

Surface Water Quality Update 2022

Tracking Lake Health

Eight Burnsville lakes are monitored by volunteers through the Metropolitan Council's Citizen-Assisted Monitoring Program (CAMP). Volunteers visit their lake every two weeks from April through October to measure water clarity and to collect samples for algae and nutrient testing.

Water clarity is a measurement of how deep sunlight reaches into the water, which is influenced by the density of floating particles (like algae). When nutrients such as phosphorus are at high levels, the density of the tiny algae increases, which in turn reduces water clarity.



Water clarity affects aquatic plant growth, the amount of oxygen in the water and water temperature. These factors are important for lake health. For example, poor clarity means less light and less photosynthesis by aquatic plants, leading to less oxygen for fish and other aquatic animals.

Burnsville Lake Clarity Report Card						
LAKE	UNIT	2019	2020	2021	3-YR AVG	GOAL
Alimagnet ^a	feet	3.6	4.0	4.5	4.0	4.3
Crystal ^b	feet	7.2	8.4	8.3	8.0	6.9
Earley	feet	6.6	6.9	7.2	6.9	5.6
Keller ^a	feet	4.3	4.0	4.9	4.4	3.3
Lac Lavon ^b	feet	13.3	14.0	13.1	13.5	11.8
Sunset Pond	feet	3.6	*	5.5	*	5.6
South Twin	feet	6.2	5.8	4.9	5.6	4.6
Wood Pond	feet	6.9	7.5	9.4	7.9	5.6

On the 2021 Minnesota Impaired Waters List for aquatic recreation^a and aquatic consumption^b

**Not enough data available*

The above table includes data gathered by CAMP volunteers. Each number shows how deep the Secchi disk (pictured left) was visible when lowered into the water which is a measurement of lake clarity. The three-year averages show that most monitored lakes in Burnsville are at or near their goals. These results and other lake data guide the City's decisions about surface water quality projects.

Learn more about Burnsville lakes, data collection and monitoring at burnsvillemn.gov/naturalresources.

Program Highlights

The water quality fee on water bills supports surface water quality monitoring and improvement projects.



Keeping Streets and Water Clean

Street sweeping can help protect water quality by removing materials that would become pollutants in our waterways. Phosphorus, nitrogen and solids are the primary pollution targets, in addition to periodic project or targeted sweeping.

The City of Burnsville conducts street sweeping twice a year during the critical fall and spring seasons.

Spring target – Remove the sand used to keep roads safe during winter and trash/debris:

- Excess sediment clouds water, which disrupts animals and natural vegetation, and can carry nutrients like phosphorus into water bodies
- Trash and debris clog storm drains and pollute water

Autumn target – Leaves and trash/debris:

- Trash & leaves clog storm drains causing flooding
- Leaves release excess nutrients in stormponds and lakes which can cause water clarity issues and algae blooms

Restoring Native Plants to Keller Lake

A diverse and healthy aquatic native plant community is important for good water quality. Native plants contribute to overall water quality through reduction in nutrients and preventing resuspension of sediment. Plus, they provide habitat for fish and other critters!

What is the status of native plants at Keller Lake? Annual plant surveys show very low native aquatic plant diversity with only two native species recorded since 2014. In 2020, the City designed a project to test the effectiveness of transplanting native plants directly into the lakebed to restore diversity. Ten "plots" were initially planted and monitored throughout the growing seasons of 2020-2022. Overall the methods were successful, as many of the plants have not only survived but begun spreading through roots or seeds. Another ten plots were created in 2022.

The native species that were chosen and transplanted are not known to create nuisance conditions, unlike invasive aquatic plants like curlyleaf pondweed. Ideally the new native plants will grow enough to provide benefits, as well as some competition for invasive species which are actively managed on Keller Lake.

To learn more about aquatic plants, visit burnsvillemn.gov/plants.