

Wixom Lake Aquatic Plant Control Program Annual Activity Summary

January 2019

A publication of the Wixom Lake Improvement Board

Wixom Lake Improvement Board
220 W Ellsworth Street
Midland, MI 48640-5194

Doug Enos, Chair
Midland County Drain Commissioner

Robert Evans, Treasurer
Gladwin County Drain Commissioner

Ray Drumright, Secretary
Edenville Township Representative

Larry Woodard
Lake Resident Representative

Sandra Aultman
Gladwin County Commissioner

Jeanette Snyder
Midland County Commissioner

Wilma Thurston
Billings Township Representative

Dennis McBride
Tobacco Township Representative

Robert Kelley
Hope Township Representative

Since 2002, a nuisance plant control program has been ongoing on Wixom Lake. The primary objective of the program is to prevent the spread of invasive aquatic plants while preserving beneficial plant species. The program is financed through special assessment of lake residents in accordance with the Lake Improvements portion of the Natural Resources and Environmental Protection Act. This report contains an overview of plant control activities conducted on Wixom Lake in 2018.

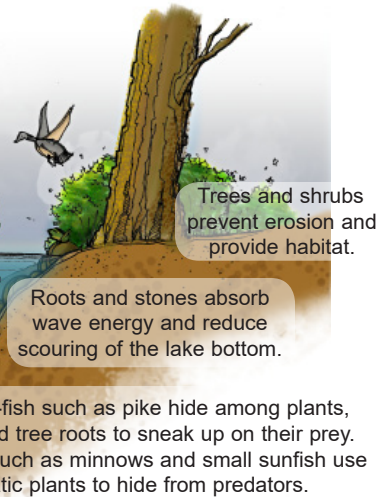
Aquatic plants are an important component of lakes. They produce oxygen during photosynthesis, provide food, habitat and cover for fish, and help stabilize shoreline and bottom sediments.

Insects and other invertebrates live on or near aquatic plants, and become food for fish, birds, amphibians, and other wildlife.

Plants and algae are the base of the food chain. Lakes with a healthy fishery have a moderate density of aquatic plants.

Aquatic plants provide habitat for fish and other aquatic life.

Aquatic plants help to hold sediments in place and improve water clarity.

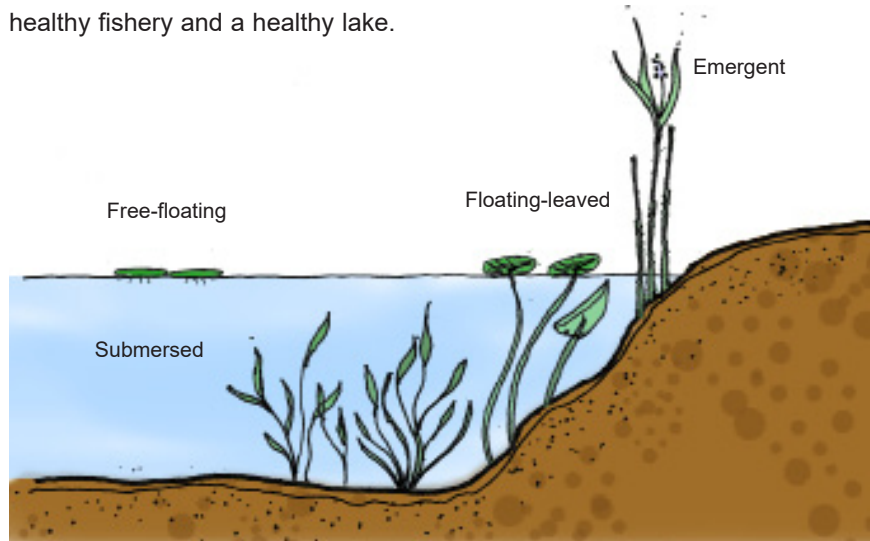


Trees and shrubs prevent erosion and provide habitat.

