

Lake Augusta

2024 Water Monitoring Report



Watershed

Lake Augusta is located in the City of Mendota Heights, within the Lower Mississippi River Watershed Management Organization (LMRWMO). Land use within the watershed is primarily institutional (cemetery), commercial, and residential (low and high density). Lake Augusta was placed on Minnesota’s 303(d) List of Impaired Waters in 2010 for aquatic recreation due to excess nutrients (phosphorus).

Lake Details

- Max Depth: 33 feet
- Watershed Size (shown): 420 acres
- Major Watershed: Mississippi River
- MPCA Lake Classification: Deep
- Met Council Lake Grade (2024): **F**



Monitoring

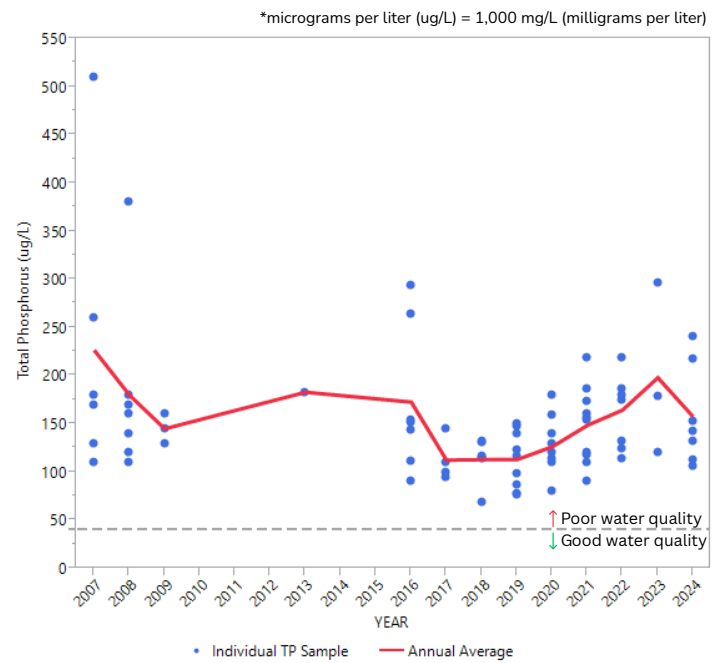
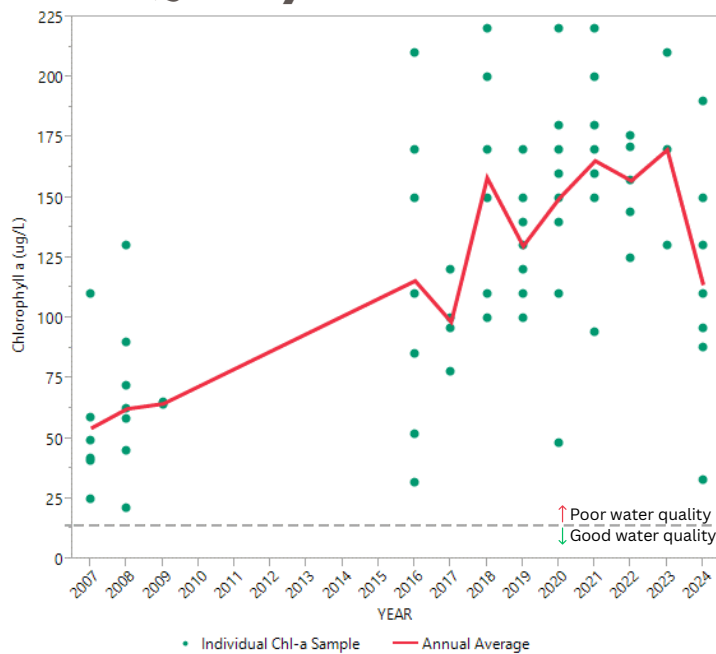
Lake Augusta continues to not meet the MPCA’s deep lake water quality criteria. Since 2016, the LMRWMO has monitored the lake through the Metropolitan Council’s CAMP program. In 2022, more intensive water quality monitoring was undertaken by an environmental consulting firm in order to collect a broader set of monitoring parameters (chloride, pH, specific conductance, temperature, total suspended solids, and turbidity) at various depths in the water column.

Water Quality

Monitoring data from 2024 found that none of the water quality standards were met. Total phosphorus average and minimum increased from 2023, whereas the chlorophyll-a average and minimum actually decreased. Secchi readings remain very poor which is consistent with previous monitoring efforts. The below table shows data for 2024.

Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	14	33	190	114
Total Phosphorus (ug/L)	40	106	241	158
Secchi Depth (m)	1.4	0	0.25	0.15

Water Quality Data 2007 - 2024



Chlorophyll-a*

Chlorophyll-a is the pigment that gives plants their green color. High levels indicate excessive algae from high nutrient levels in the lake. Low chlorophyll-a levels indicate good water quality. MPCA standard is 14 ug/L (dashed line).

Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. MPCA standard is 40 ug/L (dashed line).

Watershed Projects

In 2017, the LMRWMO implemented an aluminum sulfate treatment to improve water quality which provided slight phosphorus reductions but not enough to improve water quality.

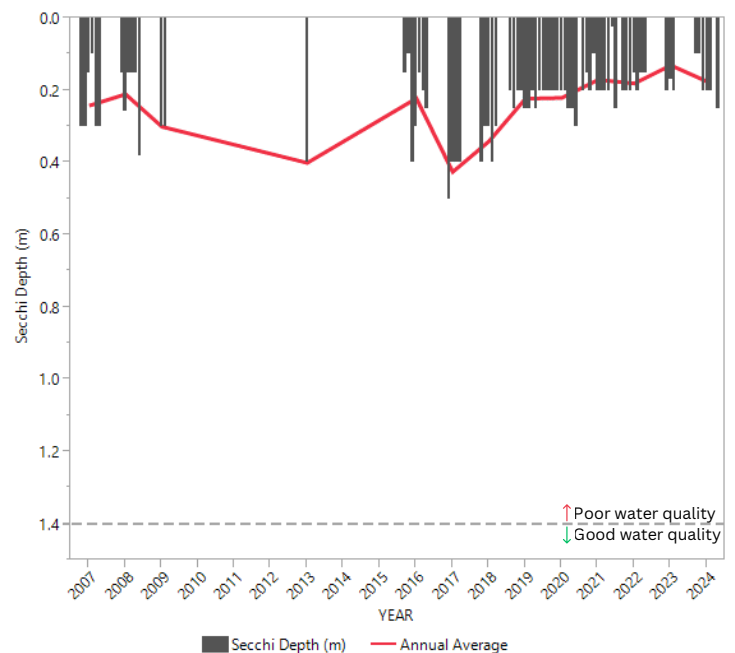
The LMRWMO and City of Mendota Heights lead a study of the lake to identify long term implementation actions to improve lake water quality. The study has shown that Double Crested Cormorants feces have a large impact on the lakes poor water quality.

The City of Mendota Heights and LMRWMO are considering potential projects or initiatives from the study for future implementation.

How can you get involved?

Anyone can help improve water quality! Installing a rain garden increases water infiltration and reduces pollution runoff that can negatively impact local water quality. The LMRWMO offers grants to residents to install rain gardens, native gardens, and native shoreline plantings as part of the Dakota County Soil and Water Conservation District's **Landscaping for Clean Water** program.

Additional Information: MN Impaired Waters Map: <https://www.pca.state.mn.us/water/impaired-waters-viewer-iwaw>
DNR Lake Finder: <https://www.dnr.state.mn.us/lakefind/index.html>
LMRWMO Contact: Joe Barten, Administrator - joe.barten@co.dakota.mn.us - 651-480-7784
LMRWMO Website: www.LMRWMO.org



Secchi Depth

A black and white secchi disc is lowered into the water until no longer visible and measures water clarity. High secchi disc depths indicate good water quality. MPCA standard is 1.4 m (dashed line).

Dickman Lake

2024 Water Monitoring Report



Watershed

Dickman Lake is located in the City of Inver Grove Heights within the Lower Mississippi River Watershed Management Organization (LMRWMO). Land use within the watershed is primarily large lot residential and highway. Dickman Lake is a private lake and is does not have any impairments.

