Lake Oakland Aquatic Plant Control Program 2023 Annual Report

A publication of the Lake Oakland Improvement Board

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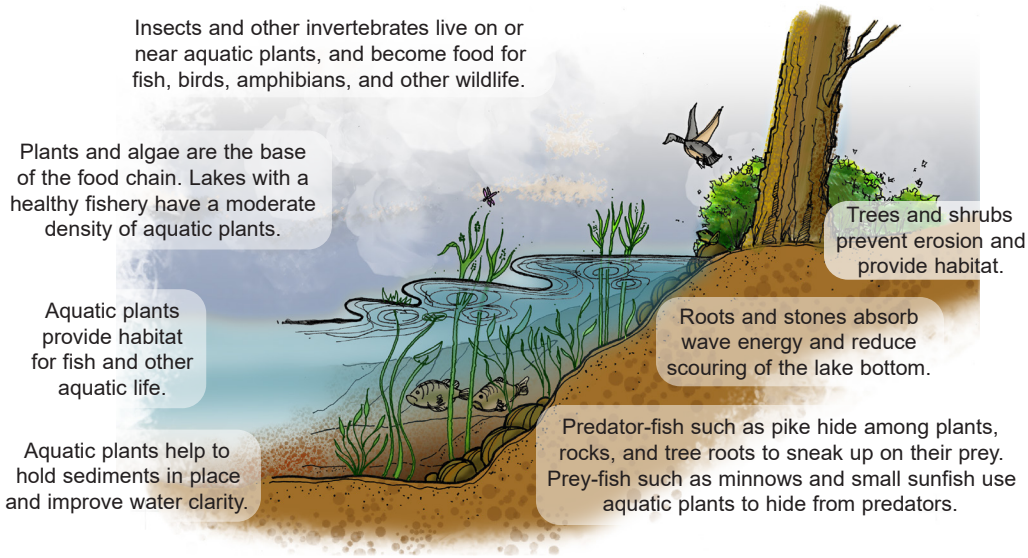
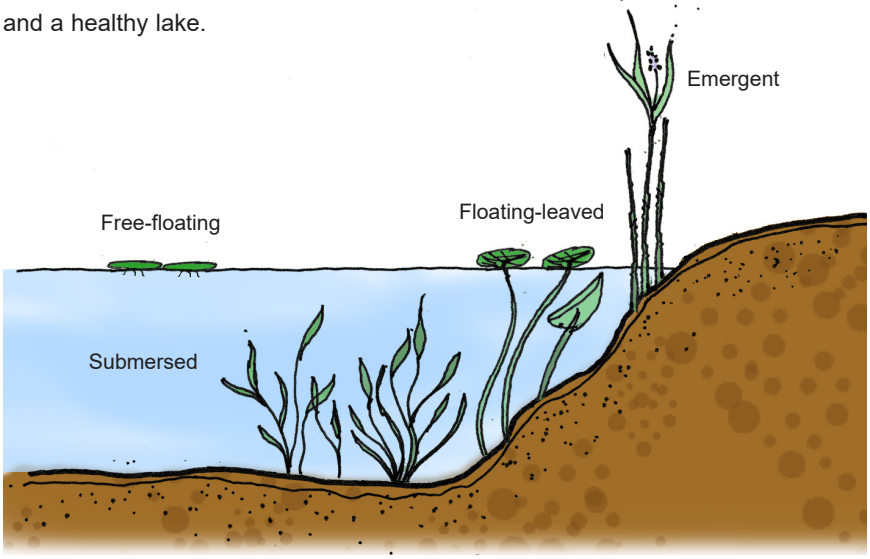
For the past several years, a nuisance plant control program has been ongoing on Lake Oakland. The primary objective of the program is to prevent the spread of invasive aquatic plants while preserving beneficial plant species. The program is financed through special assessment of lake residents in accordance with Part 309, Inland Lake Improvements, of the Natural Resources and Environmental Protection Act. This report contains an overview of plant control activities conducted on Lake Oakland in 2023.

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.

