



# Pentwater Lake Aquatic Plant Control Program 2022 Activity Summary

A publication of the Pentwater Lake Improvement Board

## Pentwater Lake Improvement Board

c/o Oceana County Drain Commissioner's  
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Hart, MI 49420

[www.pentwaterlakeboard.org](http://www.pentwaterlakeboard.org)

Joe Primozich  
*Riparian Property Owner*

Lynne Cavazos  
*Pentwater Township*

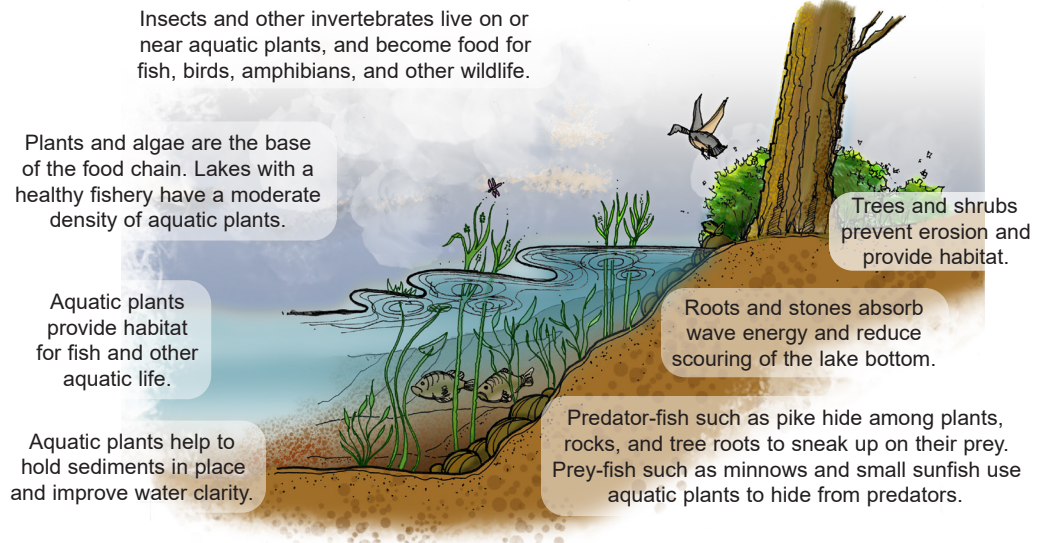
Jeff Hodges  
*Village of Pentwater*

Ron Christians  
*Oceana County Commissioner*

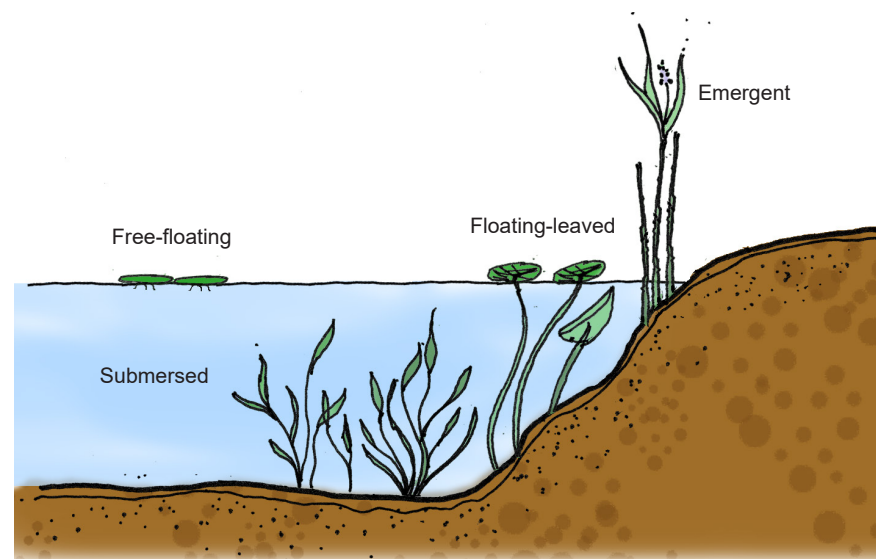
Michelle Martin  
*Oceana County Drain Commissioner*

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



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.



