

End-of-year Aquatic Plant Survey

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In addition to the surveys of the lake to identify invasive plant locations, a vegetation survey of Stone Lake was conducted on July 25, 2023 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, three floating-leaved species, and five emergent species were found in the lake. Stone Lake maintains a good diversity of beneficial, native plants species.

STONE LAKE AQUATIC PLANTS

July 25, 2023

Common Name	Scientific Name	Group	Percent of Sites Where Present
Whitestem pondweed	<i>Potamogeton praelongus</i>	Submersed	80
Flat-stem pondweed	<i>Potamogeton zosteriformis</i>	Submersed	75
Robbins pondweed	<i>Potamogeton robbinsii</i>	Submersed	58
Wild celery	<i>Vallisneria americana</i>	Submersed	33
Richardson's pondweed	<i>Potamogeton richardsonii</i>	Submersed	33
Coontail	<i>Ceratophyllum demersum</i>	Submersed	30
Small pondweed	<i>Potamogeton pusillus</i>	Submersed	23
Elodea	<i>Elodea canadensis</i>	Submersed	23
Thin-leaf pondweed	<i>Potamogeton</i> sp.	Submersed	15
Slender naiad	<i>Najas flexilis</i>	Submersed	15
Eurasian milfoil*	<i>Myriophyllum spicatum</i>	Submersed	15
Water stargrass	<i>Heteranthera dubia</i>	Submersed	10
Chara	<i>Chara</i> sp.	Submersed	8
Variable pondweed	<i>Potamogeton gramineus</i>	Submersed	8
Illinois pondweed	<i>Potamogeton illinoensis</i>	Submersed	8
Water marigold	<i>Bidens beckii</i>	Submersed	3
White waterlily	<i>Nymphaea odorata</i>	Floating-leaved	73
Yellow waterlily	<i>Nuphar</i> sp.	Floating-leaved	55
Water shield	<i>Brasenia schreberi</i>	Floating-leaved	5
Purple loosestrife*	<i>Lythrum salicaria</i>	Emergent	73
Cattail	<i>Typha</i> sp.	Emergent	50
Swamp loosestrife	<i>Decodon verticillatus</i>	Emergent	8
Bulrush	<i>Schoenoplectus</i> sp.	Emergent	5
Phragmites*	<i>Phragmites australis</i>	Emergent	3

Exotic Invasive Species*



Stone Lake Aquatic Plant Control Program 2023 Activity Summary

A publication of the Stone Lake Improvement Board

Stone Lake Improvement Board

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For the past several years, a nuisance plant control program has been ongoing on Stone Lake. 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 Stone 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.

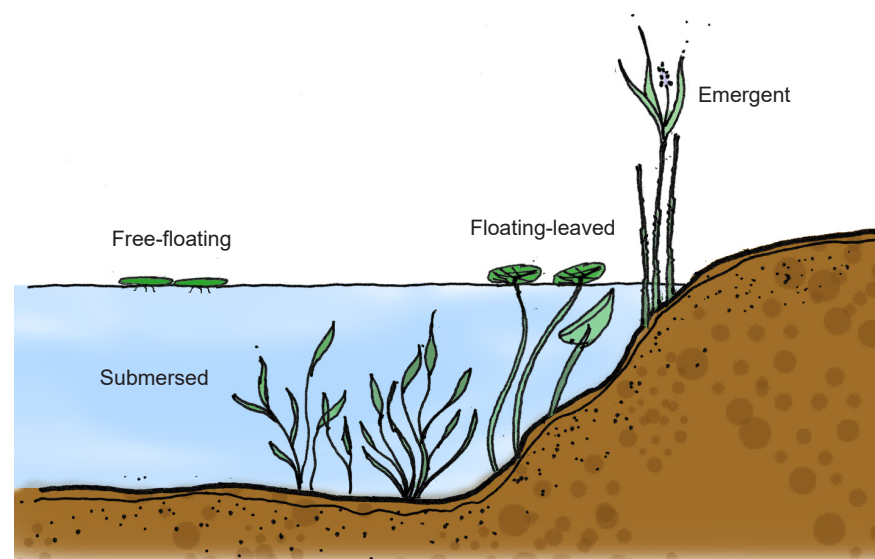
There are four main aquatic plant groups: submersed, floating-leaved, free-floating, and emergent. Each plant group provides important ecological functions. Maintaining a diversity of aquatic plants is important to sustaining a healthy fishery and a healthy lake.



