



Hess Lake Aquatic Plant Control Program 2022 Annual Report

A publication of the Hess Lake Improvement Board

Hess Lake Improvement Board

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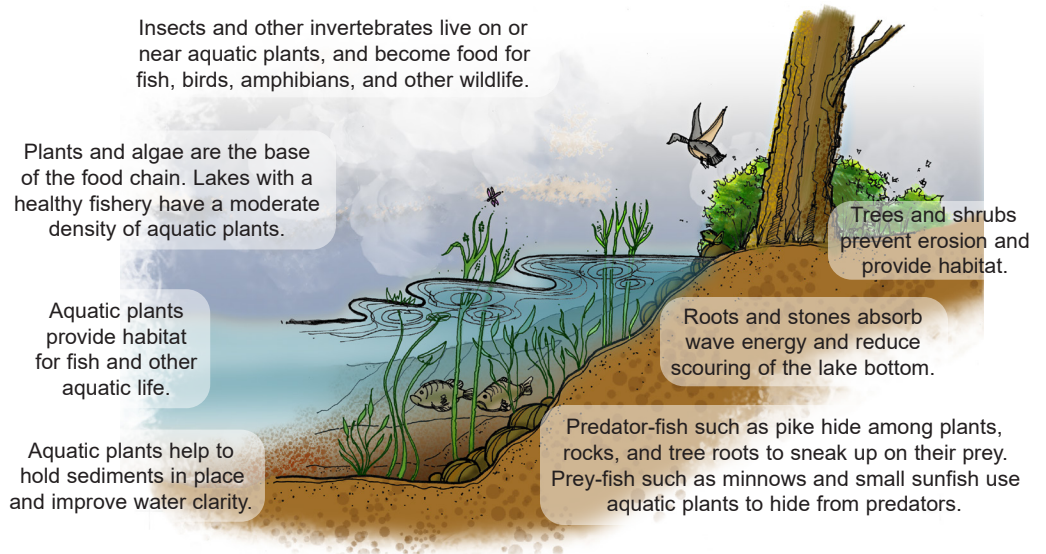
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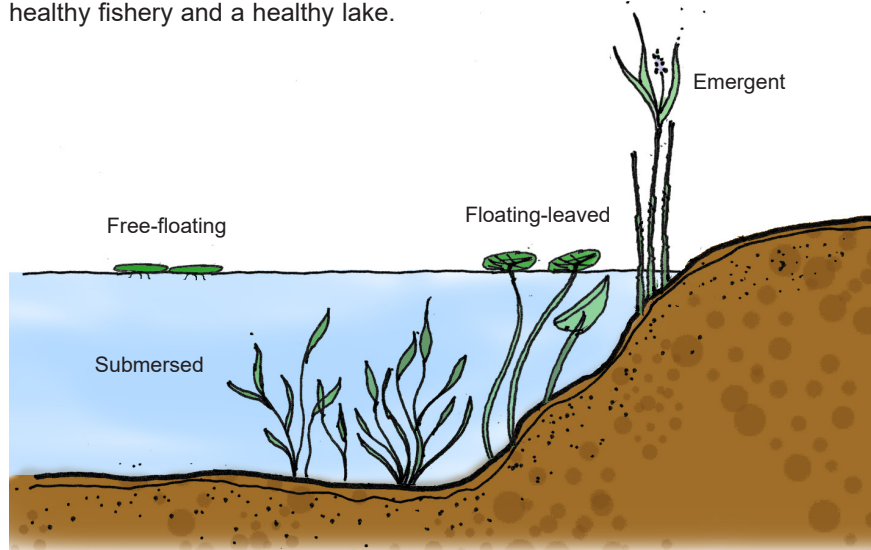
For many years, a nuisance plant control program has been ongoing on Hess Lake. The primary objective of the program is to prevent the spread of invasive aquatic plants while preserving beneficial plant species. This report contains an overview of plant control activities conducted on Hess Lake in 2022.

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.