Lake Details

Max Depth: 23 feet

Lake Size (shown): 24 acres

Major Watershed: Mississippi River

MPCA Lake Classification: Shallow

Met Council Lake Grade (2024): **D**



Monitoring

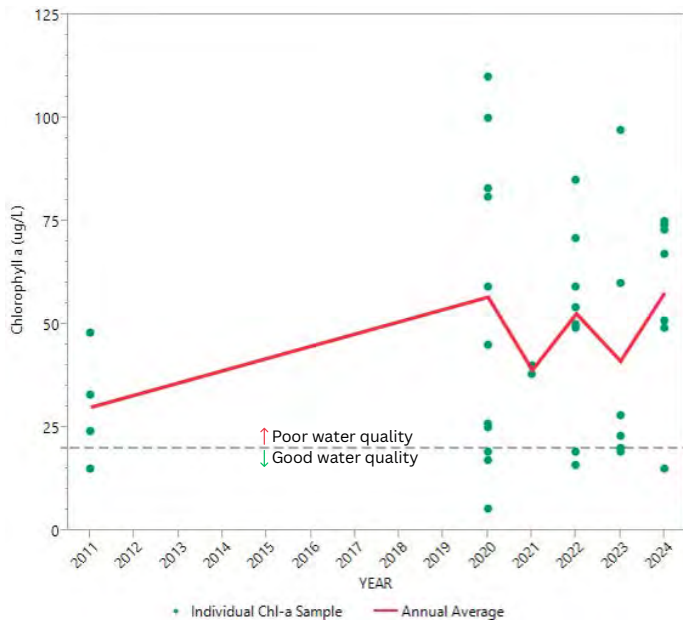
Dickman Lake is monitored on an annual basis as part of the LMRWMO’s participation in the Metropolitan Council’s Community Assisted Monitoring Program volunteer water monitoring program.-The volunteer monitors the deepest spot in the lake at two-week intervals from early June through the beginning of September. Field measurements collected include temperature and water clarity (measured with a Secchi disk), in addition to surface water samples collected for lab analyses (total phosphorus and chlorophyll-a).

Water Quality

Water quality in Dickman Lake is worse than desired. All parameters exceed the state standard, though - both chlorophyll-a and total phosphorus results show a degradation from 2023 with both parameters above the standard. Continued monitoring of this lake is recommended to strengthen trends in water quality. The below table shows the 2024 data.

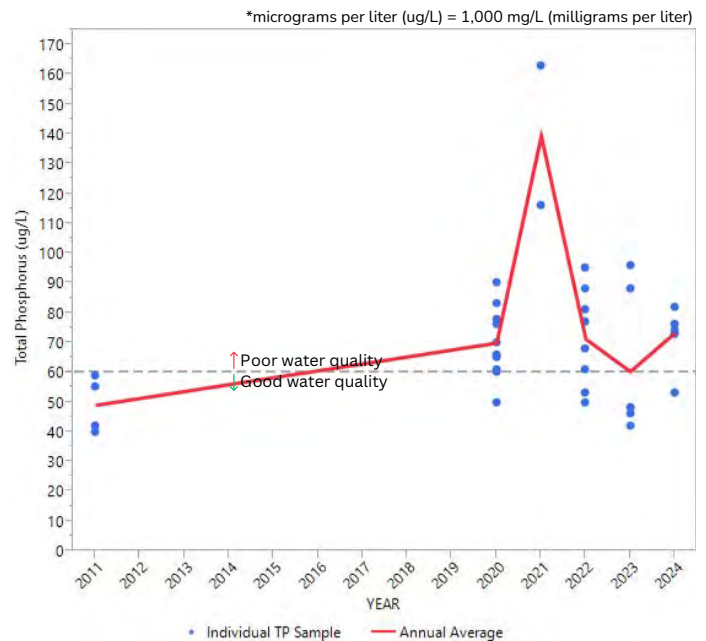
Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	20	15	75	57.71
Total Phosphorus (ug/L)	60	53	82	73.29
Secchi Depth (m)	1	0.4	0.7	0.49

Water Quality Data 2011 - 2024



Chlorophyll-a*

Chlorophyll-a is the pigment that gives plants their green color. High levels indicate excessive algae from high nutrient levels in the lake. Low chlorophyll-a levels indicate good water quality. MPCA standard is 20 ug/L (dashed line).