Environmental Consultant
Progressive AE

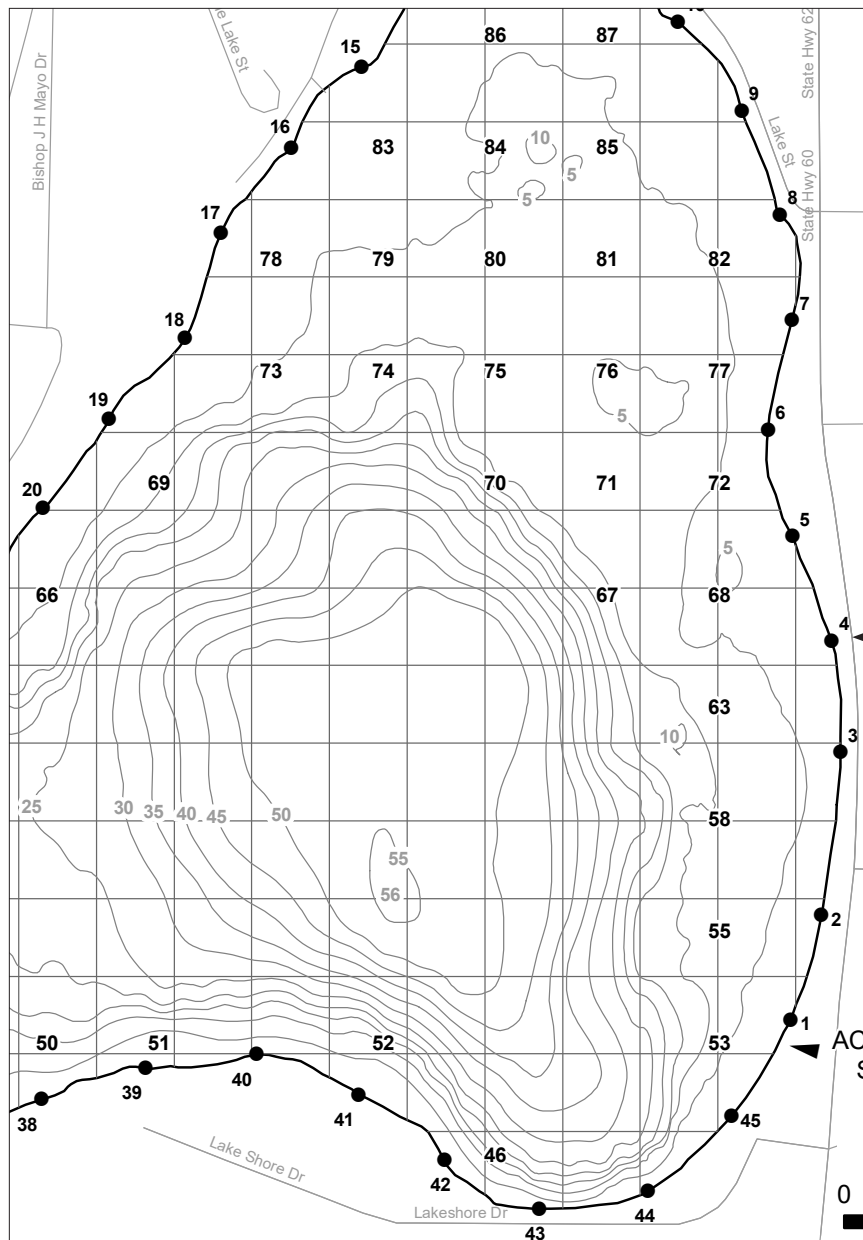
Harvesting Contractor
Savin Lake Services, Inc.

Herbicide Applicator
PLM Lake & Land Management Corp.



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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GPS reference points established along the shoreline and in shallower off-shore areas of Stone Lake are used to guide plant surveys and to accurately identify the location of nuisance plant growth areas.

Plant control in Stone Lake involves the select use of herbicides and mechanical harvesting to control invasive plant growth. Primary plants targeted for control in Stone Lake include Eurasian milfoil and Curly-leaf pondweed. 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*)



Curly-leaf pondweed (*Potamogeton crispus*)

Plant control activities conducted on Stone Lake in 2023 are summarized in the table below. Total acres managed on Stone Lake increased by 12.5 percent in 2023 from 2022.

STONE LAKE

2023 NUISANCE AQUATIC PLANT CONTROL SUMMARY

Date	Work Type	Acres Treated
May 10	Survey	
May 17	Herbicide: E. milfoil, curly-leaf	8.5
May 30	Survey	
June 12	Harvesting: Curly-leaf, Nuisance natives	33.5
June 18	Survey	
July 10	Herbicide: E. milfoil	0.75
July 25	Survey	
Total		42.75