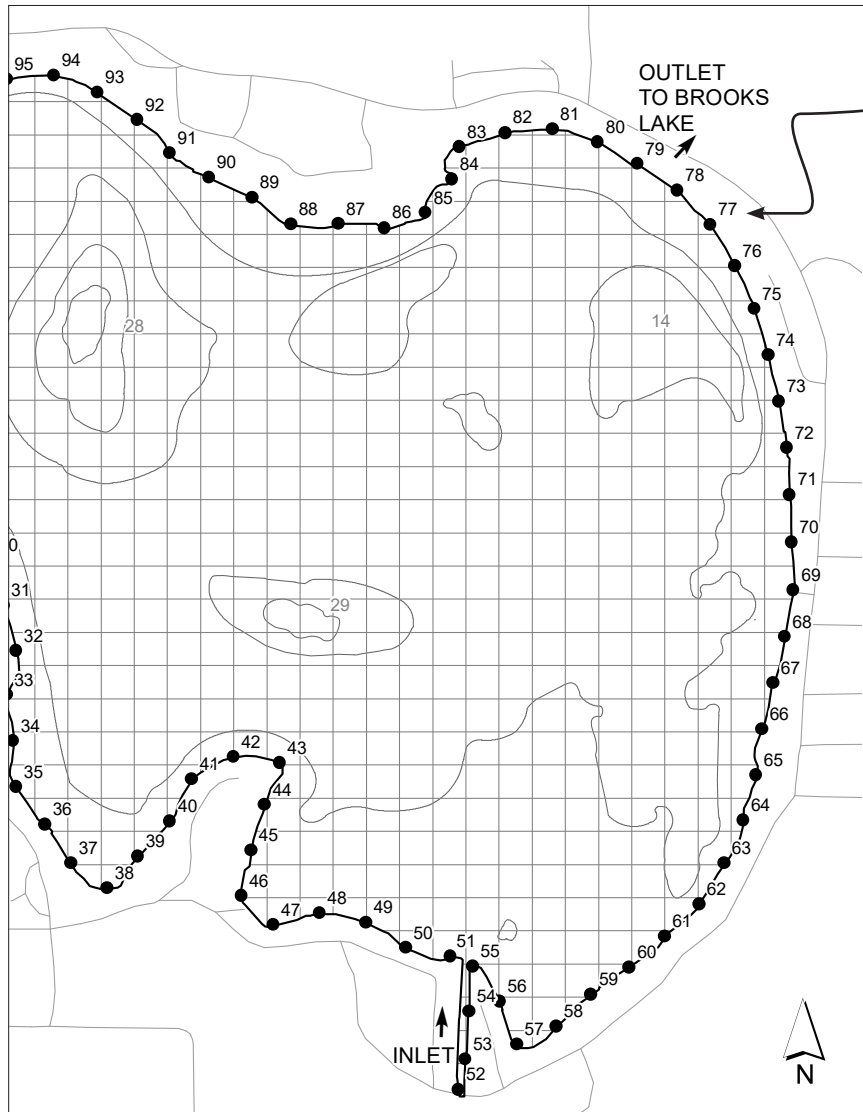
Environmental Consultant
Progressive AE

Herbicide Applicator
Savin Lake Services

Plant Surveys

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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 2022, surveys of the lake were conducted on May 24, June 20, July 26, and August 23. No herbicide treatments of Hess Lake took place in 2022.



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*)

Plant Surveys

In addition to the surveys of the lake to identify invasive plant locations, a comprehensive vegetation survey of Hess Lake was conducted on August 23 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 seven 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

August 23, 2022

Common Name	Scientific Name	Group	Percent of Sites Where Present
Coontail	<i>Ceratophyllum demersum</i>	Submersed	5
Eurasian milfoil*	<i>Myriophyllum spicatum</i>	Submersed	2
White waterlily	<i>Nymphaea odorata</i>	Floating-leaved	29
Yellow waterlily	<i>Nuphar</i> sp.	Floating-leaved	5
Purple loosestrife*	<i>Lythrum salicaria</i>	Emergent	5
Swamp loosestrife	<i>Decodon verticillatus</i>	Emergent	4
Arrowhead	<i>Sagittaria latifolia</i>	Emergent	3
Cattail	<i>Typha</i> sp.	Emergent	2
Pickerelweed	<i>Pontederia cordata</i>	Emergent	2
Water smartweed	<i>Persicaria amphibia</i> var. <i>emersa</i>	Emergent	1
Phragmites*	<i>Phragmites australis</i>	Emergent	1

*Exotic invasive species

Aquatic Plant Bio-volume

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In addition to the survey to determine plant types, hydro-acoustic soundings of the lake were recorded in August of 2022 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 would be 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. The lack of vegetation in Hess Lake is likely related to persistent algal blooms that limit sunlight penetration and rooted plant growth.

