric Administration (NOAA) and the Great Lakes Commission (GLC)

Completes one of the four, final habitat restoration management actions needed to remove Muskegon Lake from the list of Great Lakes Areas of Concern.

The West Michigan Shoreline Regional Development Commission (WMSRDC) is implementing this project

Monitoring for invasive vegetation and impacts to reptiles and amphibians will follow restoration of the aquatic ecosystem

Environmental Benefits

Reconnect lower Muskegon River with Muskegon Lake

Restore fish passage and habitat

Economic Benefits

Tourism

Community Benefits

Recreation

Educational opportunities

Improved natural area

Background of the Area of Concern (AOC)



Survey work being conducted on-site (Photo by WMSRDC)

Within the lower Muskegon River watershed lies the **Muskegon Lake AOC**, a drowned river mouth lake that flows into Lake Michigan at a shoreline that is part of the world's largest assemblage of freshwater sand dunes. Muskegon Lake was designated an AOC in 1985 due to ecological problems caused by industrial discharges, shoreline alterations and the filling of open water and coastal wetlands.

Since 1992, community groups, governmental and nongovernmental organizations have worked collaboratively to remediate contaminated sediments and to restore and protect fish and wildlife species and their habitats. Historic sawmill debris, foundry sand, and slag filled 798 acres of open

water and emergent wetlands in the AOC. Nearly 25% of Muskegon Lake's open water and shallow wetlands were filled and approximately 74% of the shoreline was hardened with wood pilings, sheet metal or concrete. This resulted in the loss and degradation of shallow water benthic (lake bottom) communities, isolation and fragmentation of coastal wetlands, and the associated degradation of water quality and fish and wildlife populations.

This project, along with three others already under development, will complete all of the management actions needed for the U.S. Environmental Protection Agency (U.S. EPA) to remove Muskegon Lake from the list of Great Lakes "toxic hotspots."

History of MERES

The Muskegon Lake MERES project is located on the eastern shoreline of Muskegon Lake, within the Muskegon Lake Area of Concern. The property is owned by the Muskegon Environmental, Research, and Education Society (MERES) and known as the Muskegon Lake Nature Preserve. This 27.0-acre shoreline property was once emergent wetland and shallow aquatic habitat. It was initially filled with sawmill wood debris waste from a historic, lumber-era sawmill that operated on the site and later filled with foundry sand and broken concrete to dispose of waste and create buildable land. However, development never took place and the property was donated to MERES to become the Muskegon Lake Nature Preserve.

Filling in this area eliminated connectivity between the Muskegon River and the property's former wetland areas, which destroyed nursery and foraging habitats for native fish and wildlife and created prime conditions for non-native invasive plants to further degrade the property. Fill material was isolating the property from the Muskegon River shoreline and degrading fish and wildlife populations by eliminating passage of desirable fish and wildlife species from Muskegon Lake and Muskegon River to its former, natural open water and emergent wetland floodplain.

Project Progress

The construction phase for this project is wrapping up. Restoration and final monitoring activities are expected to be completed in 2022 and monitoring data will be publicly shared on the Great Lakes Commission's habitat restoration database webpage.

Funding and Partners

Approximately \$1.4 million is available for this project through the GLRI, a regional program that is supporting implementation of a comprehensive restoration plan for the Great Lakes, including cleaning up AOCs. The project funding comes from NOAA through a Regional Partnership with GLC. The project is being managed locally by WMSRDC and ecological monitoring is being performed by the GVSU AWRI.

For More Information

Eric Ellis, Habitat Restoration Project Manager, Great Lakes Commission
734-396-6089, eellis@glc.org

Fallon Chabala, Project Manager, West Michigan Shoreline
Regional Development Commission, 231-722-7878 x 130, Fchabala@wmsrdc.org

