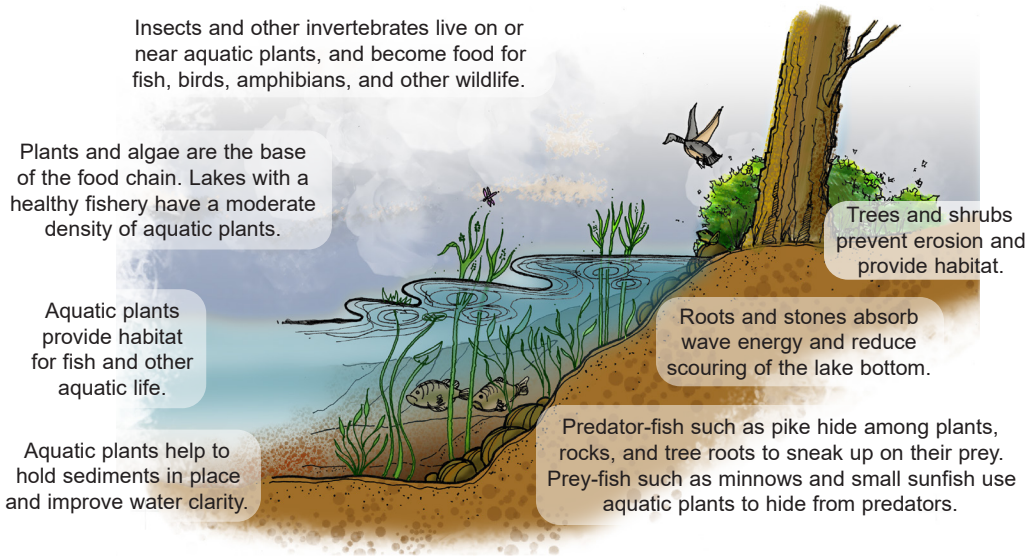
Lake Oakland
Aquatic Plant Control Program
2021 Activity Summary

A publication of the Lake Oakland Improvement Board

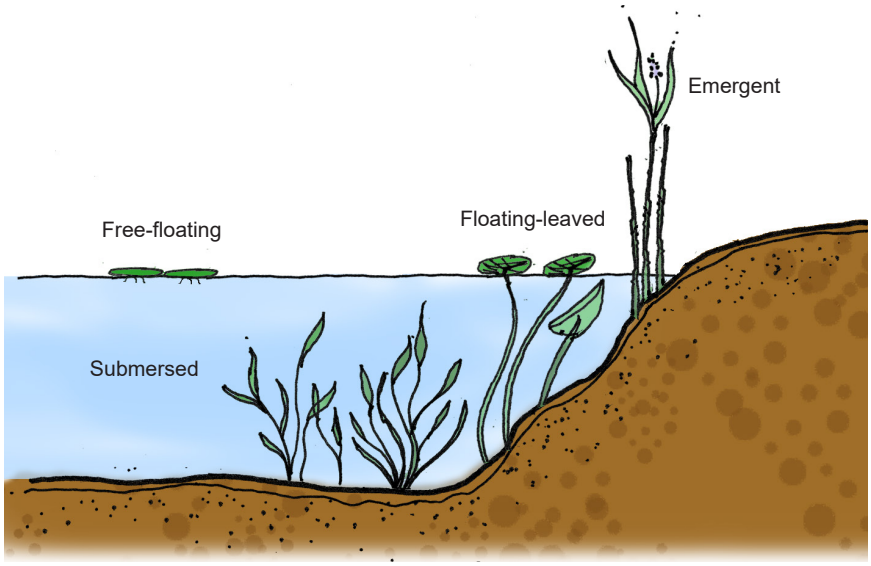
Lake Oakland Improvement Board
One Public Works Drive
Building 95 West
Waterford, MI

For the past several years, a nuisance plant control program has been ongoing on Lake Oakland. The primary objective of the program is to prevent the spread of invasive aquatic plants while preserving beneficial plant species. This report contains an overview of plant control activities conducted on Lake Oakland in 2021.

