



Long Lake Aquatic Plant Control Program 2021 Activity Summary

A publication of the Long Lake Governmental Lake Board

Long Lake Governmental Lake Board

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

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.

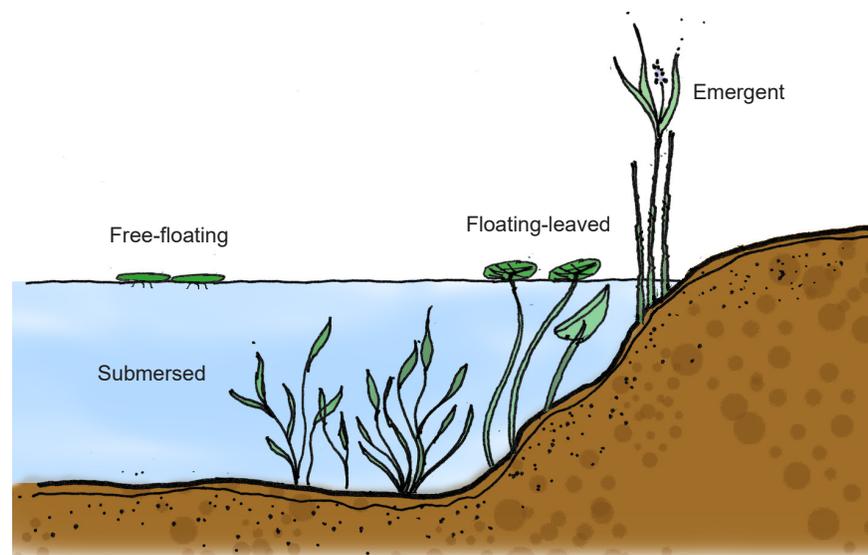


Trees and shrubs prevent erosion and provide habitat.

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.

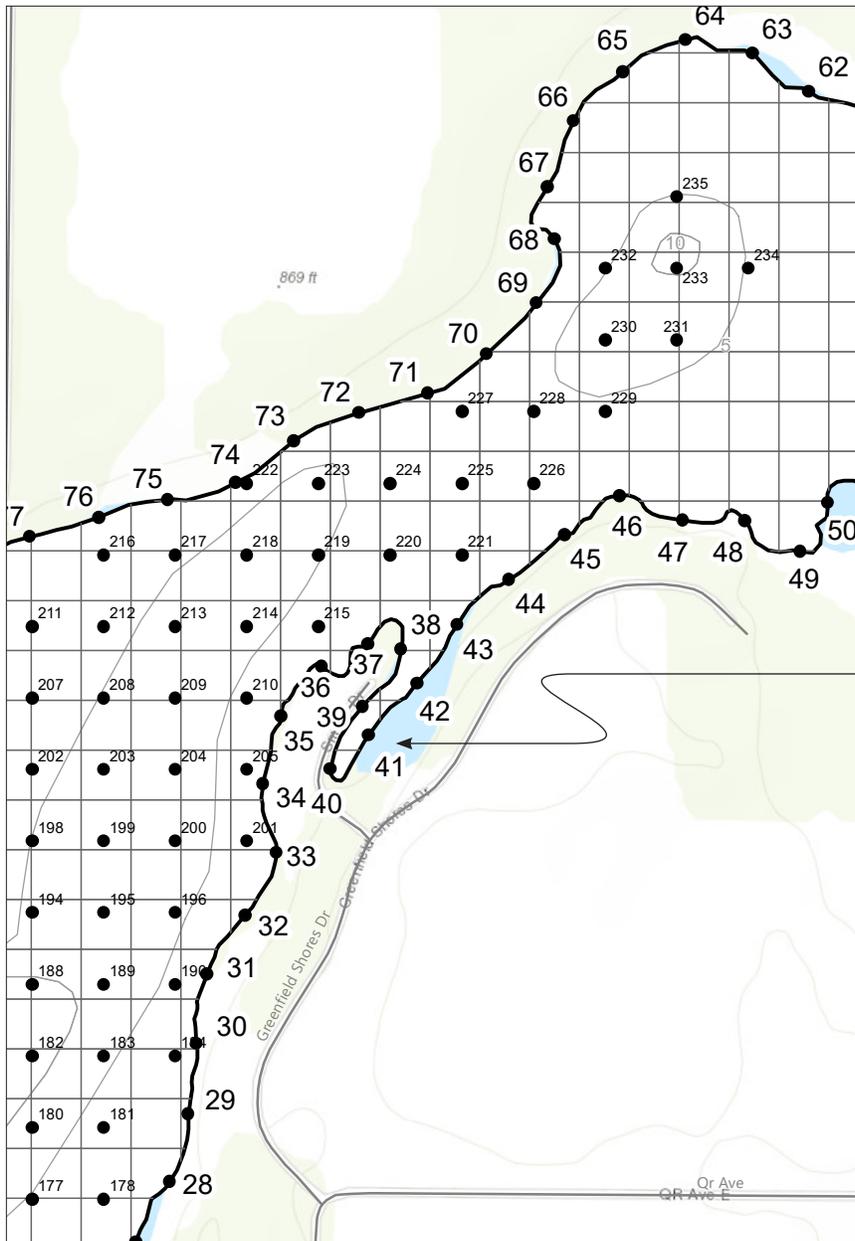
There are four main aquatic plant groups: submersed, floating-leaved, free-floating, and emergent. Each plant group provides important ecological functions. Maintaining a diversity of aquatic plants is important to sustaining a healthy fishery and a healthy lake.



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

Plant Control

Plant control in Long Lake involves the select use of herbicides to control invasive plant growth. Primary plants targeted for control in Long 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 Long Lake in 2021 are summarized in the table below.

LONG LAKE			
2021 NUISANCE AQUATIC PLANT CONTROL SUMMARY			
Work Type	Date	Plants Targeted	Acres
Survey	May 17		
Herbicide	May 25	E. milfoil, curly-leaf pondweed, nuisance natives	11
Survey	June 17		
Herbicide	June 21	E. milfoil, curly-leaf pondweed, starry stonewort, algae	25
Survey	July 1		
Herbicide	July 15	E. milfoil, cabomba, starry stonewort nuisance natives	15
Survey	July 29		
Total			51

Depth Contour Map

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Depth contours of Long Lake were mapped by the Michigan Department of Conservation in July of 1953. High-definition SONAR measurements were collected this fall and this data will be processed to create new bathymetric mapping of Long Lake as part of the new program. A series of maps will be published on the Long Lake Governmental Lake Board's website (www.longlakeimprovementboard.org) this winter.

