

Pine Canyon Lake Association



Lake Management News

June 3, 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 can be safely executed only by 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 May 2023 and provides a reminder for PCL neighbors about lake-friendly yard maintenance.

WORK PERFORMED BY PLM IN MAY 2023

Aquatic Vegetation Assessment Survey

PLM conducted an Aquatic Vegetation Assessment Survey on May 3. As illustrated in Figure 1, the key findings were:

- moderate infestation of the invasive species Curly-Leaf Pondweed was observed in 2 to 3 acres and additional growth was expected to extend the coverage to 5 to 10 acres; and
- no Watermilfoil was observed.

Figure 1: PLM Aquatic Vegetation Assessment Survey Notes

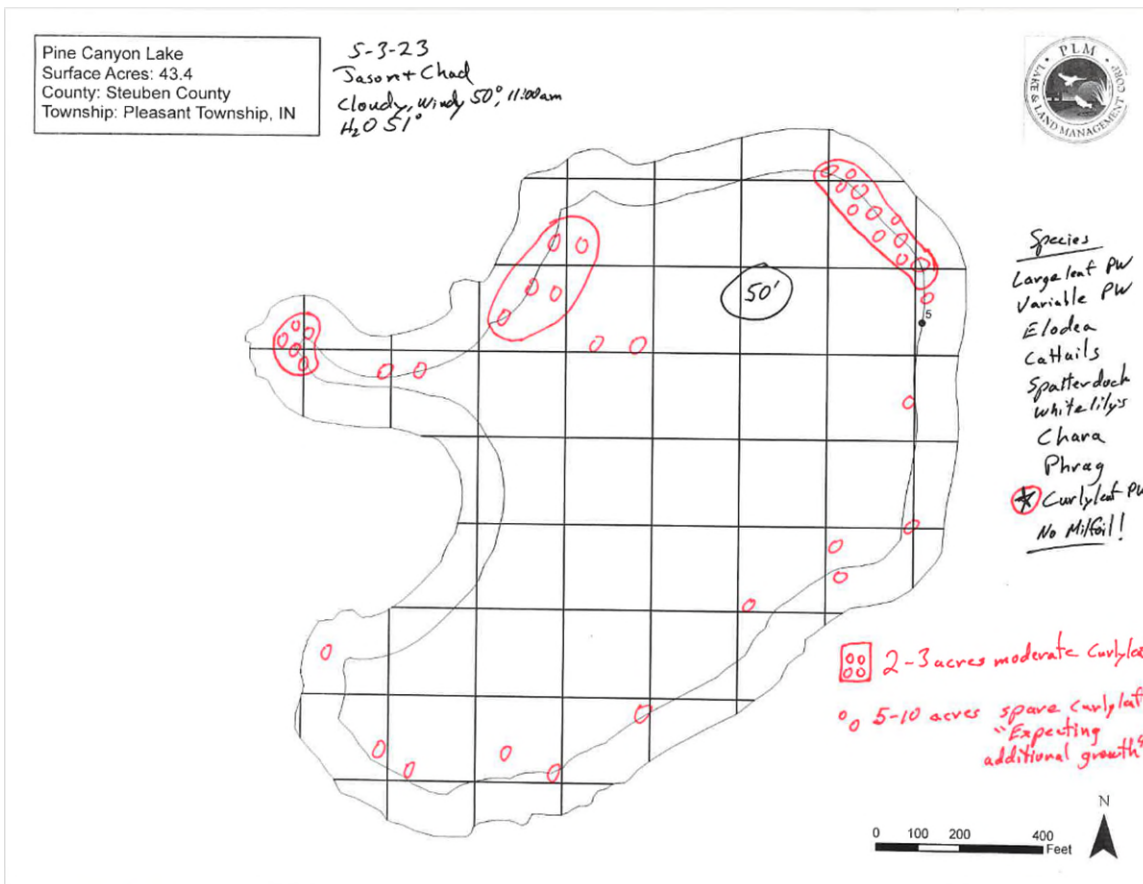


Figure 2: Curly-Leaf Pondweed



Curly-Leaf Pondweed

Action is necessary early in the season to control Curly-Leaf Pondweed because Curly-Leaf Pondweed's aggressive early season growth allows it to out-compete native species and grow to nuisance levels.

