



# Paw Paw Lake Aquatic Plant Survey 2023 Activity Summary

A publication of the Watervliet and Coloma Township Boards

**Paw Paw Lake**  
Berrien County, MI

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In 2023, Progressive AE was retained by Watervliet and Coloma Townships to assist with the coordination and administration of a lake improvement program on Paw Paw 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 surveys conducted on Paw Paw Lake in 2023.

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.

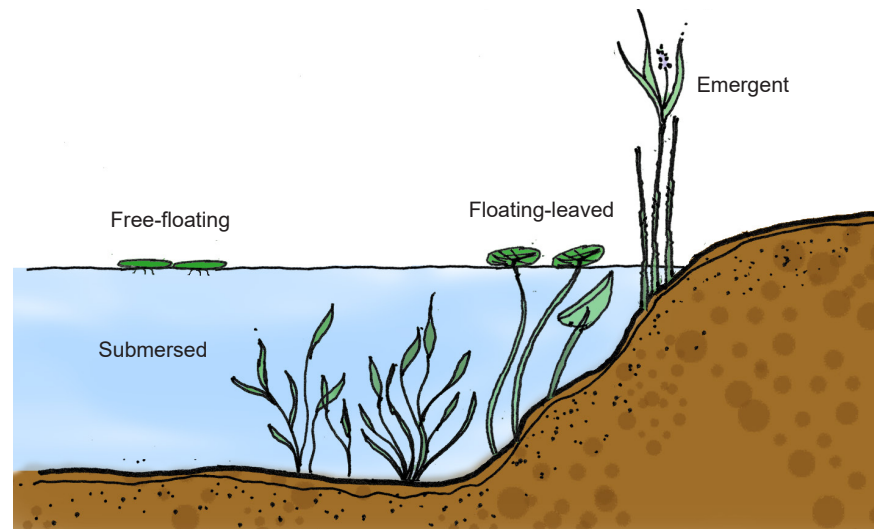
Aquatic plants help to hold sediments in place and improve water clarity.



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.

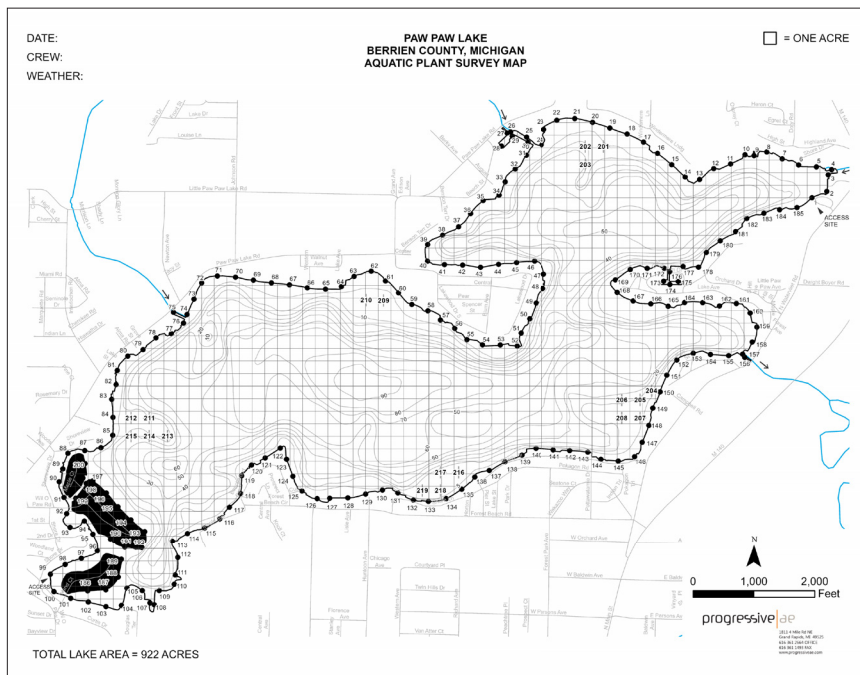


Biologists from Progressive AE conduct GPS-guided surveys of the lake to identify problem areas.

