Pine Canyon Lake Association

Lake Management News

June 30, 2023

Under the auspices of the PCLA Board of Directors, the PCLA Fish and Weed Committee developed a Lake Management Plan that was approved by PCLA members in the 2022 Annual Meeting. The Plan (a copy of which is accessible on the PCLA website under Environment Committee) includes goals, objectives, and actions for:

- controlling aquatic and shoreland invasive species,
- protecting the natural functions that diverse native plants provide both in the water and on the shore,
- maintaining and enhancing lake water quality,
- enhancing the fish population,
- enhancing shoreland area conditions,
- monitoring watershed conditions, and
- engaging the Pine Canyon Lake community.

Many of the actions for controlling invasive weed species, protecting the natural functions that diverse native plants provide in the water and on the shore, and maintaining and enhancing lake water quality require the skills of lake management services professionals. For those actions, the PCLA has engaged PLM Lake & Land Management Corp. under a five-year services agreement beginning in 2023.

PLM's licensed professionals not only have comprehensive training on the use of invasive weed control products, but they also have access to advanced laboratories to analyze water quality and identify root causes of weed growth. As part of Pine Canyon Lake's ongoing water quality testing program, PLM's scientists will track nutrient levels, dissolved oxygen, and the presence of pathogens.

This newsletter describes the services PLM performed in June 2023 and provides a reminder for PCL neighbors about lake-friendly yard maintenance.

WORK PERFORMED BY PLM IN JUNE 2023

Aquatic Vegetation Assessment Survey

PLM conducted an Aquatic Vegetation Assessment Survey on June 6. As illustrated in Figure 1, the key findings were:

- No Curly-Leaf Pondweed was observed.
- No Watermilfoil was observed.
- A more than five-acre infestation of invasive Starry Stonewort (SSW) was observed. PLM estimates, based on its distribution, the SSW has been here for two to four years. PLM says it is not currently out-competing native species or having a negative impact on fish spawning but over time it will do so.

