WISCONSIN
LAKE & POND RESOURCE
a Jones Lake Management Partner



December 4, 2025

Silver Lake Protection District
Attn: Jim Purinton

Re: 2025 Aquatic Plant Survey & Report, Silver Lake, Kenosha County, WI

Dear Mr. Purinton & District Board:

In response to your request for aquatic plant management and surveying, Wisconsin Lake & Pond Resource (WLPR). The purpose of the visits was to control existing stands of aquatic invasive species (AIS) and document remaining populations of AIS for 2025 management.

**Background Information**

Silver Lake is a 516-acre drainage lake located in the Town of Salem, Kenosha County, Wisconsin. Silver Lake has a maximum depth of 43 feet with a mean depth of 9.3 feet. The Silver Lake Protection District is an active lake District that has been managing aquatic plants on the lake through herbicidal treatments. Hybrid water-milfoil and curly-leaf pondweed (CLP), both AIS, are present within the waterway, with only HWM actively managed for control. Starry stonewort (SSW) is a newly discovered AIS in Wisconsin that has been recently found and verified in Silver Lake in 2023.

The aquatic plant community of the lake has been healthy, though periodically dense. However, introduction of aquatic invasive species caused an expanding problem with excessive aquatic plant growth. Hybrid Eurasian water-milfoil has caused the most significant problem within the lake. A September 2024 survey documented 11.99 acres of HWM, not including individual stems and/or clumps, which was found at many different densities. 2024 management areas totaled 6.85 acres. Treatment area A (4.2 acres) was located in the north point of the lake while treatment area B (2.65 acres) was located on the west side of the lake. Treatment in 2025 occurred to 0.35 acres in the small bay on the south east corner of the lake.

A WDNR aquatic herbicide permit was applied for and approved to control this area of HWM growth (Figure 1). The aquatic herbicide ProcellaCOR EC (active ingredient florpyrauxifen-benzyl) was permitted for use within the target area. Application occurred on May 9, 2025. The approved permit and treatment record are attached at the end of the report.

**2025 Aquatic Plant Survey**

To gauge current conditions and assess the need for 2026 management, a follow-up aquatic plant survey was completed on September 11, 2025, by Wisconsin Lake & Pond Resource using a meander method throughout the entire photic zone of the lake with rake throws and visual observations to verify the presence and density of AIS, primarily HWM and starry Stonewort. All locations of these AIS were recorded on a GPS. Results of the mapping survey are found on Figure 2.

A small, low-density population of starry stonewort was identified during the 2023 survey. This location was extensively surveyed again in 2024 and 2025 and did not find any starry stonewort present at the original location or at other sites within the lake. Samples were taken in the area of SSW growth and did not find any on the sampling rake. Species that were identified in that area were coontail, HWM, southern naiad, water stargrass and two macro algae species that are very similar and often mistaken for starry stonewort, chara and nitella. It is likely starry stonewort still exist in Silver Lake, but populations can be at very low levels.

The 2025 survey identified HWM growing at various densities and distribution in the survey locations. The following densities were used to describe the HWM populations:

1. **Spots** – small locations of individual plants or clumps that were not large enough to map around their perimeter.
2. **Scattered** – locations of HWM that had plants close enough to map as an area but were still widely scattered. HWM is merely present and not a large component of the biomass.
3. **Low** – HWM identified in distinct beds. While individual plants or clumps may reach the surface, most are lower growing or not as dense. Often mixed with other vegetation.
4. **Moderate** – HWM occupies over half the water column with many plants or clumps at or just below the surface. Few other plant species were found.
5. **High** – locations of HWM that were at or near the surface and occupied much of the water column. HWM may be the only plant found growing in these locations.