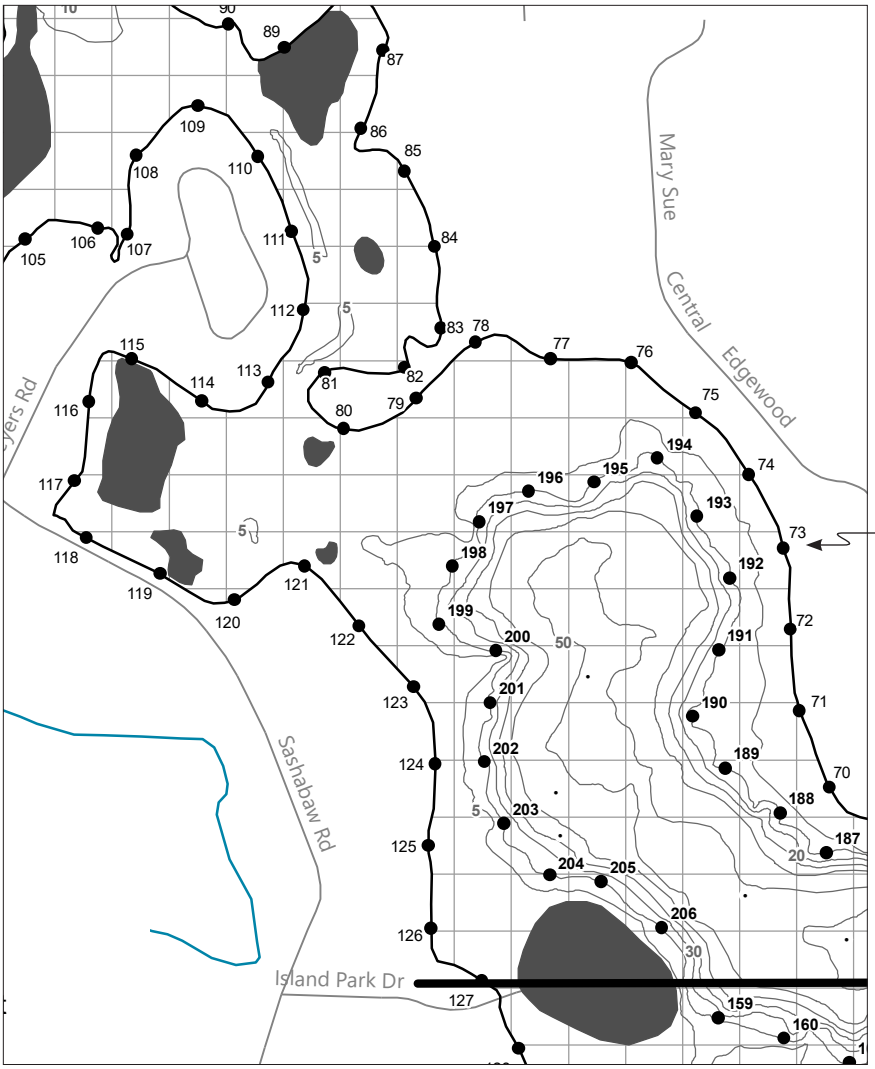


There are four main aquatic plant groups: submersed, floating-leaved, free-floating, and emergent. Each plant group provides important ecological functions. Maintaining a diversity of aquatic plants is important to sustaining a healthy fishery and a healthy lake.



Plant Surveys

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 treatment maps are provided to the plant control contractor. Follow-up surveys are conducted throughout the growing season to evaluate results and the need for additional treatments. In 2023, surveys of the lake were conducted on May 1, June 8, July 5, July 13, August 16, September 5.



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

Plant Control

Plant control in Lake Oakland involves the select use of herbicides to control invasive plants and mechanical harvesting to control nuisance growth of native plants. 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 2023 are summarized in the table below.

LAKE OAKLAND
2023 NUISANCE AQUATIC PLANT CONTROL SUMMARY

Date	Work Type	Acres Treated
April 25	Herbicide: Algae	21.00
May 17	Herbicide: E. milfoil, curly-leaf, algae	23.50
June 13	Herbicide: E. milfoil, starry stonewort, algae	38.75
July 10	Harvest: Starry stonewort, nuisance natives	37.25
July 12	Herbicide: Curly-leaf, starry stonewort, nuisance natives	24.25
August 28	Harvest: Starry stonewort, nuisance natives	13.50
Total		**158.25**

End-of-year Aquatic Plant Survey

In addition to the surveys of the lake to identify invasive plant locations, a comprehensive vegetation survey of Lake Oakland was conducted on August 9 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 eight emergent species were found in the lake. Lake Oakland maintains a good diversity of beneficial, native plants species.

LAKE OAKLAND AQUATIC PLANTS
AUGUST 16, 2023

Common Name	Scientific Name	Group	Percent of Sites Where Present
Chara	*Chara* sp.	Submersed	72
Illinois pondweed	*Potamogeton illinoensis*	Submersed	61
Wild celery	*Vallisneria americana*	Submersed	58
Starry stonewort	*Nitellopsis obtusa*	Submersed	44
Large-leaf pondweed	*Potamogeton amplifolius*	Submersed	41
Richardson's pondweed	*Potamogeton richardsonii*	Submersed	39
Slender naiad	*Najas flexilis*	Submersed	31
Thin-leaf pondweed	*Potamogeton* sp.	Submersed	22
Eurasian milfoil	*Myriophyllum spicatum*	Submersed	19
Bladderwort	*Utricularia vulgaris*	Submersed	13
Variable pondweed	*Potamogeton gramineus*	Submersed	11
Water stargrass	*Heteranthera dubia*	Submersed	9
Flat-stem pondweed	*Potamogeton zosteriformis*	Submersed	3
American pondweed	*Potamogeton americanus*	Submersed	1
Coontail	*Ceratophyllum demersum*	Submersed	1
Underwater arrowhead	*Sagittaria* sp.	Submersed	1
Elodea	*Elodea canadensis*	Submersed	1
Duckweed	*Lemna minor*	Free-floating	3
White waterlily	*Nymphaea odorata*	Floating-leaved	62
Yellow waterlily	*Nuphar* sp.	Floating-leaved	9
Swamp loosestrife	*Decodon verticillatus*	Emergent	14
Purple loosestrife	*Lythrum salicaria*	Emergent	11
Cattail	*Typha* sp.	Emergent	7
Arrowhead	*Sagittaria latifolia*	Emergent	6
Iris	*Iris* sp.	Emergent	6
Bulrush	*Schoenoplectus* sp.	Emergent	4
Pickerelweed	*Pontederia cordata*	Emergent	3
Phragmites	*Phragmites australis*	Emergent	1

Invasive exotic species