

November

2024

VAN NORMAN LAKE

PLANT CONTROL SUMMARY

PREPARED FOR:
VAN NORMAN LAKE IMPROVEMENT BOARD
OAKLAND COUNTY, MI

VAN NORMAN LAKE IMPROVEMENT BOARD

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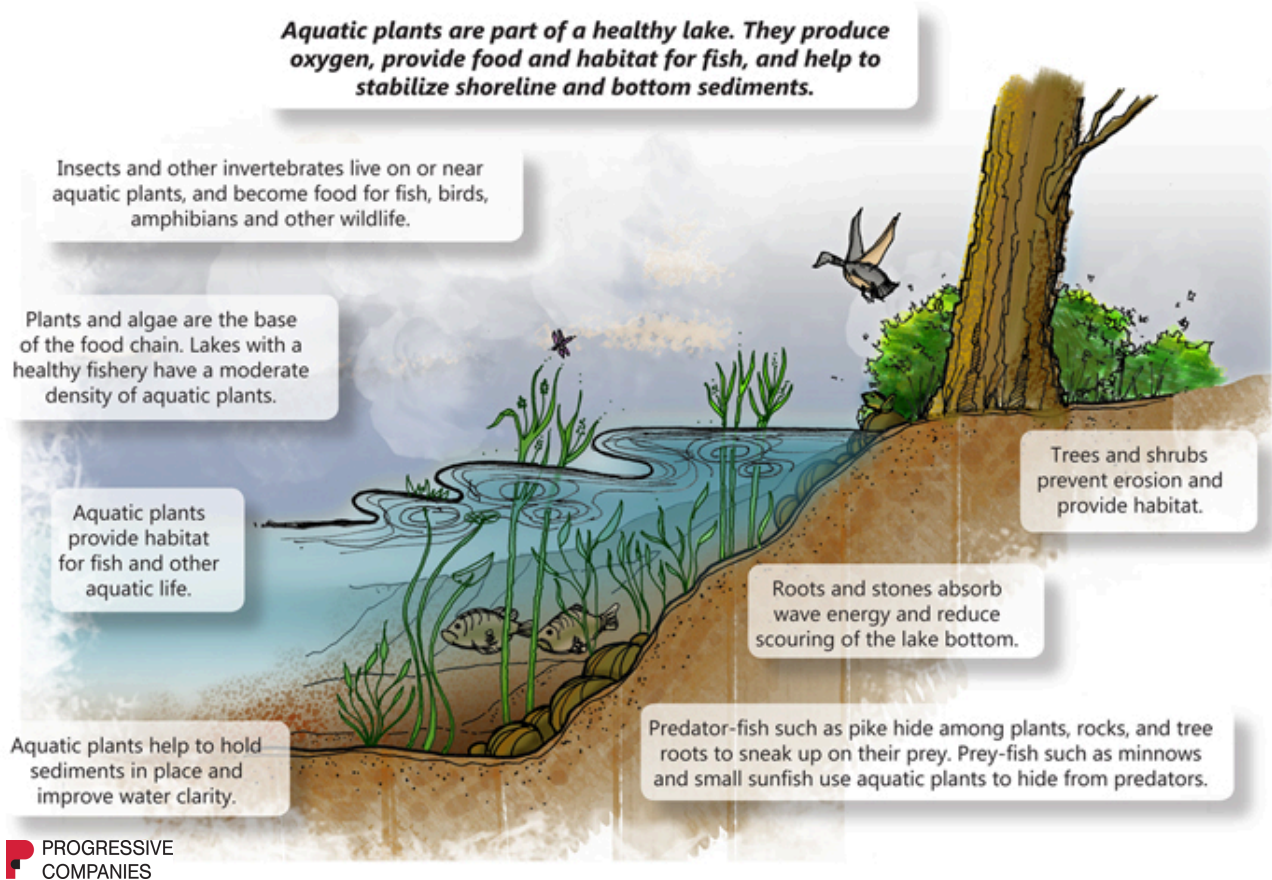


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PROGRAM SUMMARY

A nuisance aquatic plant control program was renewed on Van Norman Lake for years 2021-2025. The primary objective of the program is to prevent the spread of invasive aquatic plants and maintain navigational access around the lake. This report contains an overview of plant control activities conducted on Van Norman Lake in 2024.