Overall, 124.04 acres of HWM were identified during the September 2025 survey. Populations of HWM undoubtably exist outside the areas identified in 2025. The breakdown of Eurasian water-milfoil present by density across the Lake are as follows:

| Density | Acres |
|---|---|
| Scattered | 58.42 |
| Low | 58.49 |
| Moderate | 7.13 |
| High | 0 |
| Total | 124.04 |

Data recorded in 2025 showed an extreme upward trend in the HWM populations in Silver Lake. Majority of locations of HWM populations were found as widely scattered stems or clumps throughout the entire lake. The acreage shown is a lot worse than what is actually out there. The central portion of the lake was found to have a higher frequency and abundance of HWM, though they were mostly stems and/or small clumps that were grouped into large, scattered beds. The north-western part of the lake had a low to moderate density bed which measured 17.57 acres. Other beds found in the northern half of the lake were scattered beds and widely scattered stems of HWM. Other smaller scattered beds were found throughout the lake, mainly on the shorelines. The small southern bay that was treated

for in spring of 2025 had no HWM found in the bay. A small, scattered bed was noted at the opening. Hybrid Eurasian water-milfoil should be managed in 2025 to limit the spread of this invasive species.

An aquatic plant community is dynamic and changes year to year based on growing conditions and many other factors. Some species identified in 2025 were not directly sampled in the past and vice versa, but this should not be a cause for concern.

## NEXT STEPS

Successful, historical management of AIS in Silver Lake by the District has reduced populations substantially, resulting in periodic, small-scale control. Although the small-scale treatments worked, they did not target single stem growth throughout the lake which caused the increase in population in the 2025 season. The District's approach has allowed native populations to flourish and enhance the health of the lake. Unfortunately, HWM really took off in the last year with no management occurring in the main basin of the lake.

Current DNR recommendations for control of AIS include the use of an integrated pest management approach, or IPM. The use of IPM includes changing methods of control, including but not limited to: varying herbicide active ingredients, mechanical harvesting, hand or suction harvesting, monitoring-only, and no-action. The spread of HWM in Silver Lake recorded in 2025 is found in a variety of depths ranging from 2-12 feet and found widely scattered also at ranging densities.

It is our recommendation to continue to conduct management in select areas for control of denser areas of HWM and navigational relief while monitoring populations of AIS, both new and existing, in 2026. With the growth progress from 2024 to 2025 there is two recommendations provided below.

1. **Spot-management of densest areas of HWM:** Numerous HWM growth sites were identified as scattered or low density beds or as isolated spots or clumps. In total, the densest area reached 17.57 acres of HWM in the northern most, shallow area of Silver Lake (Figure 2). This option provides relief of the densest area in the lake. This area has a history of harboring HWM each year. By treating a larger portion of this area, it can hopefully reduce the populations and spread for the next couple of growing seasons. Previous applications consisted of the use of ProcellaCOR EC, with the use of the IPM method it is recommended to treat with a different product in 2026. Budget-conscious chemical applications with fast-acting products like Aquastrike (diquat & endothall) or targeted management using Diver Assisted Suction Harvesting (DASH). Given the extent and magnitude of the infestation, DASH might be unaffordable and time-consuming.

2. **No action:** Though there is much of the lake that is occupied by HWM, majority of the density is scattered to low, which may not need to be managed for in 2026. This could also allow for the District to continue to save up to complete an up-to whole-lake treatment in the following years.

A recommended timeline for 2026 actions is as follows:

- **February /March 2026**: Apply for WDNR permit for up to 17.57ac to control HWM and nuisance relief.
- **May/June 2026**: Selective/spot treatment for HWM control with Aquastrike.
- **August/September 2026**: Aquatic plant survey and mapping to assess AIS populations.
- **October/November 2026**: Complete an assessment of AIS present for 2027 planning.
    - Update management report and recommendations to the District. Future planning may involve any of the following actions:
        - Varying scale of AIS control in 2027
        - Continued monitoring
        - No action

If you have any questions, require any additional information, or would like a formal proposal on any of the above management options please contact us directly as follows:

