November 2026

PONEMAH, AANIKEGAMAA, TUPPER

LAKE MANAGEMENT SUMMARY

PREPARED FOR:
PST LAKE ASSOCIATION
GENESEE COUNTY, MI

PROGRESSIVE COMPANIES

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ENVIRONMENTAL CONSULTANT

Progressive Companies

AQUATIC HERBICIDE APPLICATOR

Aqua-Weed Control, Inc.

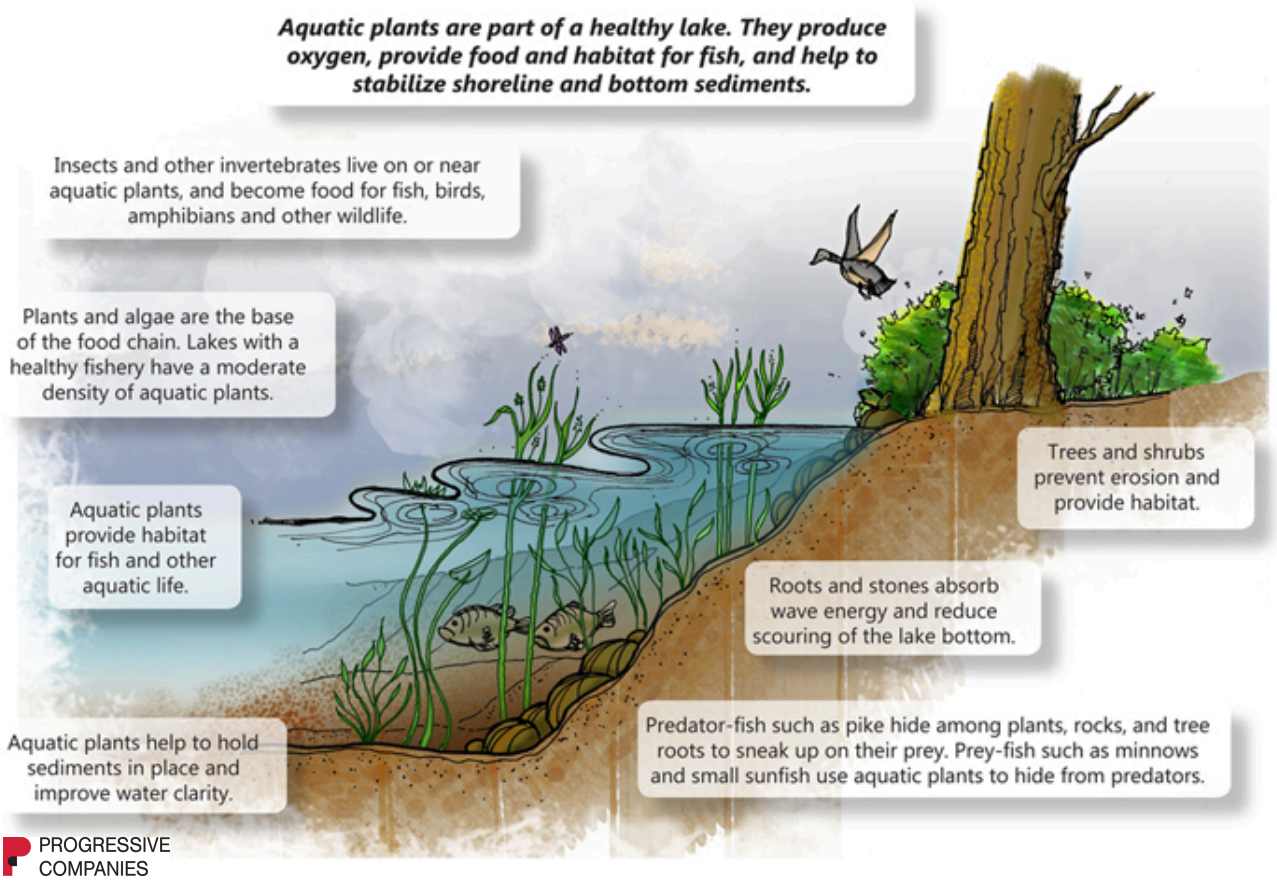
MECHANICAL HARVESTER

PLM Lake and Land Management Corp.