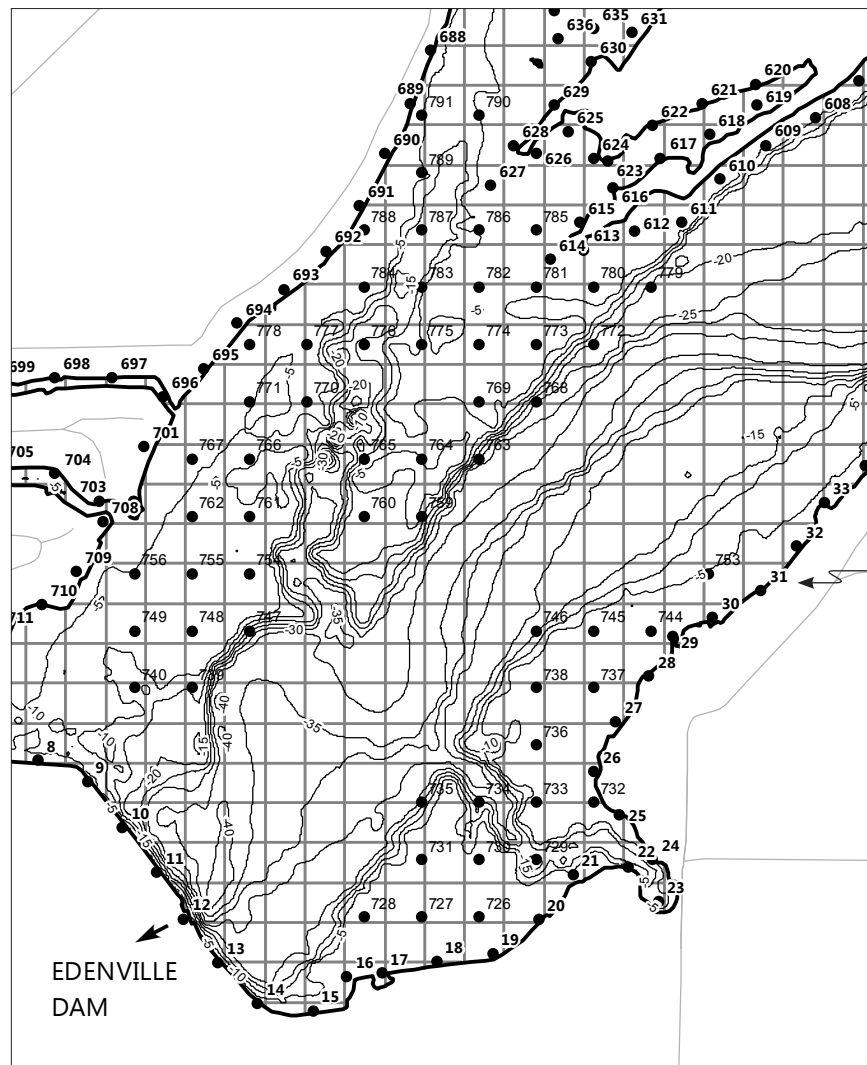
Roots and stones absorb wave energy and reduce scouring of the lake bottom.

Predator-fish such as pike hide among plants, rocks, and tree roots to sneak up on their prey. Prey-fish such as minnows and small sunfish use aquatic plants to hide from predators.

There are four main aquatic plant groups: submersed, floating-leaved, free-floating, and emergent. Each plant group provides important ecological functions. Maintaining a diversity of aquatic plants is important to sustaining a healthy fishery and a healthy lake.



Plant control in Wixom Lake involves the select use of herbicides and mechanical harvesting to control invasive plant growth. Plant control activities are coordinated under the direction of an environmental consultant, Progressive AE. Biologists from Progressive conduct GPS-guided surveys of the lake to identify problem areas and detailed plant control maps are provided to the aquatic herbicide applicator, PLM Lake & Land Management, and the mechanical harvesting contractor, Mike's Clearwater Harvesting. Follow-up surveys are conducted throughout the growing season to evaluate results and the need for additional treatments or follow-up harvesting. In 2018, surveys of the lake were conducted on May 10, May 17, June 14, July 12, August 8, and August 10.



GPS reference points established along the shoreline and across the shallow portions of Wixom Lake are used to guide plant surveys and to accurately identify the location of nuisance plant growth areas.