Perhaps the most significant problem associated with Curly-Leaf Pondweed involves internal nutrient cycling. The die-off and decomposition of the plant during the warmest time of year can lead to a sudden nutrient release in the water. Curly-Leaf Pondweed thus alters the natural habitat of the lake and eventually will interfere with boating, fishing, and swimming by growing completely to the surface in thick, dense stands. Because it lacks specific predators, pathogens, and parasites it can out-compete and displace native vegetation.

Application Of Diquat Herbicide To Control Curly-Leaf Pondweed

To control the Curly-Leaf Pondweed found in our lake, PLM applied the aquatic herbicide Diquat to the affected areas on May 17.

Diquat is a fast-acting herbicide that works by disrupting cell membranes and interfering with photosynthesis. It does not move throughout the plants, so it will kill only parts of the plants that it directly contacts. Following treatment, plants will die within a week. Diquat binds with sediment it is not biologically available. It is photodegradable and slightly biodegradable. It is usually detectable in the water column for less than a day to about 35 days after treatment. Because of its persistence and very high affinity for soil, diquat does not leach into groundwater.

The Wisconsin Department of Natural Resources has reported that (a) field studies identified no significant short or long-term impacts on fish and other aquatic organisms in lakes or ponds treated with Diquat and (b) the bioconcentration factors measured for Diquat in fish tissues are low and, therefore, bioconcentration is not a concern with Diquat.¹

REMINDER ABOUT LAKE-FRIENDLY YARD MAINTENANCE

Please remember that the following simple yard maintenance practices, by reducing or eliminating pollutants in runoff, can help to keep our lake water safe for people, pets, and wildlife.

1. Lawn and Garden Watering. Soils, yard wastes, over-watering, and garden chemicals become part of the runoff mix that winds its way through streets, gutters, and storm drains and into the lake. For example, over-watering wastes water and can increase the amount of pollutants flowing into the lake. Don't over-water. Conserve water by using irrigation practices such as drip irrigation, soaker hoses, or micro-spray systems. Avoid watering areas that drain into the lake.
2. Mowing and Natural Vegetation Zones. You can lessen the amount of fertilizer, fuel, and energy your property requires by reducing the amount of mowed lawn and allowing native vegetation to grow. Equally important, creating or maintaining natural vegetation zones around the lake will help intercept runoff, as well as infiltrate, filter, and treat runoff.
3. Plant Selection. Lessen lawn area by planting gardens or use low-growing native sedges to mimic lawn. Selecting native plants and grasses lessens the need for watering and pesticides as they are typically more drought-tolerant and pest resistant.
4. Fertilizer Application. Fertilizers applied to lawns and landscaped areas can contaminate ground and surface water, and harm beneficial insects. In addition, phosphorus, a chemical in most fertilizers, is one of the leading causes of diminished water quality in lakes. If you feel your lawn must be fertilized, use one of the fertilizers available with no phosphorus. (A popular brand is Jonathan Green's "Green Up No Phosphorus Formula Lawn Fertilizer", and it is available at Walmart in Angola.)

¹ "Diquat Chemical Fact Sheet", Wisconsin Department of Natural Resources, 2018, Madison, WI

5. Pesticides. Instead of pesticides, use pest management involving physical controls such as barriers or traps, biological controls (e.g., green lacewings that eat aphids), and bacterial insecticides (e.g., bacillus thuringiensis that kill caterpillars). Chemical control should be considered a last resort. The following are the least harmful: dehydrating dusts (e.g., silica gel or diatomaceous earth), insecticidal soaps, boric acid powder, horticultural oils, and pyrethrin-based insecticides. If you must use a pesticide, use one that is specifically designed to control your pest and use only as directed. The insect should be listed on the label. (Many studies have shown that approximately 90% of the insects on lawns and gardens actually are not harmful.) Rinse empty pesticide containers and dispose of rinse water per the instructions on the product container. Dispose of empty rinsed containers in the trash.
6. Pet Waste. Pet waste left on the ground can be carried away by runoff, contributing bacteria, parasites, and viruses to the lake. Pet waste does not fertilize the ground and can be the cause of significant pollution that presents health risks to people and pets. To properly dispose of animal waste, use newspaper, bags, or pooper-scoopers to pick up the waste. Place wrapped pet waste in the trash or unwrapped in a toilet. Never discard pet waste in the lake!
7. Yard Scraps. Leaves, grass clippings, and tree trimmings can clog catch basins and storm drains, increasing the risk of flooding. Yard scraps that enter lakes absorb oxygen as they decompose, straining or killing aquatic life. Use approved containers for trash-hauler pickup of lawn scraps, do your own composting, or take scraps to a landfill that composts.