PROGRAM SUMMARY

The primary objective of the aquatic plant control program is to prevent the spread of invasive aquatic plants while preserving beneficial native plant species. This report contains an overview of plant control activities conducted on Lake Ponemah, Aanikegamaa Lake, and Tupper Lake (PAT) in 2026.



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 on the lake's ecosystem. It is important to maintain an active plant control program to reduce the establishment and spread of invasive species within PAT. Plant control efforts in 2026 consisted of four surveys, five aquatic herbicide treatments, and one mechanical harvesting event.

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 lakes 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 drop-off areas of the lakes. These waypoints are used to accurately identify the location of invasive and nuisance plant growth areas.



Eurasian milfoil
Myriophyllum spicatum



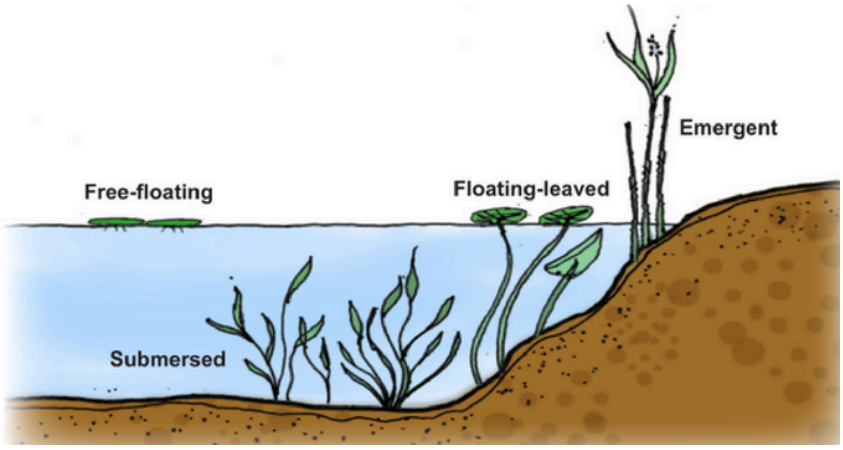
Curly-leaf pondweed
Potamogeton crispus



Starry stonewort
Nitellopsis obtusa



Primary plants targeted for control in PAT 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 2026 are summarized in Tables 1-3.



PLANT CONTROL

TABLE 1. PONEMAH 2026 PLANT CONTROL ACTIVITIES

Date	Work Type	Plants Targeted	Acreage
May 1	Survey	NA	-
May 5	Herbicide Treatment	Non-native milfoil, curly-leaf, algae	93.75
June 2	Survey	NA	-
June 8	Herbicide Treatment	Non-native milfoil, curly-leaf, algae	28.25
July 7	Survey	NA	-
July 15	Herbicide Treatment	Wild celery, starry stonewort, algae	31.50
August 5	Survey	NA	-
August 10	Mechanical Harvesting	Nuisance natives, brittle naiad	22.50
August 17	Herbicide Treatment	Non-native milfoil, algae	3.25
August 17	Harvest Inspection	NA	-
Total			**179.25**

PLANT CONTROL

TABLE 2. AANIKEGAMAA 2026 PLANT CONTROL ACTIVITIES

Date	Work Type	Plants Targeted	Acreage
May 1	Survey	NA	-
May 5	Herbicide Treatment	Algae	4.00
June 2	Survey	NA	-
June 8	Herbicide Treatment	Non-native milfoil, curly-leaf, algae	8.75
July 7	Survey	NA	-
July 15	Herbicide Treatment	Curly-leaf, wild celery, starry stonewort, algae	8.75
July 29	Herbicide Treatment	Duckweed	1.50
August 5	Survey	NA	-
August 10	Mechanical Harvesting	Nuisance natives, starry stonewort	2.00
August 17	Herbicide Treatment	Non-native milfoil	0.25
August 17	Harvest Inspection	NA	-
Total			**25.25**