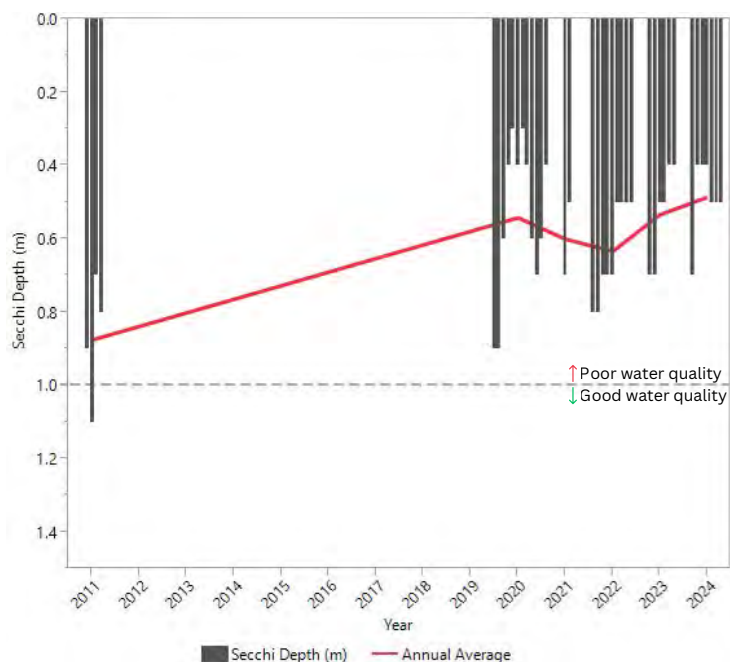


Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. MPCA standard is 60 ug/L (dashed line).

How can you get involved?

Anyone can help improve water quality! Installing a raingarden increases water infiltration and reduces pollution runoff that can negatively impact local water quality. The LMRWMO offers grants to residents to install raingardens, native gardens, and native shoreline plantings as part of the Dakota County Soil and Water Conservation District's **Landscaping for Clean Water** program.



Secchi Depth

A black and white secchi disc is lowered into the water until no longer visible and measures water clarity. High secchi disc depths indicate good water quality. MPCA standard is 1 m (dashed line).

Interstate Valley Creek 2024 Water Monitoring Report

Watershed

The Interstate Valley Creek watershed is located in the cities of Mendota Heights, West St Paul, and Sunfish Lake within the Lower Mississippi River Watershed Management Organization (LMRWMO). Land use within the watershed is primarily low density residential, with pockets of commercial, institutional, and parkland. Interstate Valley Creek was placed on Minnesota's 303(d) List of Impaired Waters in 2014 for impacts to aquatic life due to excess *E. coli* bacteria.

Stream Details

Mainstem Length: 2.5 miles

Watershed Size (shown): 3,272 acres

Major Watershed: Mississippi River

Impairment: *E. coli* (Miss. River) (2014)

Years Monitored: 5



Monitoring

A volunteer monitor takes water samples from one location (red dot above) from Interstate Valley Creek for lab analysis. The purpose is to identify stream reaches that contribute pollutants and establish baseline stream water quality conditions. Monitoring also helps track the impact of future watershed projects that stabilize banks or treat stormwater in the watershed to reduce the in-stream pollutant load (sediment and phosphorus).

Interstate Valley Creek was monitored six times in 2024 - monthly April through October. The water was tested for the following pollutants: chloride (salt), phosphorus (nutrients), total suspended solids (sediment), *E. coli* (bacteria), nitrates, and chlorophyll-a. Field measurements for temperature, dissolved oxygen, pH, and water transparency were also collected for each effort.

