Wixom Lake
Aquatic Plant Control Program
Annual Activity Summary

A publication of the Wixom Lake Improvement Board

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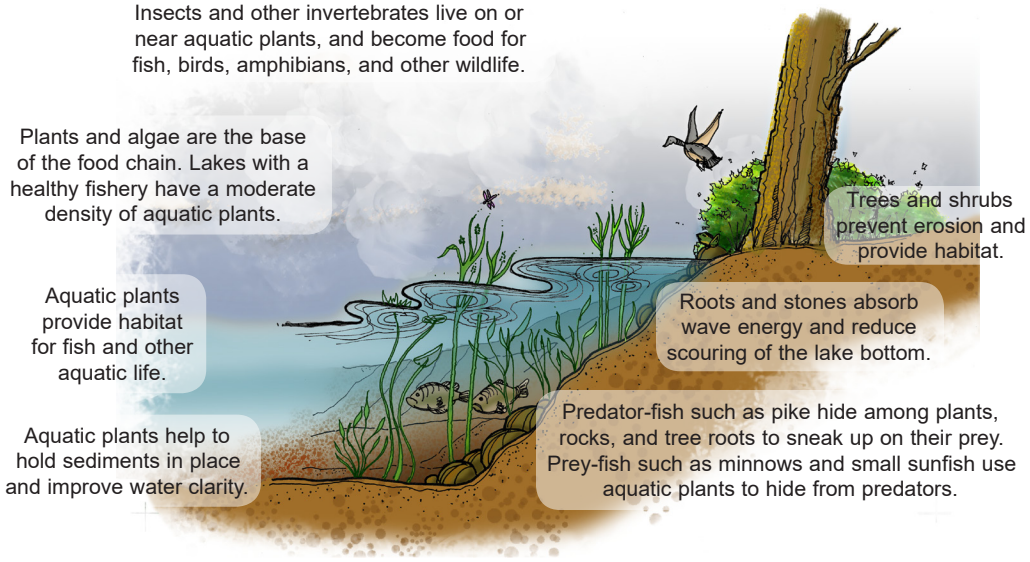
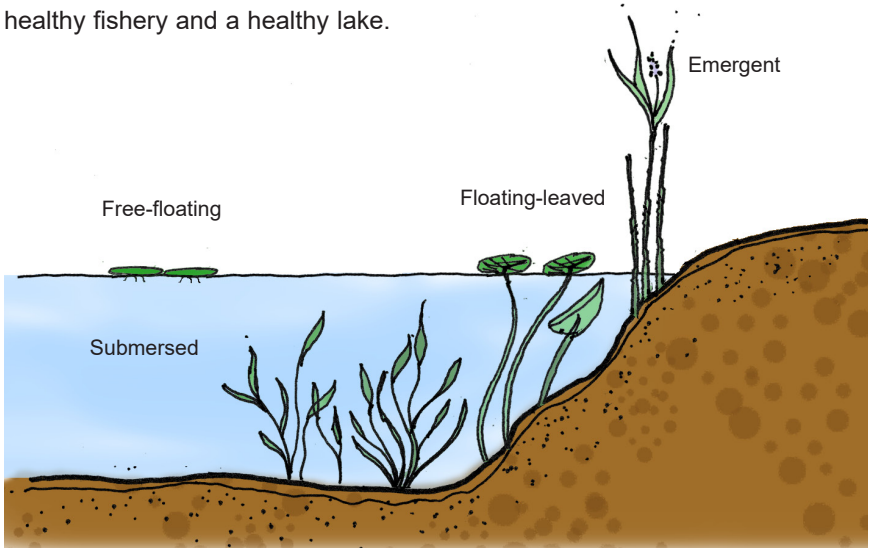
Wixom Lake Improvement Board
220 W Ellsworth Street
Midland, MI 48640-5194

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 2017.

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.



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.