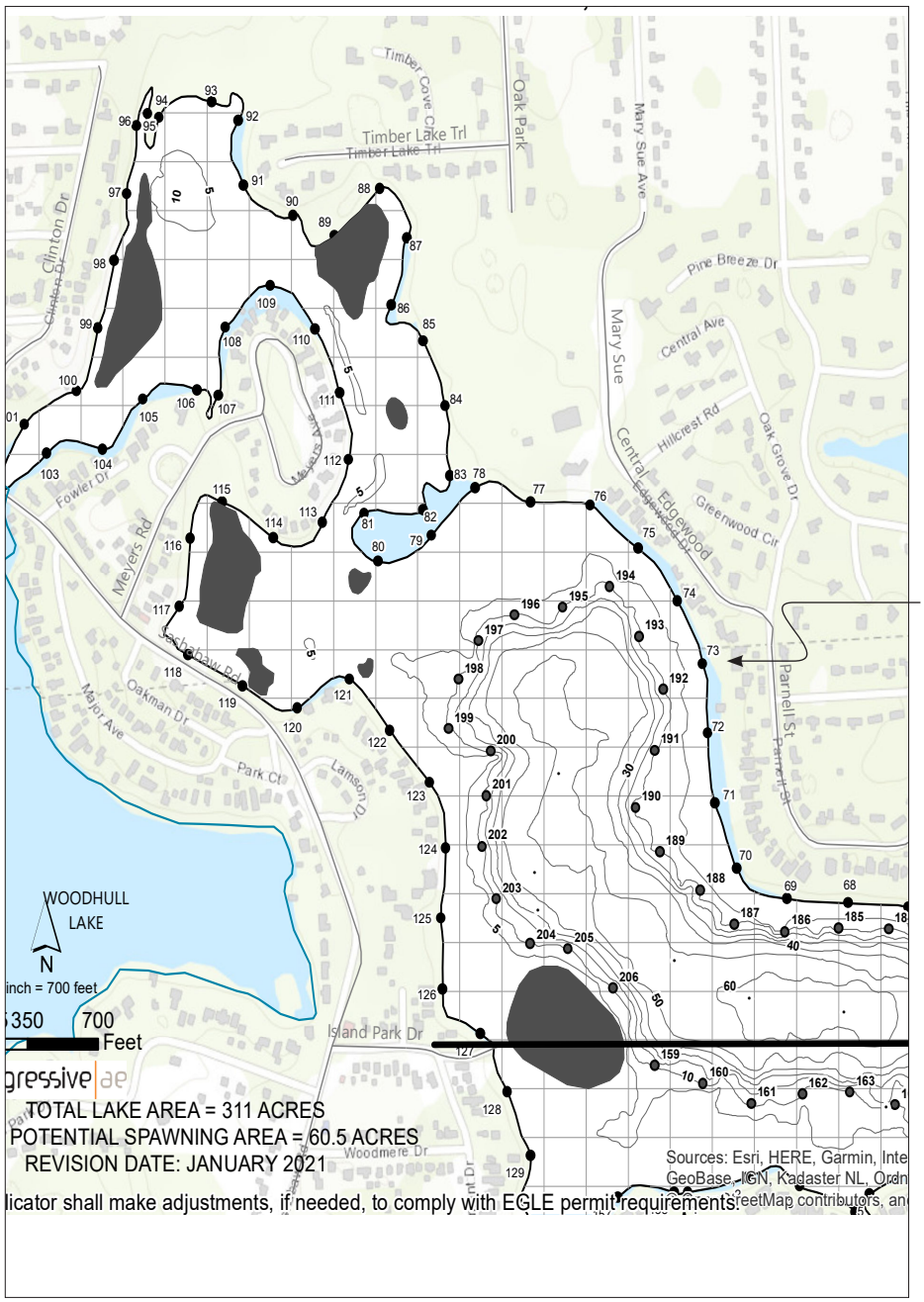
Aquatic plants are an important component of lakes. They produce oxygen during photosynthesis, provide food, habitat and cover for fish, and help stabilize shoreline and bottom sediments.



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.

