

# Surface Water Quality Update

Fall 2019

## Tracking Lake Health

Eight Burnsville lakes are monitored through a volunteer program called the *Citizen-Assisted Monitoring Program* (CAMP), which is managed by the Metropolitan Council. From April through October, volunteers visit their lake every two weeks to measure water clarity, record temperature, and collect samples for algae and nutrient testing.

Measuring lake clarity indicates how deep sunlight reaches into the water. Less light means less photosynthesis by underwater plants, which means less oxygen for fish and other aquatic animals.

Density of microscopic plankton algae influences lake clarity. In turn, nutrient levels in the water, especially phosphorus, determines plankton algae density.

The clarity data from CAMP volunteers is summarized in the table to the right. The three-year

clarity averages show that most monitored lakes in Burnsville are at or near their goals. These results along with other lake data guide the City's decisions about surface water quality programs and projects.

To learn more about the status of Burnsville lakes and the data that is collected, visit the Natural Resources webpage at [www.burnsvillemn.gov](http://www.burnsvillemn.gov).

For more CAMP lake data visit the water quality management section of [www.metrocouncil.org](http://www.metrocouncil.org).



Disk used to measure water clarity

Burnsville Lake Clarity Report Card (depths shown in meters and feet)						
LAKE		2016	2017	2018	3-YR AVG.	GOAL
Alimagnet*	meters	0.7	0.7	0.6	0.7	1.3
	feet	2.3	2.3	2.0	2.2	4.3
Crystal	meters	2.2	2.3	2.6	2.4	2.1
	feet	7.2	7.5	8.5	7.8	6.9
Earley	meters	1.7	1.4	2.0	1.7	1.7
	feet	5.6	4.6	6.6	5.6	5.6
Keller*	meters	1.0	0.9	0.7	0.9	1.8
	feet	3.3	3.0	2.3	2.8	5.9
Lac Lavon	meters	4.4	4.4	4.3	4.4	3.6
	feet	14.4	14.4	14.1	14.3	11.8
Sunset Pond	meters	1.8	2.4	1.7	2.0	1.7
	feet	5.9	7.9	5.6	6.5	5.6
South Twin	meters	1.9	2.2	1.8	2.0	1.4
	feet	6.2	7.2	5.9	6.5	4.6
Wood Pond	meters	1.8	1.3	1.2	1.4	1.7
	feet	5.9	4.3	3.9	4.7	5.6

\* On the 2019 Minnesota Impaired Waters List for aquatic recreation



Alum treatment at Wood Pond in fall 2018

## Program Highlights

The water quality fee on water bills supports surface water quality monitoring and improvement projects such as storm pond cleanout and removal of invasive plants in lakes.

### Alum Treatments

To improve water quality in Burnsville, aluminum sulfate (alum) treatments were conducted at Wood Pond in fall 2018 and at Keller Lake in spring 2019. Alum treatments reduce the amount of phosphorus in a body of water. Phosphorus can originate from stormwater runoff, fertilizer, erosion, and other sources. Too much phosphorus leads to algae growth and poor water clarity. Alum is added to the water and attaches to phosphorus, making it unable to be used by algae. The benefits of an alum treatment last for multiple years.

### Slope Stabilization Study

Erosion, natural and human caused, adds sediment and nutrients to lakes and ponds. Excess sediment and nutrients lead to algal blooms and is harmful to aquatic plant and animal life. To address the effects of erosion, the City completed a slope stabilization study that identified problem slopes and prioritized future erosion control projects. With this knowledge the City can work to better prevent negative impacts to water quality associated with erosion.

### Grant Opportunity for Burnsville Residents

Residents can help improve water quality by installing a natural shoreline or raingarden on their property, with financial assistance through the Burnsville Neighborhood Water Resources Enhancement Grant program. Applications are due in early May of each year. More information can be found at [www.burnsvillemn.gov/WQgrant](http://www.burnsvillemn.gov/WQgrant).



Grant program helps residents fund raingarden projects

Before

After



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