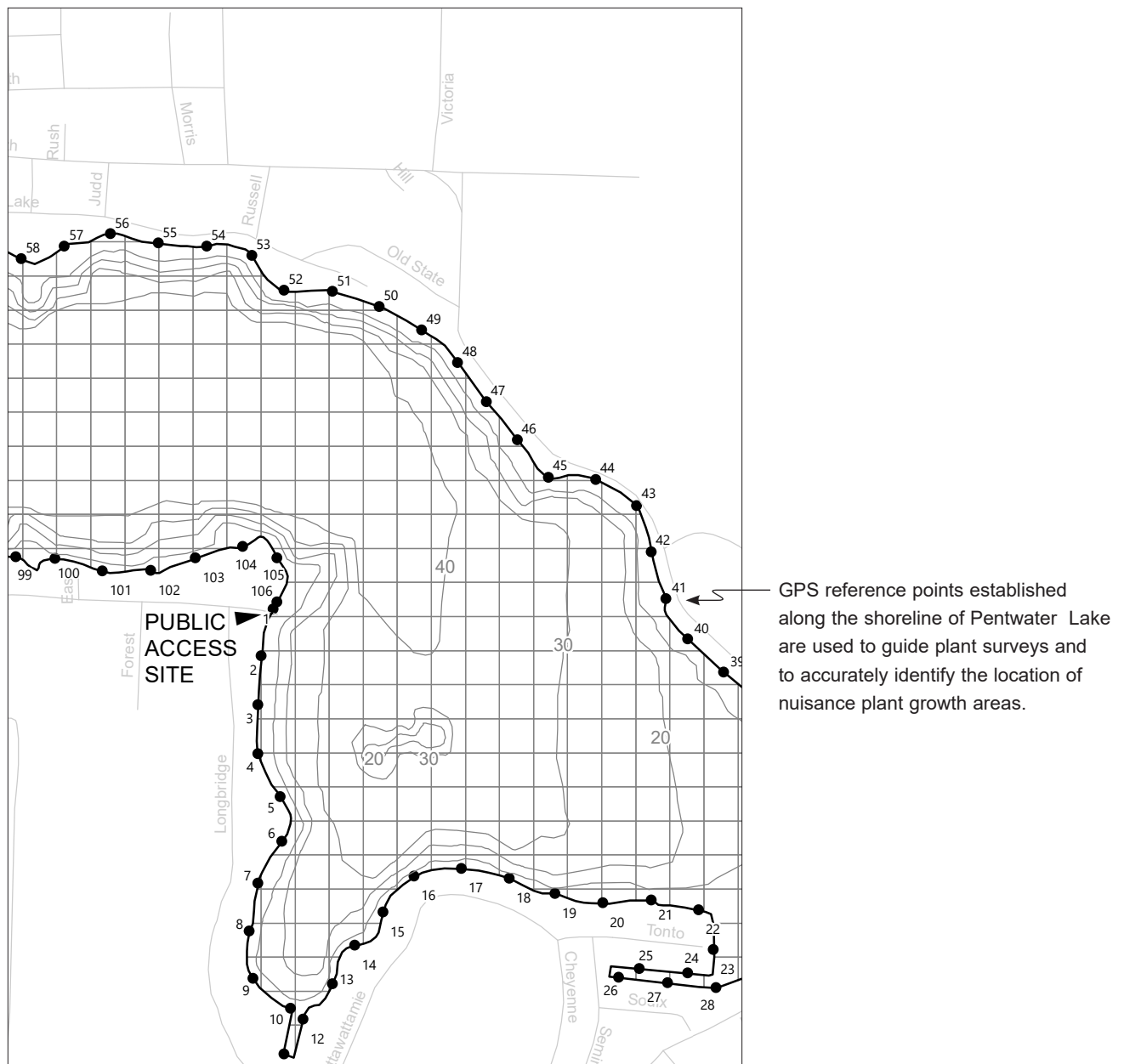
*Environmental Consultant*  
Progressive AE

