



Upper Straits Lake Aquatic Plant Control Program 2023 Activity Summary

A publication of the Upper Straits Lake Aquatic Advisory Board

**Upper Straits Lake
Aquatic Advisory Board**
www.upperstraitscleanlake.org

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In 2023 a nuisance plant control program began on Upper Straits 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 Act 188 of 1954, as amended. This report contains an overview of plant control activities conducted on Upper Straits Lake 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.

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.

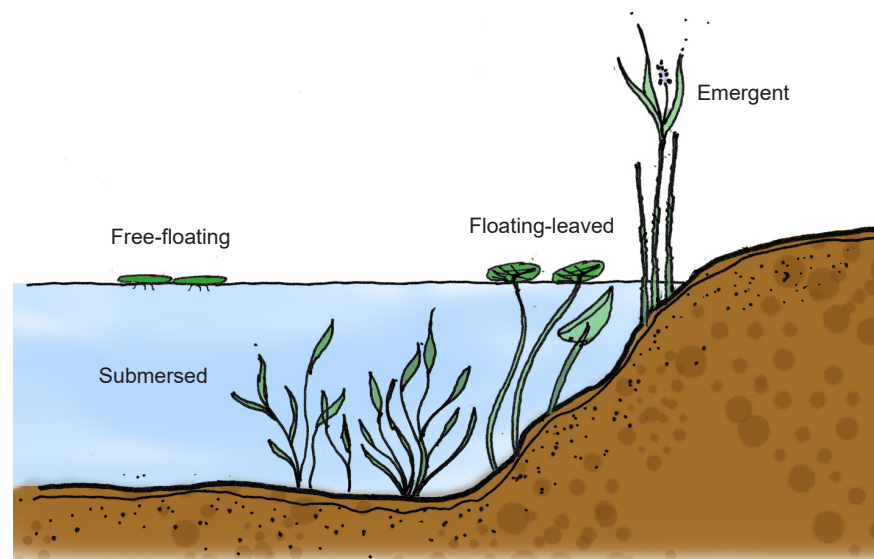
Aquatic plants help to hold sediments in place and improve water clarity.

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.



Environmental Consultant
Progressive AE

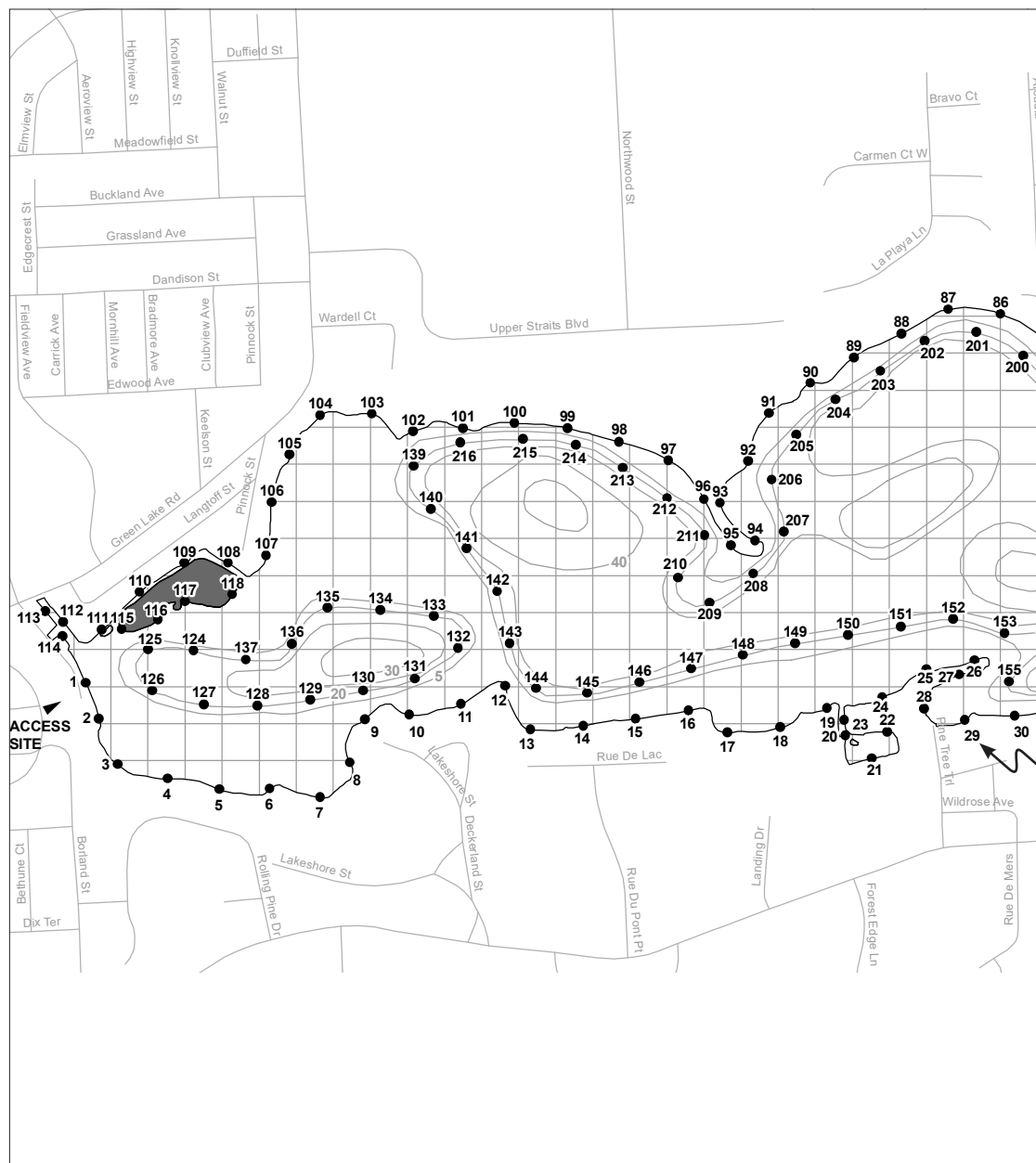
Herbicide Contractor
Savin Lake Services