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. 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 native aquatic plants is important to sustaining a healthy fishery and a healthy lake. Invasive aquatic plant species have negative impacts to the lake's ecosystem. It is important to maintain an active plant control program to reduce the introduction and spread of invasive species within Van Norman Lake. Plant control efforts in 2024 consisted of six aquatic plant surveys, four herbicide applications, and two mechanical plant harvests.

PLANT CONTROL

Plant control activities are coordinated under the direction of an environmental consultant, Progressive Companies. Scientists 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. GPS reference points are established along the shoreline and 10 ft contour of the lake. These waypoints are used to accurately identify the location of invasive and nuisance plant growth areas.



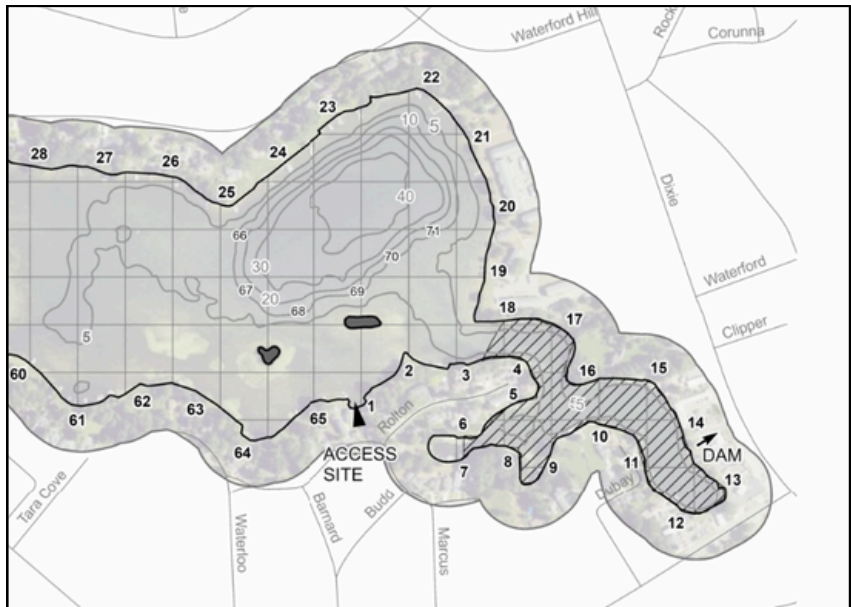
Eurasian milfoil
Myriophyllum spicatum



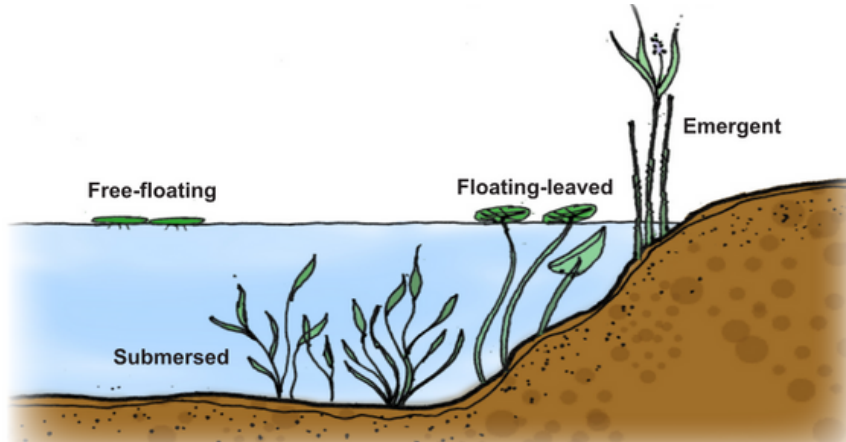
Curly-leaf pondweed
Potamogeton crispus



Starry stonewort
Nitellopsis obtusa



Primary plants targeted for control in Van Norman Lake include Eurasian milfoil, curly-leaf pondweed, and starry stonewort. These plants are non-native (exotic) species that tend to be highly invasive and have the potential to spread quickly if left unchecked. Plant control activities conducted on the lake in 2024 are summarized in Table 1.



