

October

2025

SPRING LAKE

PLANT CONTROL SUMMARY

PREPARED FOR:
SPRING LAKE-LAKE BOARD
OTTAWA AND MUSKEGON COUNTIES, MI

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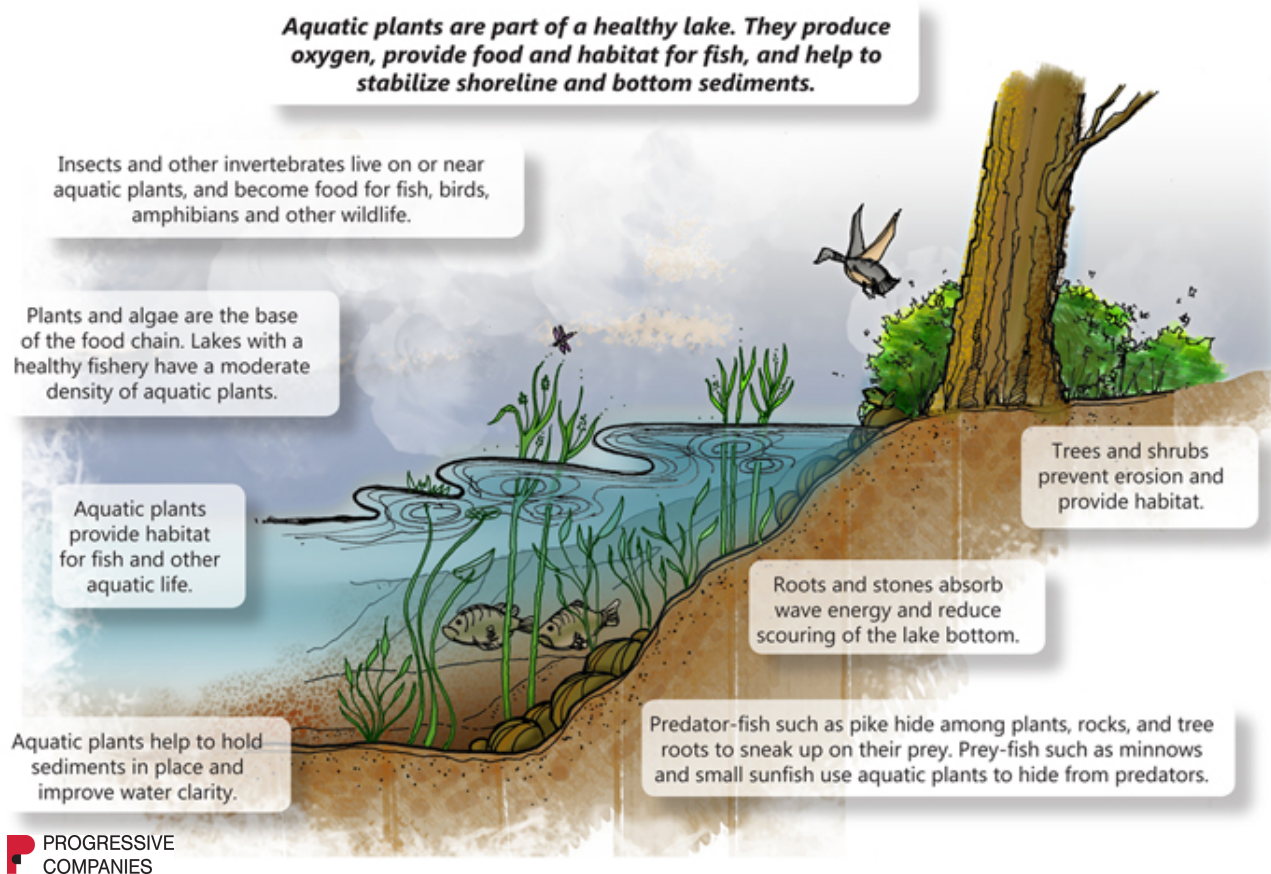
AQUATIC HERBICIDE APPLICATOR

PLM Lake & Land Management Corp



PROGRAM SUMMARY

A nuisance aquatic plant control program has been ongoing on Spring Lake for many years. The primary objective of the 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 Spring Lake in 2025.



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 Spring Lake. Plant control efforts in 2025 consisted of four aquatic plant surveys and five aquatic herbicide treatments.

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 contractors. GPS reference points are established along the shoreline of the lake. These waypoints are used to accurately identify the location of invasive and nuisance plant growth areas.