2



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





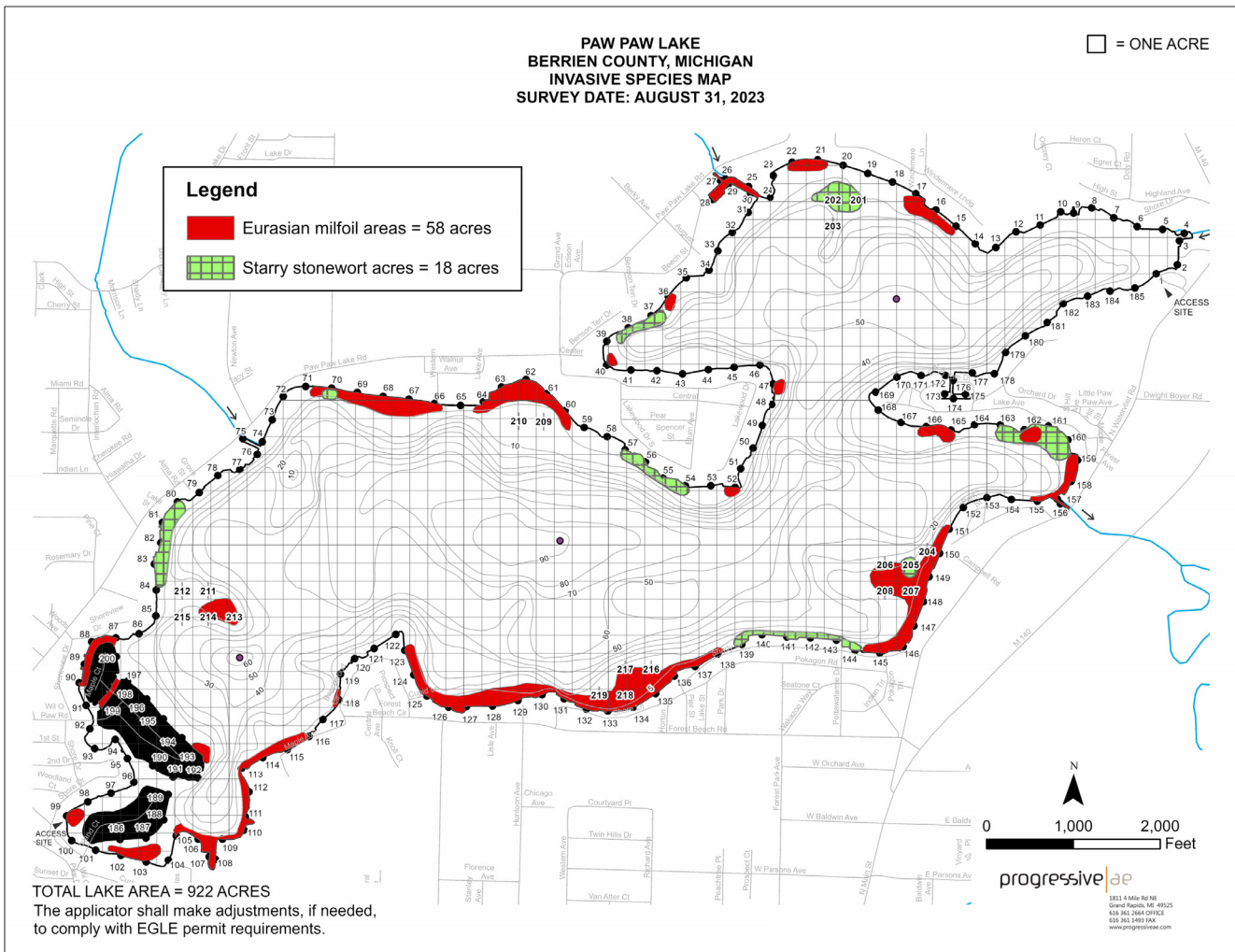
Eurasian milfoil (*Myriophyllum spicatum*)



Starry stonewort (*Nitellopsis obtusa*)

Primary plants of concern in Paw Paw 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.

Invasive plants found in Paw Paw Lake in August of 2023 are shown in the map below.



# End-of-year Aquatic Plant Survey

4

In addition to the surveys of the lake to identify invasive plant locations, a vegetation survey of Paw Paw Lake was conducted on August 31, 2023 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, one free-floating species, three floating-leaved species, and nine emergent species were found in the lake. Paw Paw Lake maintains a good diversity of beneficial, native plants species.

## PAW PAW LAKE AQUATIC PLANTS AUGUST 31, 2023

Common Name	Scientific Name	Group	Percent of Sites Where Present
Slender naiad	<i>Najas flexilis</i>	Submersed	50
Coontail	<i>Ceratophyllum demersum</i>	Submersed	47
Chara	<i>Chara</i> sp.	Submersed	41
Eurasian milfoil*	<i>Myriophyllum spicatum</i>	Submersed	41
Flat-stem pondweed	<i>Potamogeton zosteriformis</i>	Submersed	28
Ribbon-leaf pondweed	<i>Potamogeton epihydrus</i>	Submersed	28
Wild celery	<i>Vallisneria americana</i>	Submersed	26
Large-leaf pondweed	<i>Potamogeton amplifolius</i>	Submersed	21
Starry stonewort*	<i>Nitellopsis obtusa</i>	Submersed	12
Thin-leaf pondweed	<i>Potamogeton</i> sp.	Submersed	8
Small pondweed	<i>Potamogeton pusillus</i>	Submersed	6
Illinois pondweed	<i>Potamogeton illinoensis</i>	Submersed	4
Variable pondweed	<i>Potamogeton gramineus</i>	Submersed	4
Robbins pondweed	<i>Potamogeton robbinsii</i>	Submersed	2
Curly-leaf pondweed*	<i>Potamogeton crispus</i>	Submersed	2
Water stargrass	<i>Heteranthera dubia</i>	Submersed	1
Elodea	<i>Elodea canadensis</i>	Submersed	1
Sago pondweed	<i>Stuckenia pectinata</i>	Submersed	1
Duckweed	<i>Lemna minor</i>	Free-floating	2
Yellow waterlily	<i>Nuphar</i> sp.	Floating-leaved	16
White waterlily	<i>Nymphaea odorata</i>	Floating-leaved	13
Floating-leaf pondweed	<i>Potamogeton natans</i>	Floating-leaved	1
Purple loosestrife*	<i>Lythrum salicaria</i>	Emergent	11
Arrowhead	<i>Sagittaria latifolia</i>	Emergent	10
Lake sedge	<i>Carex lacustris</i>	Emergent	5
Pickerelweed	<i>Pontederia cordata</i>	Emergent	4
Bulrush	<i>Schoenoplectus</i> sp.	Emergent	3
Cattail	<i>Typha</i> sp.	Emergent	2
Swamp loosestrife	<i>Decodon verticillatus</i>	Emergent	1
Phragmites*	<i>Phragmites australis</i>	Emergent	1
Iris	<i>Iris</i> sp.	Emergent	1

Exotic Invasive Species\*