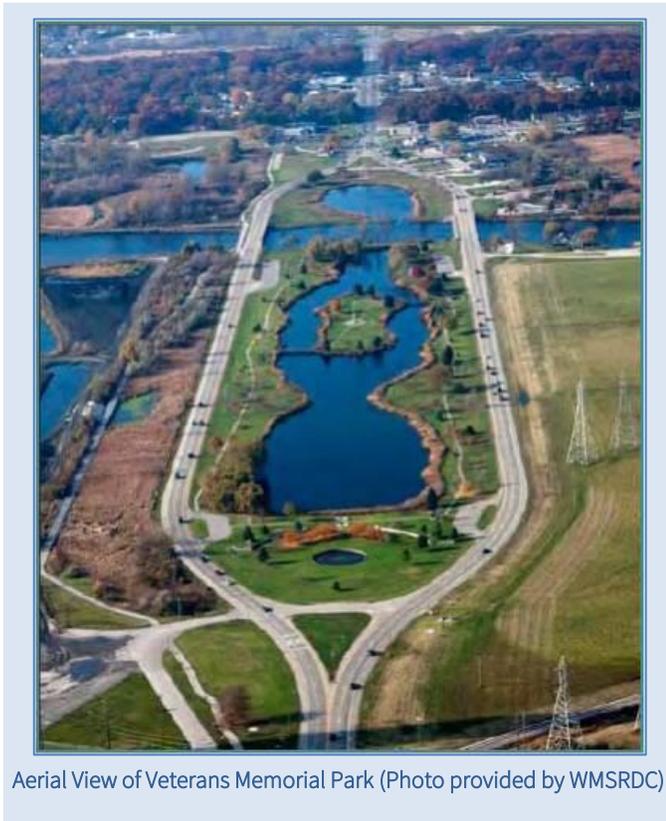




## Muskegon Lake AOC Habitat Restoration

The **Veterans Memorial Park** habitat restoration will improve habitat for fish and wildlife by restoring wetlands, creating natural shorelines, and re-establishing passage for fish.



Aerial View of Veterans Memorial Park (Photo provided by WMSRDC)

### Project Highlights

Re-establish the hydrological connection to the Muskegon River by replacing an aging water control structure to allow fish passage

Restore 6,025 linear feet of shoreline habitat, 1 acre of fish habitat, 6.4 acres of emergent wetland, and 5.4 acres of native plant buffer

Restore 4.6 acres of open water wetland by removing 40,208 metric tons of sediment

Complete restoration of Muskegon Lake to remove it from the list of Great Lakes AOCs or “toxic hotspots” as early as 2020

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)

#### Environmental Benefits

Improve 15 acres of habitat for native plants and animals  
Bring the AOC closer to de-listing

#### Economic Benefits

Increase tourism to Muskegon

#### Community Benefits

Improve fishing, kayaking, canoeing, wildlife watching, picnicking, and park appearance

## Background of the Area of Concern (AOC)

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 the Park

Veterans Memorial Park is located along a historically significant parkway at the east end of Muskegon Lake. The park was created between 1928 and 1934 by excavating and filling wetlands along the Muskegon River. Two ponds were

excavated, the channel was straightened and the adjacent wetlands were filled, eliminating wetland, nursery and foraging habitats for native fish and wildlife. Installation of a water control structure in 1970 further degraded habitat by eliminating passage of desirable fish species from Muskegon River to the south pond. The structure also altered surface water flow between the Muskegon River and the south pond, which severely degraded water quality, aesthetics and desirable fish populations.



*"The members of [The Northside Lions] club could not be happier with the combined partnerships that have restored the park. It is a testament of support for the sacrifices of all our veterans."*

*-Dennis Cobler  
Vietnam Veteran and former Club President*

## Project Progress

This project is in the end of the implementation phase. Construction of the replacement water control structure is expected to be completed by spring 2020 and post-restoration monitoring will be completed by fall 2020.

## Funding and Partners

Approximately \$3.4 million of Great Lakes Restoration Initiative (GLRI) funding was used to implement this project. GLRI is a regional program supporting the 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 the West Michigan Shoreline Regional Development Commission with the Grand Valley State University Annis Water Resources Institute monitoring the impact of restoration on the aquatic ecosystem.

### For More Information

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