South portion of Wixom Lake aquatic plant survey map.

Plant Surveys

In addition to the surveys of the lake to identify invasive plant locations, a vegetation survey of Wixom Lake was conducted on September 12 and 13, 2018 to evaluate the type and abundance of all plants in the lake. The table below lists each plant species observed during the survey and the relative abundance of each. At the time of the survey, 17 submersed species, one free-floating species, two floating-leaved species, and four emergent species were found in the lake. Wixom Lake maintains a good diversity of beneficial, native plants species.

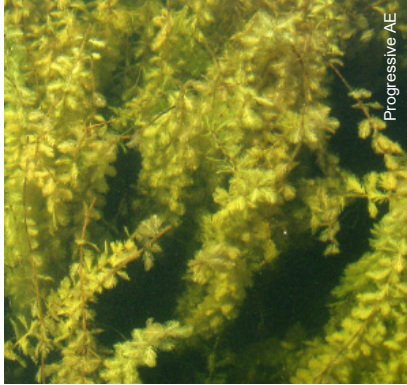
WIXOM LAKE AQUATIC PLANTS

September 12 - 13, 2018

Common Name	Scientific Name	Group	Percent of Sites Where Present
Wild celery	<i>Vallisneria americana</i>	Submersed	70
Eurasian milfoil	<i>Myriophyllum spicatum</i>	Submersed	68
American pondweed	<i>Potamogeton americanus</i>	Submersed	56
Coontail	<i>Ceratophyllum demersum</i>	Submersed	55
Water stargrass	<i>Heteranthera dubia</i>	Submersed	48
Slender naiad	<i>Najas flexilis</i>	Submersed	18
Thin-leaf pondweed	<i>Potamogeton</i> sp.	Submersed	11
Richardson's pondweed	<i>Potamogeton richardsonii</i>	Submersed	9
Flat-stem pondweed	<i>Potamogeton zosteriformis</i>	Submersed	9
Large-leaf pondweed	<i>Potamogeton amplifolius</i>	Submersed	7
Illinois pondweed	<i>Potamogeton illinoensis</i>	Submersed	5
Starry stonewort	<i>Nitellopsis obtusa</i>	Submersed	4
Milfoil	<i>Myriophyllum heterophyllum</i>	Submersed	4
Elodea	<i>Elodea canadensis</i>	Submersed	2
Bladderwort	<i>Utricularia vulgaris</i>	Submersed	2
Curly-leaf pondweed	<i>Potamogeton crispus</i>	Submersed	2
Chara	<i>Chara</i> sp.	Submersed	1
Duckweed	<i>Lemna minor</i>	Free-floating	7
White waterlily	<i>Nymphaea odorata</i>	Floating-leaved	37
Yellow waterlily	<i>Nuphar</i> sp.	Floating-leaved	2
Cattail	<i>Typha</i> sp.	Emergent	12
Iris	<i>Iris</i> sp.	Emergent	4
Bulrush	<i>Scirpus</i> sp.	Emergent	3
Phragmites	<i>Phragmites australis</i>	Emergent	1

4

Primary plants targeted for control in Wixom Lake include Eurasian milfoil and starry stonewort. Both of these plants are non-native (exotic) species that tend to be highly invasive and have the potential to spread quickly if left unchecked.



Eurasian milfoil (*Myriophyllum spicatum*)



Starry stonewort (*Nitellopsis obtusa*)

Plant control activities conducted on Wixom Lake in 2018, are summarized in the table below.

WIXOM LAKE 2018 NUISANCE AQUATIC PLANT CONTROL SUMMARY

Treatment Date	Plants Targeted	Acres Treated
May 15	Eurasian milfoil, curly-leaf pondweed, algae	96
May 23	Eurasian milfoil, curly-leaf pondweed, algae	14
June 7	Eurasian milfoil, nuisance natives, algae	93
June 25	Eurasian milfoil, nuisance natives, algae	222
July 13-25	Harvest nuisance natives	73
July 16	Eurasian milfoil, wild celery, starry stonewort, algae	215
August 9	Algae	17
August 16	Eurasian milfoil, starry stonewort, wild celery, algae	235
Total		965