

# Hess Lake Aquatic Plant Control Program 2021 Annual Report

A publication of the Hess Lake Improvement Board

Hess Lake Improvement Board

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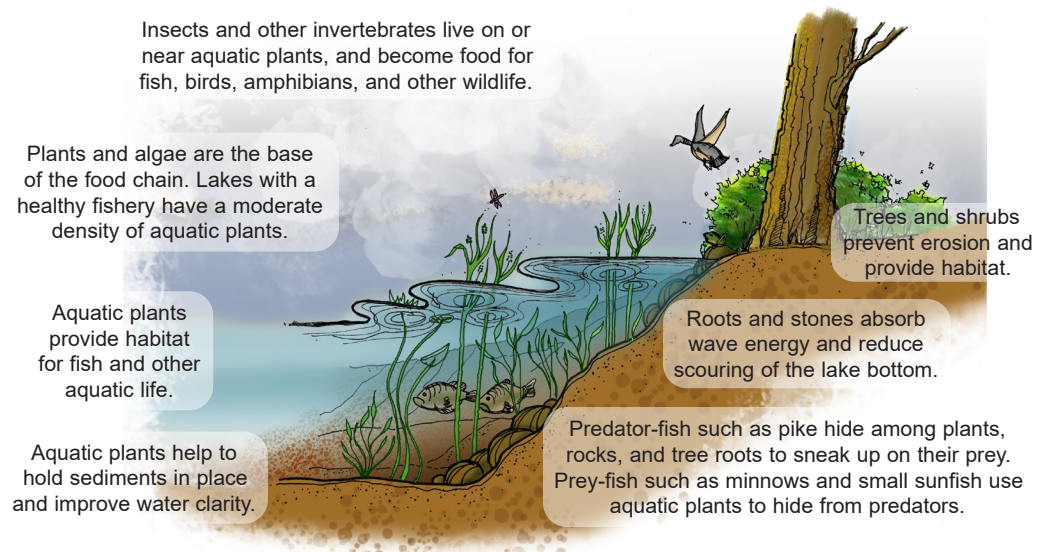
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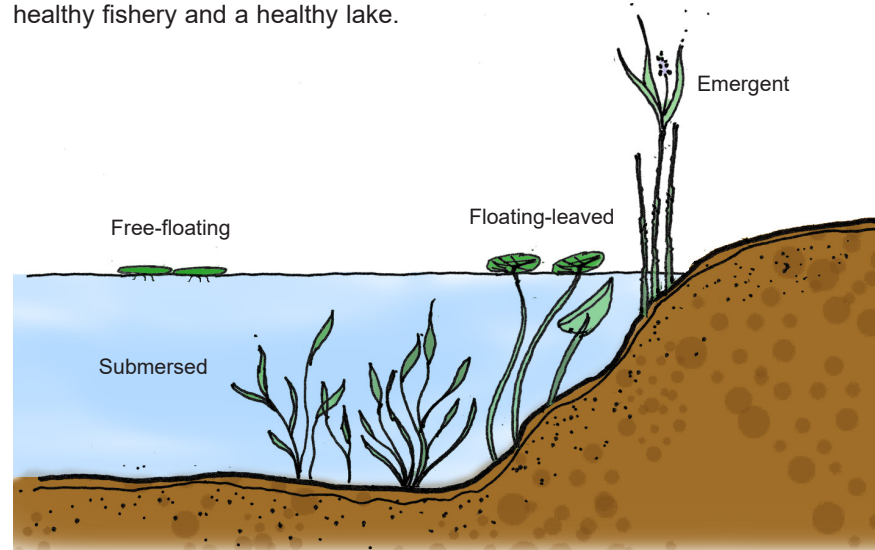
For many years, a nuisance plant control program has been ongoing on Hess Lake. The primary objective of the program is to prevent the spread of invasive aquatic plants while preserving beneficial plant species. This report contains an overview of plant control activities conducted on Hess Lake in 2021.

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.