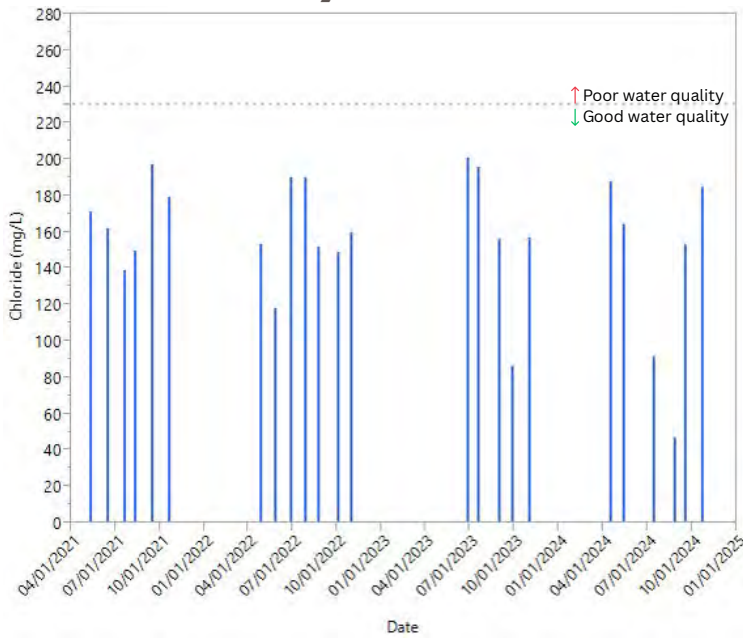
Water Quality

Interstate Valley Creek shows low levels of chloride, below the state standard. Phosphorus levels have averaged below the standard since 2020, though individual exceedance does occur throughout the monitoring season. Total suspended solids are consistently below the standard. *E. coli* levels are generally within the state MPCA standard for individual samples though more data is needed in the future.

Water temperature is below 71 degrees Fahrenheit all season and transparency is high during baseflow (low flow) conditions. Chlorophyll-a and nitrate levels are consistently below applicable standards.

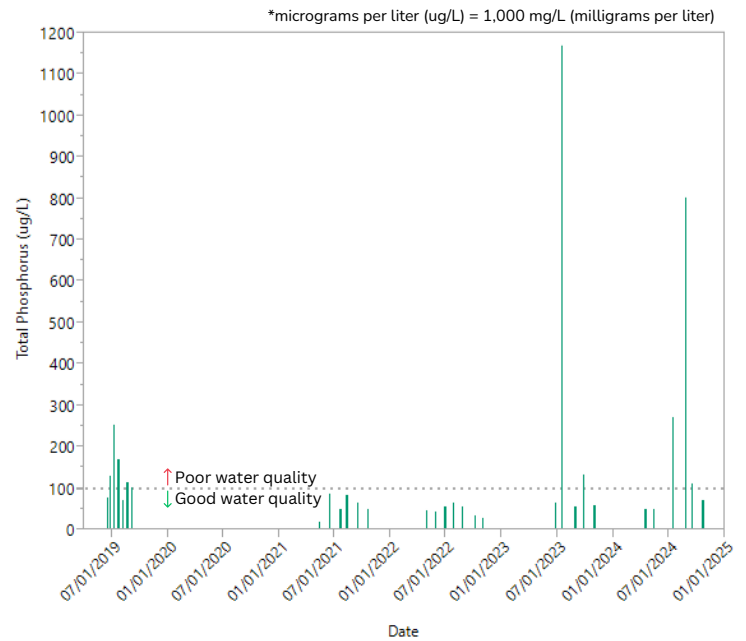


Water Quality Data 2019 - 2024



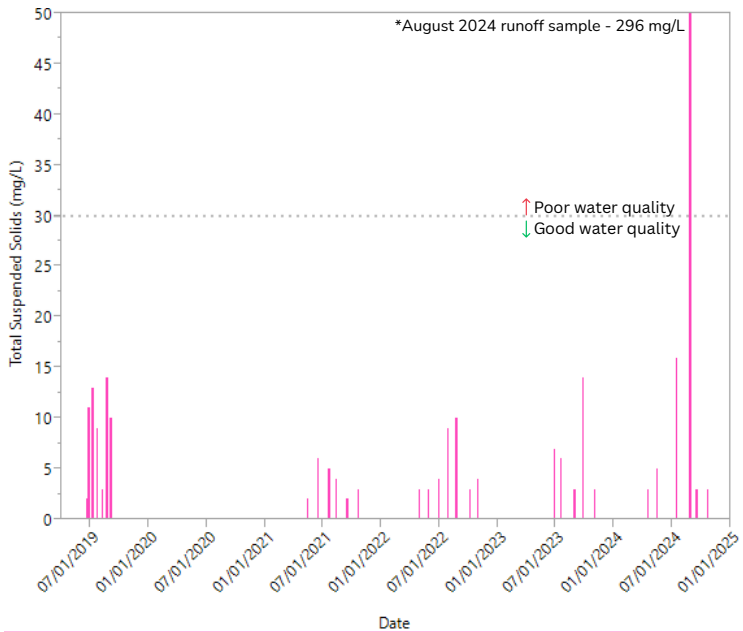
Chloride

Elevated chloride concentrations can be toxic to some aquatic life – altering community composition, as well as affecting mortality and reproduction capabilities. State standard for acute toxicity is ≤ 230 ug/L (dashed line).



