



Aquatic Invasive Species Prevention Program

City of Lakeville
Lake Marion Zebra Mussel
Early Detection and Rapid Response



A containment barrier is installed in advance of a rapid response treatment to battle a new zebra mussel infestation on Lake Marion

Early Detection and Rapid Response Plan in Action on Lake Marion

The City of Lakeville, Minnesota Department of Natural Resources, and Dakota County completed a rapid response pilot project on Lake Marion in October 2017 in an attempt to eradicate newly discovered zebra mussels on Lake Marion. Zebra mussels were detected as part of an early detection monitoring program by the City of Lakeville supported by the Dakota County AIS grant program.

A lake-wide search to determine the extent of zebra mussels, by both professional divers and volunteers, confirmed invasive mussels were limited to a 0.5 acre area in front of the public boat launch at the City of Lakeville's Caspersen Park. The boat launch was closed from October 9-16, 2017 to complete the zebra mussel treatment pilot project. The area was treated with an EPA-approved copper-based product that has been found to effectively kill zebra mussels while limiting the mortality of non-target species such as fish and other wildlife.

Post-treatment monitoring, in addition to further prevention measures, such as watercraft inspections and law enforcement activities to contain the spread of zebra mussels throughout the County, are ongoing. Zebra mussel treatments are experimental; while zebra mussels have been killed in previous attempts within other Minnesota lakes, no entity has been able to demonstrate 100 percent eradication.



Sand bags are staged for installation of a containment barrier for the EarthTec QZ zebra mussel treatment

The project, initiated by the City of Lakeville and supported by Dakota County, also received support from the Minnesota Department of Natural Resources (MN DNR) and the United States Geological Survey (USGS).



Project partners at the United States Geological Survey arrived with a mobile laboratory to monitor zebra mussel mortality and chemical concentrations during the EarthTec QZ treatment.



Lake water is continuously tested during the treatment and pumped to tanks on shore with live zebra mussels to measure chemical concentration and zebra mussel mortality.

Dakota County receives Aquatic Invasive Species (AIS) Prevention Aid annually from the Minnesota Department of Revenue. Dakota County's AIS Plan includes the following guidelines for the use of AIS Prevention Aid:

- *Prepare a comprehensive inventory of boat launches and waterbodies at risk*
- *Undertake awareness campaigns*
- *Develop early detection and rapid response procedures*
- *Manage existing populations of AIS*
- *Establish partnerships with local units of government and lake associations*



Project Timeline

- **Five zebra mussels were found between September 14-15, 2017 at the public access.**
- **All five zebra mussels were adults (>20 mm).**
- **Additional zebra mussels were found by the MnDNR at the public access.**
- **A total of 16.3 hours of searching occurred on September 14, 15, 20, and 21, 2017.**
- **Zebra mussel eradication attempt conducted in a confined 6 acre area from October 10-18, 2017.**
- **No zebra mussels were found on a search on November 17, 2017.**



An invasive and non-native zebra mussel is found attached to a native mussel.



Dakota County Water Resources
14955 Galaxie Avenue
Apple Valley, MN 55124
www.dakotacounty.us
952-891-7000