Environmental Consultant
Progressive AE

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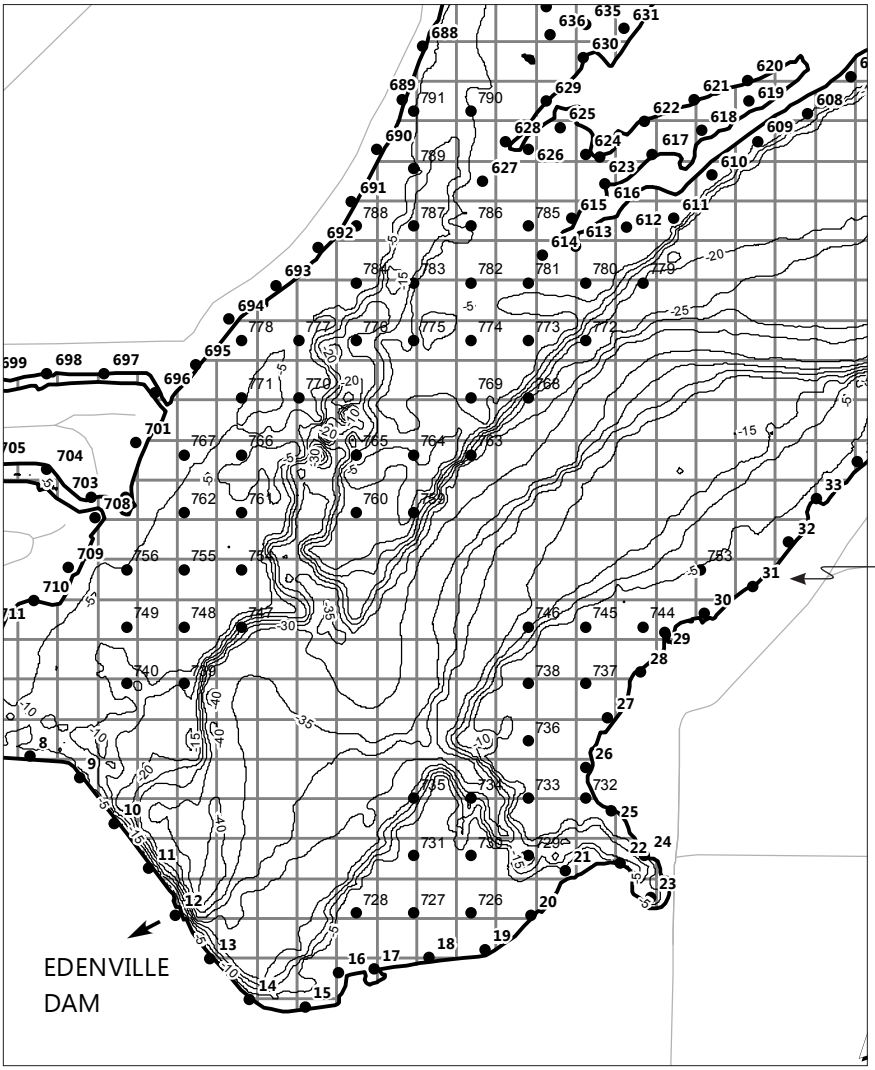
Plant control in Wixom Lake involves the select use of herbicides and mechanical harvesting to control invasive plant growth. Plant control activities are coordinated under the direction of an environmental consultant, Progressive AE. Biologists from Progressive conduct GPS-guided surveys of the lake 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 2017, surveys of the lake were conducted on April 12, May 10, June 15, July 12, and August 9.



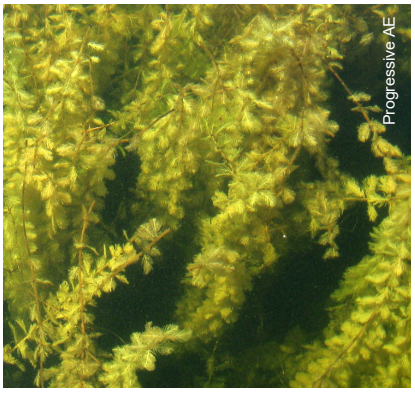
GPS reference points established along the shoreline and across the shallow portions of Wixom Lake are used to guide plant surveys and to accurately identify the location of nuisance plant growth areas.

In addition to the surveys of the lake to identify invasive plant locations, a vegetation survey of Wixom Lake was conducted on September 20 and 21, 2017 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, 16 submersed species, 1 free-floating species, 1 floating-leaved species, and 5 emergent species were found in the lake. Wixom Lake maintains a good diversity of beneficial, native plants species.

WIXOM LAKE AQUATIC PLANTS
September 20 - 21, 2017

Common Name	Scientific Name	Group	Percent of Sites Where Present
Wild celery	*Vallisneria americana*	Submersed	78
Eurasian milfoil	*Myriophyllum spicatum*	Submersed	69
American pondweed	*Potamogeton americanus*	Submersed	54
Coontail	*Ceratophyllum demersum*	Submersed	53
Water stargrass	*Heteranthera dubia*	Submersed	20
Richardson's pondweed	*Potamogeton richardsonii*	Submersed	14
Illinois pondweed	*Potamogeton illinoensis*	Submersed	11
Starry stonewort	*Nitellopsis obtusa*	Submersed	9
Flat-stem pondweed	*Potamogeton zosteriformis*	Submersed	9
Slender naiad	*Najas flexilis*	Submersed	6
Thin-leaf pondweed	*Potamogeton* sp.	Submersed	6
Chara	*Chara* sp.	Submersed	5
Large-leaf pondweed	*Potamogeton amplifolius*	Submersed	4
Elodea	*Elodea canadensis*	Submersed	3
Curly-leaf pondweed	*Potamogeton crispus*	Submersed	2
Milfoil	*Myriophyllum heterophyllum*	Submersed	1
Duckweed	*Lemna minor*	Free-floating	<1
White waterlily	*Nymphaea odorata*	Floating-leaved	24
Cattail	*Typha* sp.	Emergent	6
Iris	*Iris* sp.	Emergent	3
Phragmites	*Phragmites australis*	Emergent	1
Bulrush	*Scirpus* sp.	Emergent	<1
Purple loosestrife	*Lythrum salicaria*	Emergent	<1

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 2017, are summarized in the table below.

WIXOM LAKE
2017 NUISANCE AQUATIC PLANT CONTROL SUMMARY

Treatment Date	Plants Targeted	Acres Treated
May 1	Eurasian milfoil	34
May 16	Eurasian milfoil, curly-leaf pondweed, algae	192
June 19	Eurasian milfoil, wild celery, starry stonewort	159
July 19	Eurasian milfoil, wild celery, starry stonewort	149
July 29	Harvest nuisance natives, starry stonewort	84
August 2	Eurasian milfoil, wild celery, algae	63
August 16	Eurasian milfoil, wild celery, starry stonewort, algae	303
September 26	Starry stonewort	21
Total		1,005