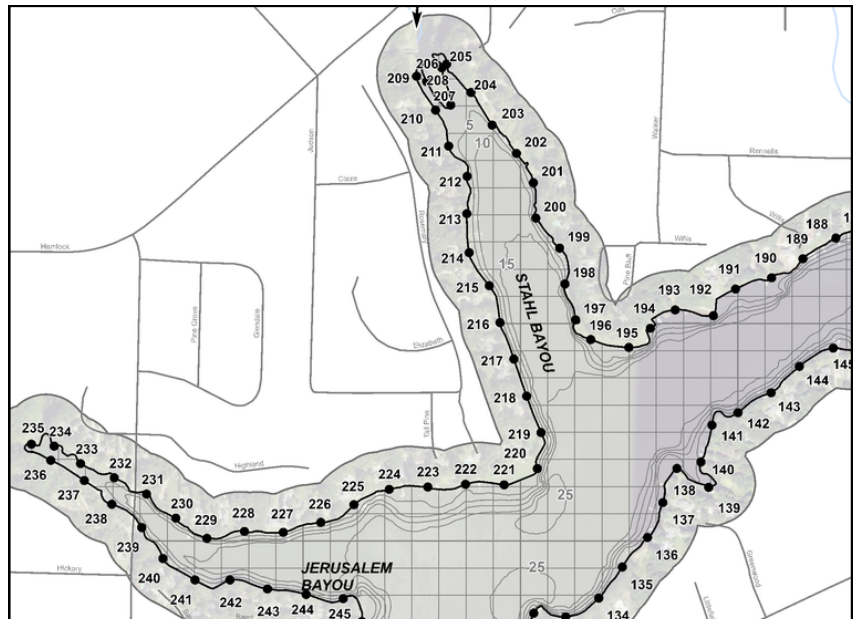
Eurasian milfoil
Myriophyllum spicatum



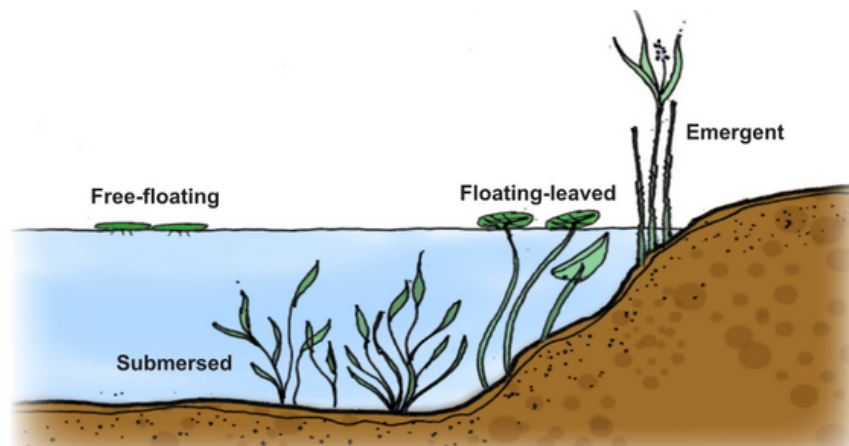
Curly-leaf pondweed
Potamogeton crispus



Phragmites
Phragmites australis



Primary plants targeted for control in Spring Lake include Eurasian milfoil, curly-leaf pondweed, and *Phragmites*. 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 2025 are summarized in Table 1.



2025

PLANT CONTROL

TABLE 1. SPRING LAKE 2025 PLANT CONTROL ACTIVITIES

Date	Plants Targeted	Acreage
May 27	E. milfoil, curly-leaf, algae	45.50
June 26	E. milfoil, curly-leaf, algae, nuisance natives	48.25
July 23	E. milfoil, starry stonewort, algae, nuisance natives	46.75
August 7	algae, nuisance natives	30.75
August 27	<i>Phragmites</i> , algae, nuisance natives	17.75
Total		189.00

In 2025, aquatic herbicides were applied to 189 acres of Spring Lake. Eurasian milfoil was managed using a combination of contact and systemic herbicides and curly-leaf pondweed was successfully controlled with contact herbicides. In May and June, algae were treated with chelated copper products in accordance with the Michigan Department of Environment, Great Lakes, and Energy (EGLE) permit. In July and August, copper sulfate was permitted to be applied to treat nuisance algae. 5.75 acres of *Phragmites* were treated along the Spring Lake shoreline in September.

Native pondweeds impeding navigation in Spring Lake were treated with contact herbicides in June, July, and August. Another native aquatic plant, wild celery, has become increasingly dense over the past few years, raising recreation and navigation concerns among lake residents. Wild celery is typically managed with chelated copper, however, its use on Spring Lake is only permitted in channels and bayous due to the presence of State Threatened and Endangered freshwater mussel species. In August, an EGLE permit amendment was acquired, expanding treatment areas to include the main body of the lake

In April, a buffered application of sodium aluminate and aluminum sulfate (alum) was conducted on Spring Lake, inactivating phosphorus and increasing water clarity. As a result of the clearer water, light was able to penetrate further through the water column, contributing to a noticeable increase in native aquatic plant growth. In response, the lake board is evaluating the need for mechanical harvesting in 2026 should plant growth reach levels that interfere with recreational use or ecological balance.

PLANT SPOTLIGHT: WILD CELERY

Vallisneria americana, commonly known as wild celery or eelgrass, is a submerged aquatic plant native to North America. It plays an important role in freshwater ecosystems, providing food for migratory waterfowl and habitat for fish and invertebrates, stabilizing sediment, and improving water quality. However, its rapid growth and widespread coverage have raised concerns about navigation and recreational use in Spring Lake and other regional lakes, as it forms dense mats and accumulates along shorelines when fragmented by boat traffic.

Wild celery is difficult to control with herbicides, as treatments typically suppress rather than eliminate it. Its robust rhizome system allows for rapid regrowth, making season-long control challenging. The most common treatment is chelated copper, a copper compound bound to organic molecules that improve its uptake and reduce toxicity to non-target species. It disrupts photosynthesis and is most effective when applied in late spring or early summer during active growth. However, regrowth and residual plant mass continue to pose management challenges.

The Michigan Department of Environment, Great Lakes, & Energy (EGLE) requires a permit be obtained prior to applying herbicides to lakes in Michigan. The permits specify approved herbicides, dosage, use restrictions, and areas of the lake where treatments are allowed. For wild celery, only two treatments in the same area are permitted per year.

While wild celery does offer ecological benefits, its dense growth can interfere with recreation and navigation. Boaters navigating through areas with dense vegetation should trim up their motors to prevent damage and reduce the risk of becoming stuck. Shoreline property owners are encouraged to manually rake areas of dense wild celery growth along their frontage if its presence is adversely affecting navigational and/or recreational pursuits.

