



Characteristics of a Healthy Lake and How Silver Lake Compares

Water Transparency

Water transparency in Silver Lake improved dramatically between 2014-2016, following aerator installation. Water clarity typically improves with decreases in sediment and nutrient transport as well as reduced algal growth.

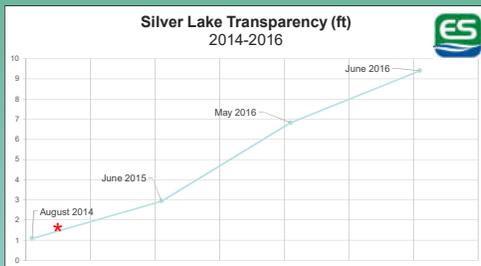


Table 1. Silver Lake Water Clarity (Secchi Disk) in measurements of feet. * Indicates installation of aeration system in September 2014.

Nutrients Entering from the Watershed

Nutrients are substances that provide nourishment essential for growth and the maintenance of life. Nutrients include phosphorous and nitrogen, two of the major nutrients that contribute to algae blooms when they occur in excess.

Nutrient loading, or the process of nutrients being transported by stormwater runoff into a body of water, can cause nuisance algal growth which may release harmful toxins. Limiting the amount of stormwater runoff using best management practices such as rain barrels, limited lawn mowing and fertilization, and permeable surfaces can help protect our lake ecosystems from harmful algae.

Clean Water Tips: How can you fertilize and help keep our waters clean?

- Use fertilizer sparingly.
- Don't fertilize before a rain storm.
- Use organic fertilizers that release nutrients more slowly.
- Have your soil tested before applying fertilizers to your lawn and gardens.

Few, if any, Blue-Green Algae Blooms with Little or No Algal Toxin

Blue-green algae (measured as Chlorophyll a, a pigment produced by blue-green algae) and algal toxins (microcystin) have decreased dramatically over the last three years, following addition of aerators to the lake. These metrics are both recorded as concentrations, in parts per billion (ppb). An example of 1 ppb is a drop of water in an Olympic-sized swimming pool.

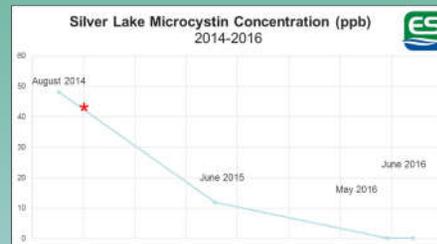


Table 2. Silver Lake Microcystin Concentration in parts per billion (ppb). * Indicates installation of aeration system in September 2014.

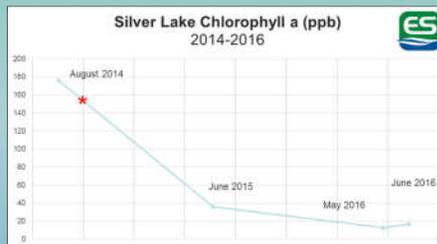


Table 3. Silver Lake Chlorophyll a Concentration in parts per billion (ppb). * Indicates installation of aeration system in September 2014.

Stable and Naturalized Shoreline

A stable, naturalized shoreline helps prevent erosion from the lake's surrounding land. Erosion transports sediments and nutrients to the water, making the lake not only murkier but also fueling the growth of blue-green algae

Diverse and Healthy Fishery

When a lake is healthy, the life within it thrives as well. Diverse fish populations can, in turn, help keep the ecosystem balanced and support recreational fishing opportunities.

Diverse and Healthy Rooted Aquatic Plant Community

Aquatic plants in Silver Lake are important because they:

Provide food and habitat for birds and aquatic life in the lake



Provide cover for young fish and amphibians



Increase oxygen in the lake

Help protect shorelines from erosion and improve water clarity by stabilizing sediments



Improve water quality by using nutrients like phosphorous and nitrogen that might otherwise help fuel excessive growth of undesirables.