Sydney Kanz: (920) 872-2032 or skanz@wisconsinlpr.com

Respectfully,

Sydney Kanz

Sydney Kanz - Aquatic Field Biologist

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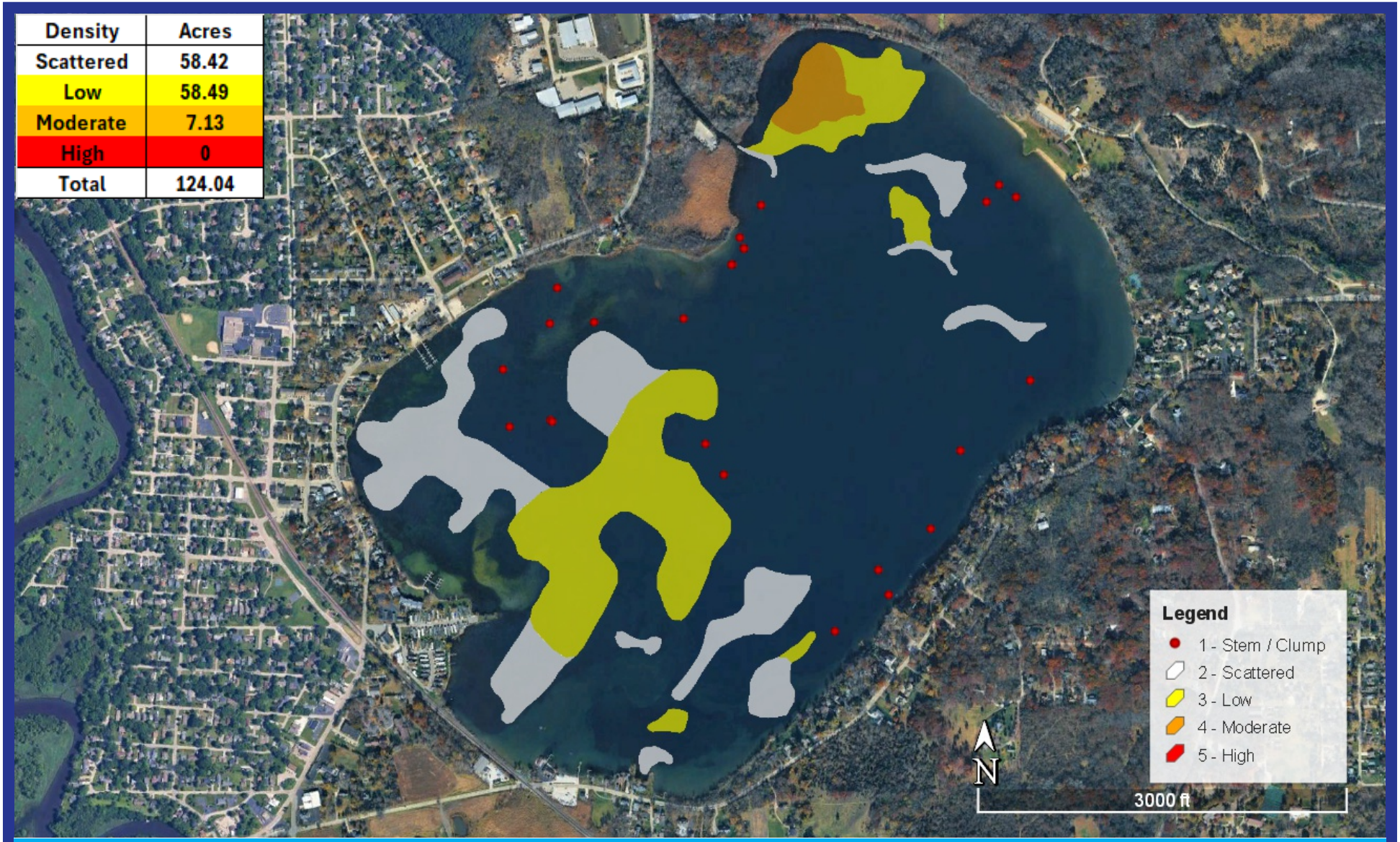


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# 2025 Eurasian water-milfoil

Silver Lake
Kenosha Co., WI
Surveyed: 09/11/25