



# 2021 Citizen Assisted Monitoring Program

## Overview

Each year, the City of Lakeville participates in Met Council’s Citizen Assisted Monitoring Program (CAMP). CAMP’s purpose is to track local water quality trends using resident volunteers and City sponsors. In 2021, lake consultant Blue Water Science was contracted to complete sampling events.

The program is centered on bi-weekly water sampling on Marion, Orchard, Kingsley, Lee, Valley and East lakes. Samples are analyzed for indicators of algae growth potential (nitrogen, phosphorus and chlorophyll-a). At each sampling event, surface water temperature and water transparency are also observed.

For each monitoring parameter, the Met Council assigns a unique grade based on the lake’s ability to meet state water quality standards. Grades of A and B represent lakes that are above average in terms of state water quality standards, where grades of D and F represent lakes below average. The table below reflects the grades assigned to Lakeville lakes over the past three years of monitoring.



## Practices

- ◆ Water quality monitoring
- ◆ Public education and engagement

## Benefits

- ◆ Informs City water quality improvement initiatives
- ◆ Water quality protection

## Partners

- ◆ Metropolitan Council
- ◆ Local lake residents
- ◆ Black Dog Watershed Management Organization
- ◆ Blue Water Science

## Timeline

- ◆ Bi-weekly April—October

## Historic Transparency Averages

Lake	Year	Transparency Avg (m)	Grade
Kingsley*	2021	1.9	A
	2020	N/A	N/A
	2019	3.4	A
East	2021	0.6	F
	2020	0.8	D
	2019	1	D
Lee	2021	1.5	C
	2020	1.3	C
	2019	2.5	B
Orchard	2021	2.6	B
	2020	2.2	B
	2019	2.4	B
Marion	2021	2.6	B
	2020	2.4	B
	2019	2.1	C
Valley	2021	1.3	C
	2020	1	D
	2019	0.7	D

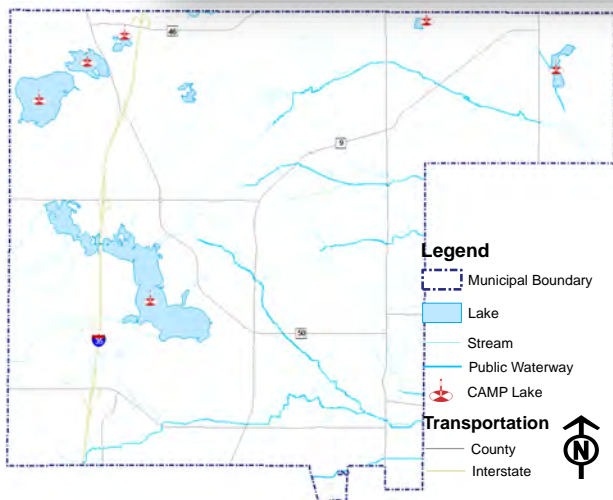
\* Kingsley Lake transparency levels are measured at lake bottom —due to historically low levels, the 2021 reading can be misleading

2021 was the 23rd year the City sponsored the CAMP!

## Funding

City of Lakeville: \$11,290  
 Black Dog WMO: \$760

**Project Cost: \$12,050**





(Below) The wetland on the southeast side of Orchard Lake absorbs nutrient loads from upstream and with the help of aeration, nutrients like phosphorous, are kept out of Orchard Lake.



(Above) Water quality appears to be steadily improving in Valley Lake. In 2021, the City transitioned the public swimming beach to a native pollinator garden. As numerous geese often used the beach as a congregation point, this change may be pivotal for improved lake health.



(Above) Lee Lake is home to the unique lotus flower. The plant is similar to a water lily; however, the flower and its leaves actually grow above the water surface, rather than floating atop the water surface.



(Above) Historically low lake levels were observed on many lakes in 2021, due to severe drought conditions. Lake Marion was observed feet below normal water level. Normal water levels typically submerge the last stair of this fishing access point.



(Left) With an exceptional water quality history dating back to when monitoring began in 1993, staff did not monitor Kingsley Lake in 2020. In 2021, historically low lake levels made transparency levels seem much lower than normal—and made aquatic plants thrive!