2024

PLANT CONTROL

TABLE 1. VAN NORMAN LAKE 2024 PLANT CONTROL ACTIVITIES

Date	Activity	Acreage
May 7	Herbicide: E. milfoil	3.25
June 5	Herbicide: E. milfoil, curly-leaf	11.50
July 8-11	Harvesting	17.25
July 10	Herbicide: E. milfoil, algae	4.25
September 4	Herbicide: E. milfoil, starry stonewort, nuisance natives	7.25
September 9-15	Harvesting	23.50
Total		67.00

In 2024, 26.25 acres of Van Norman Lake were treated with aquatic herbicides throughout the season. Eurasian milfoil was treated with the systemic herbicide, ProcellaCOR, for season-long control. Curly-leaf pondweed was treated on June 5 using contact herbicides which provided seasonal control of the invasive plant. Starry stonewort and nuisance algae were treated with copper products and contact herbicides. A total of 40.75 acres of mechanical harvesting was performed on the lake chain. Harvesting addressed nuisance native growth areas as well as some starry stonewort.

To effectively manage Eurasian milfoil, systemic aquatic herbicides like ProcellaCOR, should be used. Van Norman Lake has a diverse native community that should be preserved at moderate levels, as these plants provide benefits to the lake's fishery and water quality. Harvesting of nuisance native growth areas that obstruct navigation around the lake should continue.

PLANT INVENTORY SURVEY

In addition to the surveys of the lake to identify invasive plant locations, a detailed vegetation survey of Van Norman Lake was conducted on August 27 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, 18 submersed species, three floating-leaved species, and seven emergent species were found in the lake. Van Norman Lake maintains a good diversity of beneficial, native plant species.

TABLE 2. LAKE VAN NORMAN 2024 PLANT INVENTORY DATA

Common Name	Scientific Name	Group	Percentage of sites where present
<i>Chara</i>	<i>Chara</i> sp.	Submersed	76
Wild celery	<i>Vallisneria americana</i>	Submersed	71
Illinois pondweed	<i>Potamogeton illinoensis</i>	Submersed	63
Bladderwort	<i>Utricularia vulgaris</i>	Submersed	49
Sago pondweed	<i>Stuckenia pectinata</i>	Submersed	43
Eurasian milfoil	<i>Myriophyllum spicatum</i>	Submersed	27
Starry stonewort	<i>Nitellopsis obtusa</i>	Submersed	18
Small pondweed	<i>Potamogeton pusillus</i>	Submersed	12
Thin-leaf pondweed	<i>Potamogeton</i> sp.	Submersed	10
Variable pondweed	<i>Potamogeton gramineus</i>	Submersed	8
Southern naiad	<i>Najas guadalupensis</i>	Submersed	8
Water stargrass	<i>Heteranthera dubia</i>	Submersed	6
Large-leaf pondweed	<i>Potamogeton amplifolius</i>	Submersed	4
Spiny naiad	<i>Najas marina</i>	Submersed	4
Flat-stem pondweed	<i>Potamogeton zosteriformis</i>	Submersed	4
American pondweed	<i>Potamogeton americanus</i>	Submersed	2
Brittle-leaf naiad	<i>Najas minor</i>	Submersed	2
Submersed bulrush	<i>Schoenoplectus subterminalis</i>	Submersed	2
White waterlily	<i>Nymphaea odorata</i>	Floating-leaved	59
Yellow waterlily	<i>Nuphar</i> sp.	Floating-leaved	16
Floating-leaf pondweed	<i>Potamogeton natans</i>	Floating-leaved	4
Purple loosestrife	<i>Lythrum salicaria</i>	Emergent	16
Iris	<i>Iris</i> sp.	Emergent	12
Cattail	<i>Typha</i> sp.	Emergent	10
Arrowhead	<i>Sagittaria latifolia</i>	Emergent	4
Bulrush	<i>Schoenoplectus</i> sp.	Emergent	4
Phragmites	<i>Phragmites australis</i>	Emergent	4
Swamp loosestrife	<i>Decodon verticillatus</i>	Emergent	2

Exotic Invasive Species