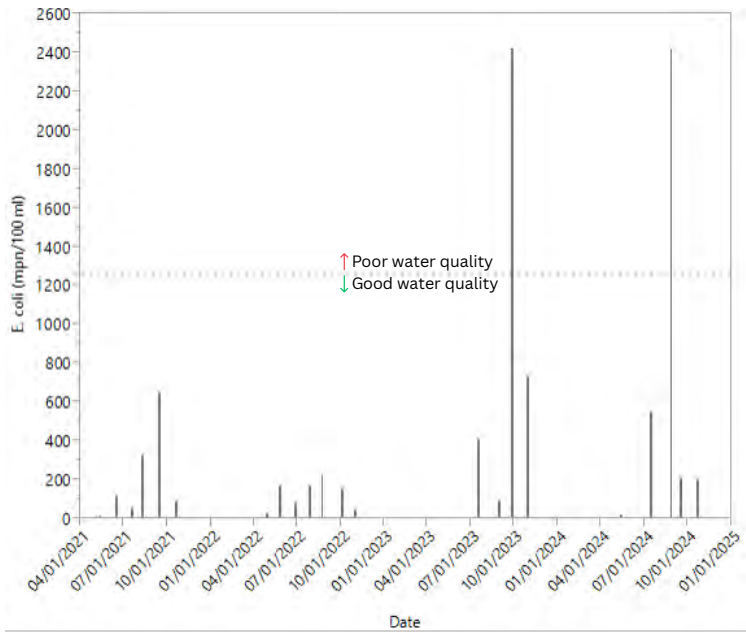
Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. State standard is 100 ug/L (dashed line).



Total Suspended Solids

A measurement of all suspended particles in the water. Potential sources include field and streambank erosion and stormwater runoff. Excessive levels can impair water quality and usability. State standard is ≤ 30 ug/L (dashed line).



E. coli

Escherichia coli (*E. coli*) bacteria is a good indicator that disease-causing pathogens may be present in water. A standard of $\leq 1,260$ MPN/100mL (dashed line) has been established (MPN = most probable number of organisms).

How can you get involved?

Anyone can help improve water quality! Installing a raingarden increases water infiltration and reduces pollution runoff that can negatively impact local water quality. The LMRWMO offers grants to residents to install raingardens, native gardens, and native shoreline plantings as part of the Dakota County Soil and Water Conservation District's **Landscaping for Clean Water** program.

Additional Information: MN Impaired Waters Map: <https://www.pca.state.mn.us/water/impaired-waters-viewer-iwv>
DNR Lake Finder: <https://www.dnr.state.mn.us/lakefind/index.html>
LMRWMO Contact: Joe Barten, Administrator - joe.barten@co.dakota.mn.us - 651-480-7784
LMRWMO Website: www.LMRWMO.org

Ivy Falls Creek

2024 Water Monitoring Report



Watershed

The Ivy Falls Creek watershed is in the cities of Mendota Heights and West St. Paul within the Lower Mississippi River Watershed Management Organization (LMRWMO). The watershed consists of the mainstem of Ivy Falls Creek and a small tributary that joins just above the falls. Land use within the watershed is primarily residential with some parkland golf course property.