Figure 1: PLM Aquatic Vegetation Assessment Survey Notes

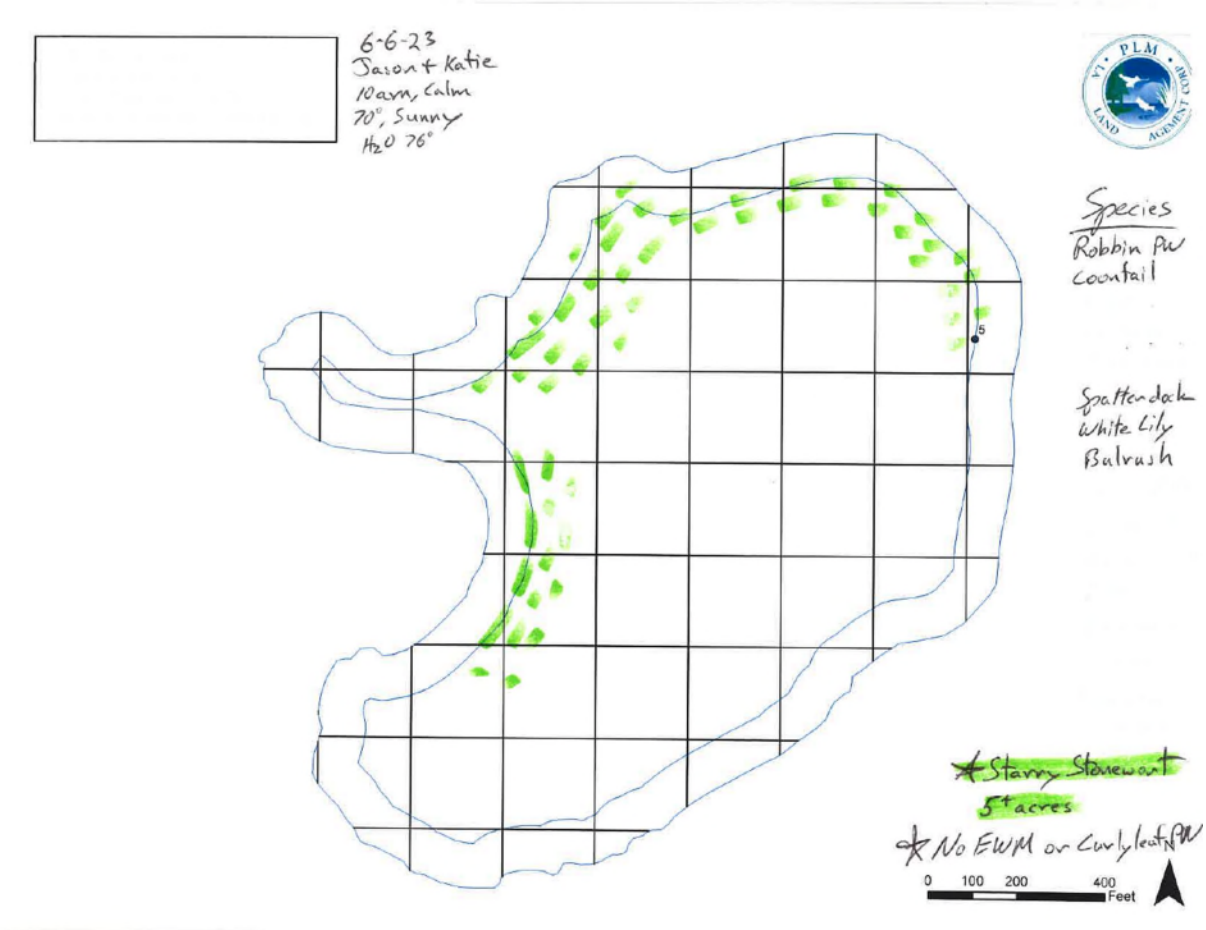

Figure 2: Starry Stonewort

Starry Stonewort

Starry Stonewort (*Nitellopsis* obtusa) is a species of macroscopic green algae. It is an invasive species that, because of its aggressive and robust growth habit, can reach nuisance abundances. SSW will form dense blankets often several feet thick covering over native vegetation habitat and fish spawning areas. So, these nuisance plants can reduce the growth of desirable aquatic vegetation, reduce suitable fish habitat, and cause fishing frustration.

PLM says copper sulfate-based algaecides are the best tool to control SSW, and they recommended treating five to seven acres with SeClear. SeClear G is manufactured by SePRO, the same company that manufactures ProcellaCOR. This product is not only an algaecide but also includes minerals to bind phosphorous.

Copper sulfate-based algaecides such as SeClear G work by interfering with cell processes like enzyme production, photosynthesis, nitrogen fixation, and cell division. Affected plants and algae will show symptoms within hours, and plants will decompose in about a week. The Wisconsin Department of Natural Resources reports[1] that:

- copper products are labeled to control macrophytic (plant-like) algae, such as invasive Starry Stonewort (*Nitellopsis* obtusa);
- there are no post-treatment restrictions on treated water use for swimming, fishing, human drinking water, pet/livestock drinking water, or irrigation.

[1] "Copper Compounds Chemical Fact Sheet", Wisconsin Department of Natural Resources, 2012, Madison, WI

Water Samples Tested For E. coli

PLM also collected water samples from three different locations to be tested for E. coli and sent these samples to Prein & Newhof's environmental laboratory (https://www.preinnewhof.com/pn-services/laboratory-water-testing/) for analysis.

The Prein & Newhof report showed PCL's E. coli levels to be a three-site average of 9.3 MPN/100ml (i.e., "Most Probable Number" of cells per 100 milliliters), which is:

- better than our most recent (2021) previous test by Aquatic Enhancement & Survey, Inc. which showed a three-site average of 10.2 MPN/100ml; and

- better than PCL's eight years (2014-2021) previous tests by Aquatic Enhancement & Survey, Inc. which showed a three-site average of 13.1 MPN/100ml.

PLM considers Pine Canyon Lake's E. coli levels low and states that water is safe for swimming up to 130 Colonies/100ml.

REMINDER: MAINTAINING ON-SITE SEWAGE DISPOSAL SYSTEMS

The June testing by PLM showed PCL's E. coli levels to be well below the level safe for swimming. This is a tribute to PCL property owners' conscientious maintenance of their on-site sewage disposal systems.

To help everyone to keep up such good work, we offer a reminder that an on-site sewage disposal system requires regular maintenance to operate efficiently. Annual inspections of the baffles are necessary to ensure that scum is not leaving the septic tank and entering the absorption field. Likewise, accumulated sludge must be removed on a regular basis to prevent it from backing up into the absorption field or reducing the tank capacity to the point that solids aren't able to settle out before the sewage slurry leaves the tank. The frequency of sludge removal ("pumping") varies with the amount of use your system receives. For a family of four, a septic tank needs to be pumped out every two to three years. However, if you are placing heavy demands on the system, such as a larger family or the use of a garbage disposal, the tank may need to be pumped every year. Tank pumping must be done by a licensed contractor, but sludge level determinations and tank inspections can be done by you.

Signs of a problem

- Slow draining toilets, showers, or sinks.
- Sewage backing up in the basement or drains.
- Ponded water or wet areas over the absorption field in your lawn.
- Bright green grass over the absorption field may indicate that effluent is coming to the surface.
- A dense stand of aquatic plants or algae along only your shoreline.
- Sewage odors.
- Bacteria or nitrates show up in tests of a nearby drinking water well.
- Biodegradable dye flushed through your system is detectable in the lake.