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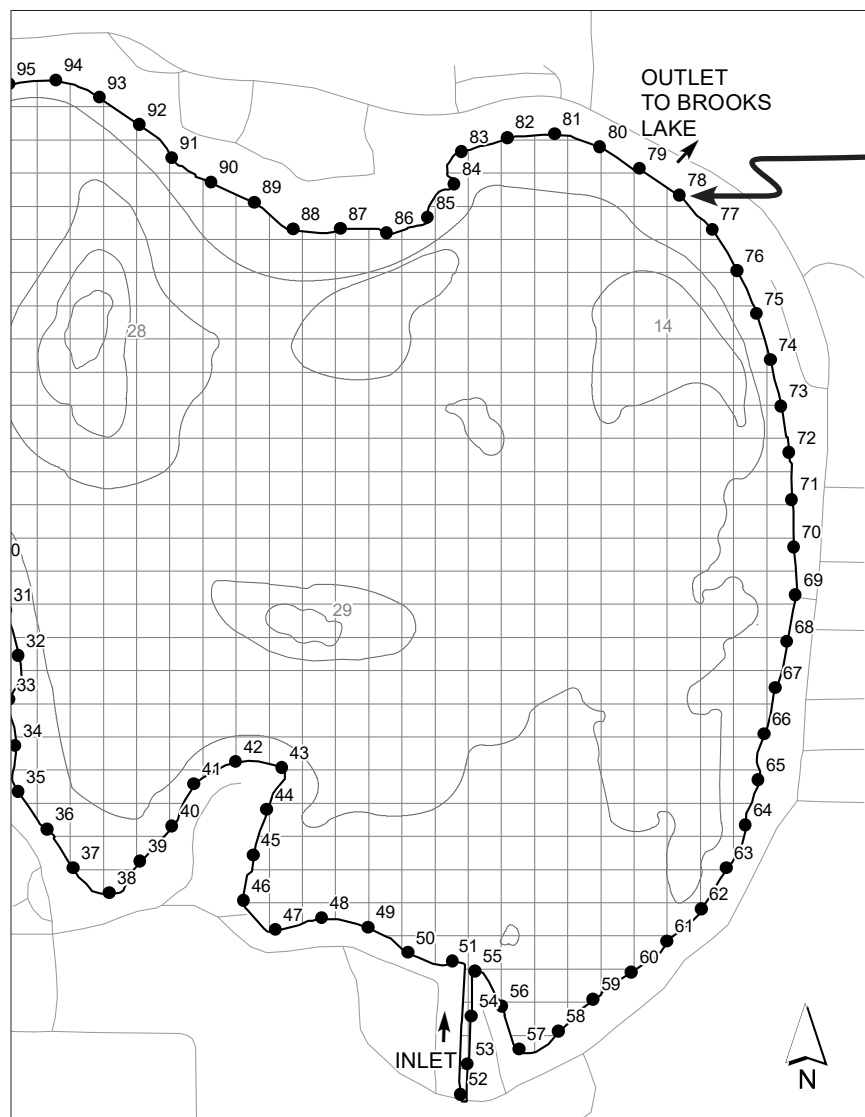
There are four main aquatic plant groups: submersed, floating-leaved, free-floating, and emergent. Each plant group provides important ecological functions. Maintaining a diversity of aquatic plants is important to sustaining a healthy fishery and a healthy lake.



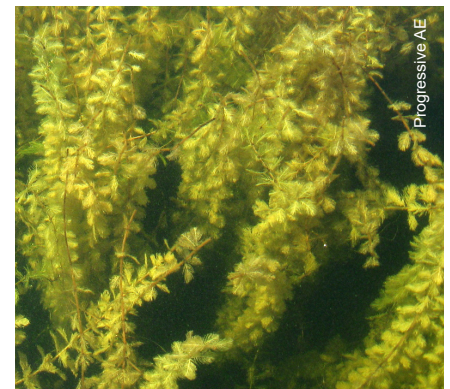
Environmental Consultant  
Progressive AE

Herbicide Applicator  
Savin Lake Services

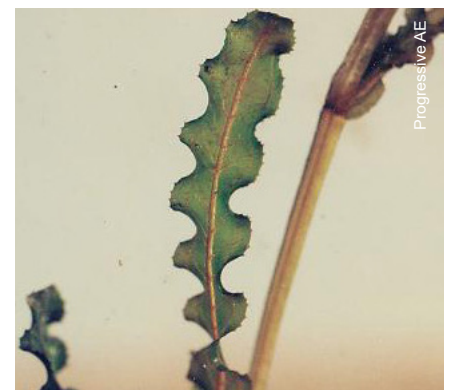
Plant control in Hess Lake involves the select use of herbicides to control invasive plant growth. Plant control activities are coordinated under the direction of an environmental consultant, Progressive AE. Biologists from Progressive conduct GPS-guided surveys of the lake to identify problem areas, and detailed 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 2021, surveys of the lake were conducted on May 25, June 21, July 26, and September 1.



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



Eurasian milfoil (*Myriophyllum spicatum*)



Curly-leaf pondweed (*Potamogeton crispus*)

On June 3, a herbicide treatment was conducted targeting Eurasian milfoil and curly-leaf pondweed in select areas of the lake. In total, 22 acres of the lake were treated. No additional treatments beyond the June treatment were warranted.

# Plant Surveys

In addition to the surveys of the lake to identify invasive plant locations, a vegetation survey of Hess Lake was conducted on September 1 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, two submersed species, two floating-leaved species, and five emergent species were found in the lake. The amount of plant growth found in the lake during the survey was minimal.

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## HESS LAKE AQUATIC PLANTS

September 1, 2021

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Common Name	Scientific Name	Group	Percent of Sites Where Present
Eurasian milfoil*	<i>Myriophyllum spicatum</i>	Submersed	31
Coontail	<i>Ceratophyllum demersum</i>	Submersed	3
White waterlily	<i>Nymphaea odorata</i>	Floating-leaved	16
Yellow waterlily	<i>Nuphar</i> sp.	Floating-leaved	5
Swamp loosestrife	<i>Decodon verticillatus</i>	Emergent	3
Cattail	<i>Typha</i> sp.	Emergent	3
Arrowhead	<i>Sagittaria latifolia</i>	Emergent	2
Phragmites*	<i>Phragmites australis</i>	Emergent	1
Pickeralweed	<i>Pontederia cordata</i>	Emergent	1

\*Exotic invasive species

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In addition to the survey to determine plant types, hydro-acoustic soundings of the lake were recorded in August to measure plant bio-volume (i.e., the height of the plants in the water column). When plants grow to the surface, they occupy 100% of the water column, and those areas are shown in red on the map. When plants are not present, 0% of the water column contains plants, and those areas are shown in blue. When plants grow half-way to the surface, they occupy 50% of the water column, and are shown in yellow. In Hess Lake, plants were found growing to a depth of about 5 feet or less. Very little vegetation was found in the off-shore areas of the lake. The lack of vegetation in the main body of Hess Lake is likely related to persistent algal blooms that limit sunlight penetration and rooted plant growth.