Stream Details

Mainstem Length: 1.2 miles

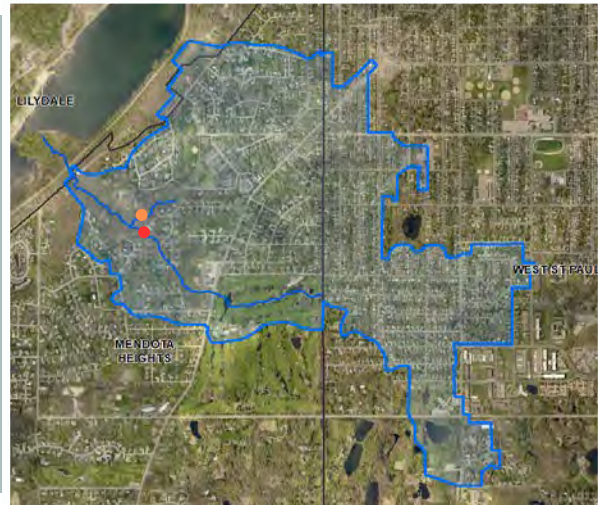
Unnamed Tributary Length: 0.2 miles

Watershed Size (shown): 746 acres

Major Watershed: Mississippi River

Impairment: None

Years Monitored: 4



Monitoring

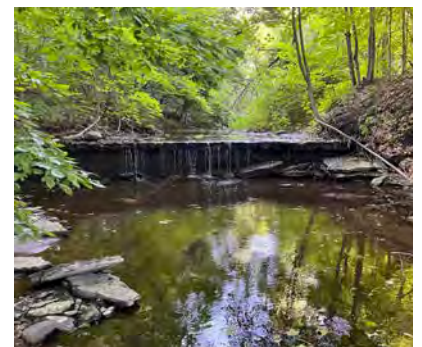
A volunteer water monitor takes water samples from Ivy Falls Creek (red dot) and an unnamed tributary (orange dot) for lab analysis. The purpose is to identify stream reaches that contribute pollutants and establish baseline stream water quality conditions. Monitoring also helps track the impact of future watershed projects that stabilize banks or treat stormwater in the watershed to reduce the in-stream pollutant load (sediment and phosphorus).

Ivy Falls Creek and the tributary were monitored seven times in 2024 - monthly April through October. The water was tested for the following pollutants: chloride (salt), phosphorus (nutrients), total suspended solids (sediment), *E. coli* (bacteria), nitrates, and chlorophyll-a. Field measurements for temperature, dissolved oxygen, pH, and water transparency were also collected for each visit.

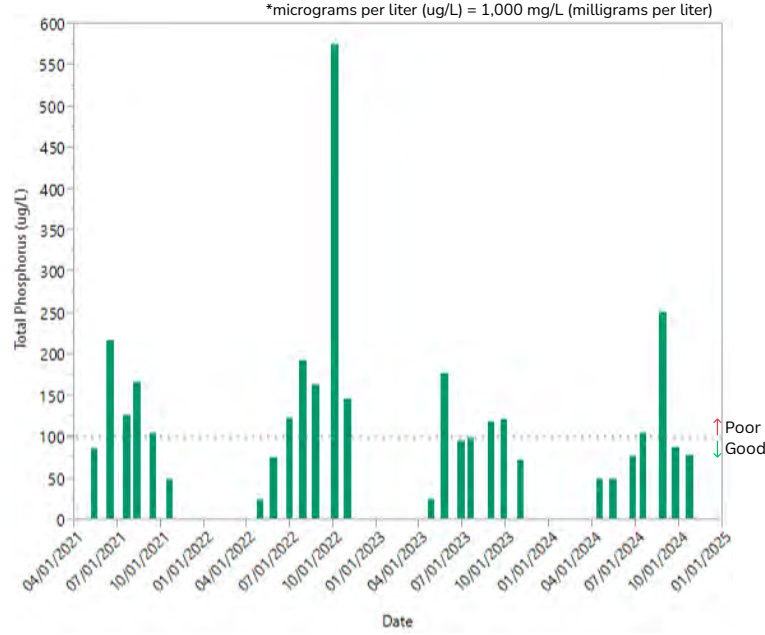
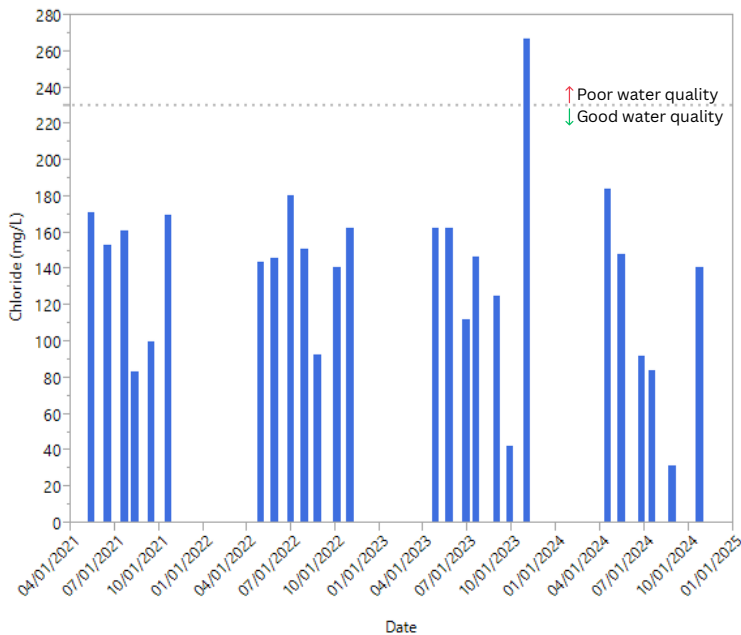
Water Quality

Ivy Falls Creek and the unnamed tributary show low levels of chloride. Phosphorus levels continue to exceed the standard with some seasonal variability. Total suspended solids are consistently below the standard, though like phosphorus, individual samples exceed it. *E. coli* levels are generally below the standard with occasional individual sample exceedances.