*Herbicide Applicator*  
PLM Lake and Land Management

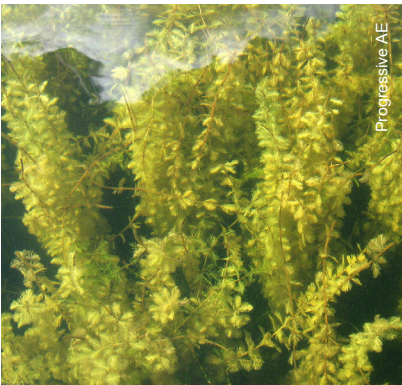
*Harvesting Contractor*  
PLM Lake and Land Management

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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Plant control in Pentwater Lake involves the select use of herbicides and mechanical harvesting to control invasive plant growth. Primary plants targeted for control in Pentwater Lake include hybrid 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.



Hybrid milfoil (*Myriophyllum* sp.)



Starry stonewort (*Nitellopsis obtusa*)

Plant control activities conducted on Pentwater Lake in 2022 are summarized in the table below.

PENTWATER LAKE 2022 NUISANCE AQUATIC PLANT CONTROL SUMMARY			
Work Type	Date	Plants Targeted	Acres
Survey	June 6		
Survey	July 18		
Harvest	July 26-29	Starry Stonewort	16
Herbicide	July 28	Hybrid milfoil, nuisance native plants	6.25
Survey	July 28		
Survey	August 31		
Total			22.25

## 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 Pentwater Lake was conducted on August 31, 2022 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, 15 submersed species, two free-floating species, two floating-leaved species, and four emergent species were found in the lake. Pentwater Lake maintains a good diversity of beneficial, native plant species.

### PENTWATER LAKE AQUATIC PLANTS

#### AVAS DATA 2021-2022

#### Percent of Sites Where Present

Common Name	Scientific Name	Group	August 31, 2022	August 25, 2021
Wild celery	<i>Vallisneria americana</i>	Submersed	66	62
Coontail	<i>Ceratophyllum demersum</i>	Submersed	66	58
Starry stonewort*	<i>Nitellopsis obtusa</i> *	Submersed	50	65
Flat-stem pondweed	<i>Potamogeton zosteriformis</i>	Submersed	30	24
Richardson's pondweed	<i>Potamogeton richardsonii</i>	Submersed	30	24
Slender naiad	<i>Najas flexilis</i>	Submersed	22	9
Chara	<i>Chara</i> sp.	Submersed	16	11
Water stargrass	<i>Heteranthera dubia</i>	Submersed	16	11
Eurasian milfoil*	<i>Myriophyllum spicatum</i> *	Submersed	11	11
Whitestem pondweed	<i>Potamogeton praelongus</i>	Submersed	10	8
Thin-leaf pondweed	<i>Potamogeton</i> sp.	Submersed	9	4
Bladderwort	<i>Utricularia vulgaris</i>	Submersed	5	11
Sago pondweed	<i>Stuckenia pectinata</i>	Submersed	5	2
Elodea	<i>Elodea canadensis</i>	Submersed	4	3
Curly-leaf pondweed*	<i>Potamogeton crispus</i> *	Submersed	3	1
European frog-bit*	<i>Hydrocharis morsus-ranae</i> *	Free-floating	4	9
Duckweed	<i>Lemna minor</i>	Free-floating	21	24
Yellow waterlily	<i>Nuphar</i> sp.	Floating-leaved	5	8
White waterlily	<i>Nymphaea odorata</i>	Floating-leaved	1	3
Cattail	<i>Typha</i> sp.	Emergent	5	3
Bulrush	<i>Schoenoplectus</i> sp.	Emergent	5	5
Phragmites*	<i>Phragmites australis</i> *	Emergent	2	2
Purple loosestrife*	<i>Lythrum salicaria</i> *	Emergent	1	0 <sup>-</sup>
Lake Sedge	<i>Carex lacustris</i>	Emergent	0 <sup>-</sup>	2

*Invasive exotic species\**

*Species not observed during survey<sup>-</sup>*