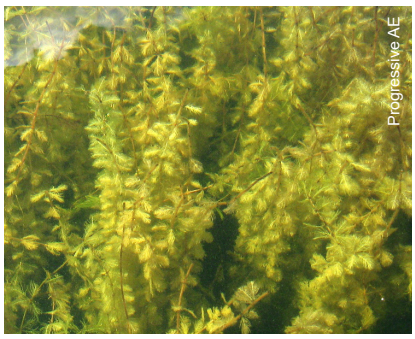


Plant control activities are coordinated under the direction of an environmental consultant, Progressive AE. Biologists from Progressive conduct GPS-guided surveys of the lake to identify problem areas, and georeferenced plant control maps are provided to the plant control contractors.



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

Plant control in Lake Oakland involves the select use of herbicides and mechanical harvesting to control invasive plant growth. Primary plants targeted for control in Lake Oakland 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 Lake Oakland in 2021 are summarized in the table below.

LAKE OAKLAND
2021 NUISANCE AQUATIC PLANT CONTROL SUMMARY

Work Type	Date	Plants Targeted	Acres
Survey	May 5		
Herbicide	May 18	E. milfoil, curly-leaf pondweed, starry stonewort, algae	57
Survey	June 10		
Herbicide	Jun 15	E. milfoil, curly-leaf pondweed, nuisance natives, starry stonewort	25
Harvesting	June 28-July 8	Nuisance natives, Chara, starry stonewort	43
Survey	July 12		
Herbicide	July 20	E. milfoil, starry stonewort, wild celery	32
Survey	August 5		
Herbicide	August 11	E. milfoil, starry stonewort, wild celery	16
Harvesting	August 25-31	Nuisance natives, starry stonewort	21
Survey	September 1		
Survey	September 13		
Herbicide	September 13	E. milfoil, starry stonewort	5
Total			**199**

In addition to the surveys of the lake to identify invasive plant locations, a vegetation survey of Lake Oakland was conducted on September 13 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, 19 submersed species, one free floating, three floating-leaved species, and eight emergent species were found in the lake. Lake Oakland maintains an excellent diversity of beneficial, native plants species.

LAKE OAKLAND AQUATIC PLANTS
September 13 , 2021

Common Name	Scientific Name	Group	Percent of Sites Where Present
Illinois pondweed	*Potamogeton illinoensis*	Submersed	73
Chara	*Chara* sp.	Submersed	69
Wild celery	*Vallisneria americana*	Submersed	58
Slender naiad	*Najas flexilis*	Submersed	57
Large-leaf pondweed	*Potamogeton amplifolius*	Submersed	41
Thin-leaf pondweed	*Potamogeton* sp.	Submersed	38
Starry stonewort	*Nitellopsis obtusa*	Submersed	25
Bladderwort	*Utricularia vulgaris*	Submersed	24
Variable pondweed	*Potamogeton gramineus*	Submersed	18
Eurasian milfoil	*Myriophyllum spicatum*	Submersed	14
Richardson's pondweed	*Potamogeton richardsonii*	Submersed	9
Water stargrass	*Heteranthera dubia*	Submersed	4
Sago pondweed	*Stuckenia pectinata*	Submersed	3
Variable-leaf milfoil	*Myriophyllum heterophyllum*	Submersed	3
Flat-stem pondweed	*Potamogeton zosteriformis*	Submersed	2
Whitestem pondweed	*Potamogeton praelongus*	Submersed	2
Coontail	*Ceratophyllum demersum*	Submersed	1
Curly-leaf pondweed	*Potamogeton crispus*	Submersed	1
Southern naiad	*Najas guadalupensis*	Submersed	1
Duckweed	*Lemna minor*	Free-floating	2
White waterlily	*Nymphaea odorata*	Floating-leaved	68
Yellow waterlily	*Nuphar* sp.	Floating-leaved	6
Water shield	*Brasenia schreberi*	Floating-leaved	1
Swamp loosestrife	*Decodon verticillatus*	Emergent	15
Cattail	*Typha* sp.	Emergent	10
Bulrush	*Schoenoplectus* sp.	Emergent	7
Purple loosestrife	*Lythrum salicaria*	Emergent	5
Pickerelweed	*Pontederia cordata*	Emergent	4
Arrowhead	*Sagittaria latifolia*	Emergent	3
Iris	*Iris* sp.	Emergent	2
Phragmites	*Phragmites australis*	Emergent	1

Invasive exotic species