Pine Canyon Lake Association

Lake Management News

July 25, 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 July 2023 and provides a tip for PCL property owners about considering a natural shoreline.

WORK PERFORMED BY PLM IN JULY 2023

Algaecide Treatment Of Starry Stonewort

As we reported in the June edition of *Lake Management News*, PLM observed during their June Aquatic Vegetation Assessment Survey a more than five-acre infestation of invasive Starry Stonewort (SSW) was observed. 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.

Figure 1: Starry Stonewort

Starry Stonewort

Therefore, PLM recommended treating five to seven acres with SeClear G. SeClear G is manufactured by SePRO, the same company that manufactures the ProcellaCOR that has been used in our lake to control Eurasian Watermilfoil. SeClear G is not only an algaecide but also includes minerals to bind phosphorous.

On July 19, Jason Broekstra of PLM applied the treatment and, in the course of doing so, discovered that the SSW was much more prevalent than expected and is trying to outcompete native plant growth. So, he expanded the treatment area to reduce the density of SSW, thus improving the habitat for native plants to grow. PLM will continue to monitor SSW and provide recommendations accordingly.

Observations

Jason reported that he also made the following observations during his work in July:

- No Curly-Leaf Pondweed.
- No Eurasian Watermilfoil.
- Good water clarity.
- Strong native plant diversity.
- Some filamentous algae blooms under the surface waters.

Jason told us that filamentous algae blooms are not uncommon and weather conditions have promoted blooms on many lakes this spring and summer. He further commented that:

- The blooms are a native green family alga (*spirogyra*) that does not produce toxins like blue-green algae.
- Any blooms that were present in the areas treated for Starry Stonewort will be controlled by the application of SeClear G and copper sulfate.

Figure 2: Spirogyra

Spirogyra

PLM WORK PLANNED FOR AUGUST

During PLM's next visit in August, they will collect water quality samples and spot-treat small stands of Phragmites.

Phragmites (*phragmites australis*) is a wetland plant that could form a ring around the lake, displacing beneficial native wetland vegetation and decreasing the value of the lake's wetland areas for wildlife, while impairing visual and recreational access for residents.

Figure 3: Phragmites

Phragmites

JULY TIP: CONSIDER A NATURAL SHORELINE

One way property owners can help keep our lake healthy is by using ecological principles to assess, design, construct and maintain natural shorelines. PCL property owners should consider natural shorelines.

Natural shorelines are buffers of native plants that grow near shorelines. Ecologists, water quality specialists, land planners, and lake management professionals all agree

that a naturally-vegetated buffer strip along the periphery of a lake is helpful to the health and quality of the water body and provides benefits that include:

- holding soil in place with either deep or laterally extensive root systems,
- absorbing and lowering energy from waves created by wind or boats,
- slowing down water runoff from a sloping yard and absorbing the extra nutrients (like those from fertilizers) and pollutants in surface runoff before they reach the lake,
- improving habitat quality for fish, waterfowl, and other aquatic life by creating shade and providing food close to the water's edge,
- reduce mowing and lawn maintenance,
- maintaining native vegetation sustains natural biodiversity and might help keep out nuisance species like the invasive purple loosestrife and phragmites.

Lawns don't make very good buffers. With runoff, short grass blades bend and do not serve as a very effective filter. Tall grass that stays upright with runoff is a better filter. Native plants like sedges and rushes have extensive root systems and are better at anchoring the soil in place and stabilizing the shoreline. Also with short ground cover, ground temperatures increase in summer, evapotranspiration increases and results in drying conditions, reducing habitat for frogs and shoreline-dependent animals.

The concept of a natural shoreline buffer is fairly simple. The buffer generally should be comprised of the type of vegetation that naturally exists in a shoreline, or riparian, setting. Also, there is a book that provides great guidance for natural shorelines, "Lakescaping for Wildlife and Water Quality" by Carrol Henderson ($11.67 at Amazon).