PLANT CONTROL

TABLE 3. TUPPER 2026 PLANT CONTROL ACTIVITIES

Date	Work Type	Plants Targeted	Acreage
May 1	Survey	NA	-
May 5	Herbicide Treatment	Non-native milfoil, curly-leaf	1.50
June 2	Survey	NA	-
June 8	Herbicide Treatment	Non-native milfoil	0.50
July 7	Survey	NA	-
August 5	Survey	NA	-
August 10	Mechanical Harvesting	Nuisance natives	1.25
August 17	Herbicide Treatment	Non-native milfoil, nuisance natives	3.75
August 17	Harvest Inspection	NA	-
Total			**7.00**

PLANT CONTROL

In 2026, 185.75 acres of PAT were treated with aquatic herbicides throughout the season. Non-native milfoil was treated with contact herbicides in May and the systemic herbicide, ProcellaCOR, in June and August. A large curly-leaf pondweed treatment occurred on May 5 using contact herbicides which provided control of the invasive plant. Nuisance algae were treated with copper products. Wild celery and starry stonewort were treated with combinations of contact herbicides and copper products in July. Nuisance duckweed in the Horrell Road canal on Aanikegamaa Lake was treated with contact herbicides in late July. Nuisance natives at the Shiawassee River inlet on Tupper Lake were treated with contact herbicides in August to improve navigability. A total of 25.75 acres of mechanical harvesting was performed on the lake chain. Harvesting addressed nuisance native growth areas as well as some starry stonewort.

Despite the robust growing season observed across southeast Michigan in 2026, 43 fewer acres of PAT were treated with herbicides compared to 2025, an approximate 20% decrease. This decrease can be attributed to the addition of a harvest to control nuisance native plants such as wild celery, as well as the early and aggressive treatment of invasive species in spring, which resulted in fewer and smaller follow-up treatments later in the season. Wild celery, a hardy native plant with increased permit restrictions, remains a nuisance for navigation near developed areas on Ponemah and Aanikegamaa. Brittle naiad, an annual invasive species, was observed at nuisance levels late in the season in select areas of Lake Ponemah.

In 2027, aggressive and early treatment of non-native milfoil and curly-leaf pondweed should continue in order to limit the need for follow-up treatments later in the season. Brittle naiad should also be targeted for early treatment. Harvesting efforts should also continue, and perhaps be expanded to allow for two harvests: a mid-season harvest to improve navigability and a late season harvest to remove biomass from the lake. The mid-season harvest would help to control wild celery growth and potentially reduce the need for herbicide treatment of nuisance native species.

E. coli

TABLE 4. PAT 2026 *E. COLI* DATA

Date	Site	*E. coli* (colonies / 100 mL)
June 2	Aanikegamaa #1	7.5
June 2	Ponemah #2	9.7
June 2	Tupper #3	1.0
June 2	Ponemah #4	88.0
July 7	Aanikegamaa #1	7.4
July 7	Ponemah #2	157.6
July 7	Tupper #3	< 1.0
July 7	Ponemah #4	33.2
July 7	Ponemah Canal #5	37.3
July 7	Ponemah Cove #6	10.9
August 5	Aanikegamaa #1	9.5
August 5	Ponemah #2	13.3
August 5	Tupper #3	1.0
August 5	Ponemah #4	30.1
August 5	Ponemah Canal #5	49.6
August 5	Ponemah Cove #6	7.2

Fecal coliform bacteria concentrations were measured at four popular swimming locations throughout the lake chain. Two additional locations were added in July and August. According to Michigan's water quality standards for total body contact and recreational activities, the permissible limit for *E. coli* bacteria is set at 300 colonies per 100 milliliters for any single event. *E. coli* concentrations were well below this threshold in all samples collected in 2026.