Harvesting Contractor
Savin Lake Services

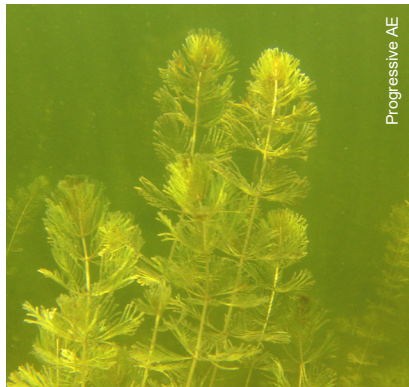
Plant Surveys

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 georeferenced plant control maps are provided to the plant control contractor.

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Plant control in Upper Straits Lake involves the select use of herbicides and mechanical harvesting to control invasive plant growth. Primary plants targeted for control in Upper Straits 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 Upper Straits Lake in 2023 are summarized in the table below. The total treatment areas in 2023 were reduced by 32.5 acres (27 percent) from 2022.

**UPPER STRAITS LAKE
2023 NUISANCE AQUATIC PLANT CONTROL SUMMARY**

Work Type	Date	Plants Targeted	Acres
Survey	May 2		
Survey	May 24		
Herbicide	June 5	Curly-leaf pondweed, Eurasian milfoil, Algae	34.75
Survey	June 27		
Herbicide	July 11	Eurasian milfoil, Starry stonewort, Nuisance natives	14.75
Harvesting	July 17	Starry stonewort, Nuisance natives	22.25
Survey	July 25		
Survey	August 21		
Herbicide	September 14	Eurasian milfoil, Algae Starry stonewort, Nuisance natives	18.25
Total			90

End-of-year Aquatic Plant Survey

In addition to the surveys of the lake to identify invasive plant locations, a vegetation survey of Upper Straits Lake was conducted on August 21 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, 20 submersed species, two free floating species, three floating-leaved species, and 13 emergent species were found in the lake. Upper Straits Lake maintains a good diversity of beneficial, native plants species.

UPPER STRAITS LAKE AQUATIC PLANTS

August 21, 2023

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Common Name	Scientific Name	Group	Percent of Sites Where Present
Chara	<i>Chara</i> sp.	Submersed	84
Wild celery	<i>Vallisneria americana</i>	Submersed	60
Sago pondweed	<i>Stuckenia pectinata</i>	Submersed	44
Illinois pondweed	<i>Potamogeton illinoensis</i>	Submersed	39
Slender naiad	<i>Najas flexilis</i>	Submersed	37
Variable pondweed	<i>Potamogeton gramineus</i>	Submersed	33
Eurasian milfoil*	<i>Myriophyllum spicatum</i>	Submersed	31
Whitestem pondweed	<i>Potamogeton praelongus</i>	Submersed	15
Starry stonewort*	<i>Nitellopsis obtusa</i>	Submersed	14
Large-leaf pondweed	<i>Potamogeton amplifolius</i>	Submersed	8
Brittle-leaf naiad*	<i>Najas minor</i>	Submersed	7
American pondweed	<i>Potamogeton americanus</i>	Submersed	6
Coontail	<i>Ceratophyllum demersum</i>	Submersed	4
Thin-leaf pondweed	<i>Potamogeton</i> sp.	Submersed	4
Richardson's pondweed	<i>Potamogeton richardsonii</i>	Submersed	4
Underwater arrowhead	<i>Sagittaria</i> sp.	Submersed	4
Bladderwort	<i>Utricularia vulgaris</i>	Submersed	4
Variable-leaf milfoil	<i>Myriophyllum heterophyllum</i>	Submersed	2
Curly-leaf pondweed*	<i>Potamogeton crispus</i>	Submersed	1
Flat-stem pondweed	<i>Potamogeton zosteriformis</i>	Submersed	1
Watermeal	<i>Wolffia punctata</i>	Free-floating	1
Duckweed	<i>Lemna minor</i>	Free-floating	1
White waterlily	<i>Nymphaea odorata</i>	Floating-leaved	54
Yellow waterlily	<i>Nuphar</i> sp.	Floating-leaved	15
Water shield	<i>Brasenia schreberi</i>	Floating-leaved	1
Cattail	<i>Typha</i> sp.	Emergent	31
Pickerelweed	<i>Pontederia cordata</i>	Emergent	25
Flowering rush*	<i>Butomus umbellatus</i>	Emergent	22
Phragmites*	<i>Phragmites australis</i>	Emergent	16
Purple loosestrife*	<i>Lythrum salicaria</i>	Emergent	15
Iris	<i>Iris</i> sp.	Emergent	14
Lake sedge	<i>Carex lacustris</i>	Emergent	10
Swamp loosestrife	<i>Decodon verticillatus</i>	Emergent	10
Bulrush	<i>Schoenoplectus</i> sp.	Emergent	9
Arrowhead	<i>Sagittaria latifolia</i>	Emergent	6
Buttonbush	<i>Cephalanthus occidentalis</i>	Emergent	5
Water smartweed	<i>Persicaria amphibia</i> var. <i>emersa</i>	Emergent	3
Arrow arum	<i>Peltandra virginica</i>	Emergent	1

* invasive species