Water temperature is below 73 degrees Fahrenheit all season and transparency is high during baseflow (low flow) conditions. Chlorophyll-a and nitrate levels are consistently below applicable standards.



Ivy Falls Creek Mainstem Water Quality Data 2021 - 2024

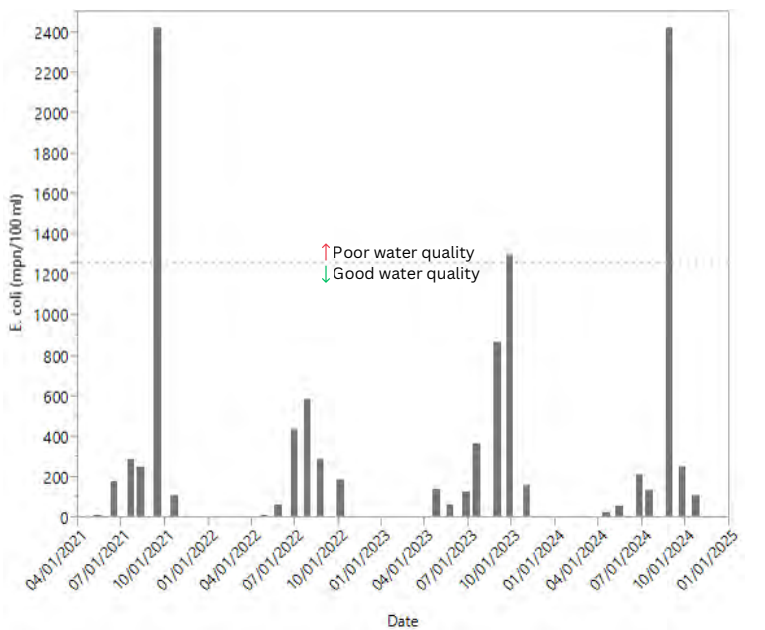
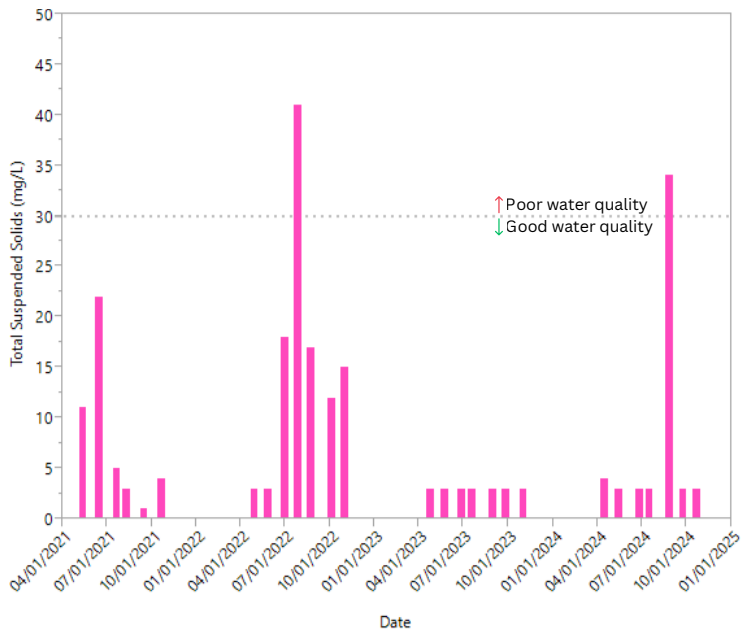


Chloride

Elevated chloride concentrations can be toxic to some aquatic life – altering community composition, as well as affecting mortality and reproduction capabilities. State standard for acute toxicity is ≤ 230 ug/L (dashed line).

Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. State standard is 100 ug/L (dashed line).



Total Suspended Solids

A measurement of all suspended particles in the water. Potential sources include field and streambank erosion and stormwater runoff. Excessive levels can impair water quality and usability. State standard is ≤ 30 ug/L (dashed line).

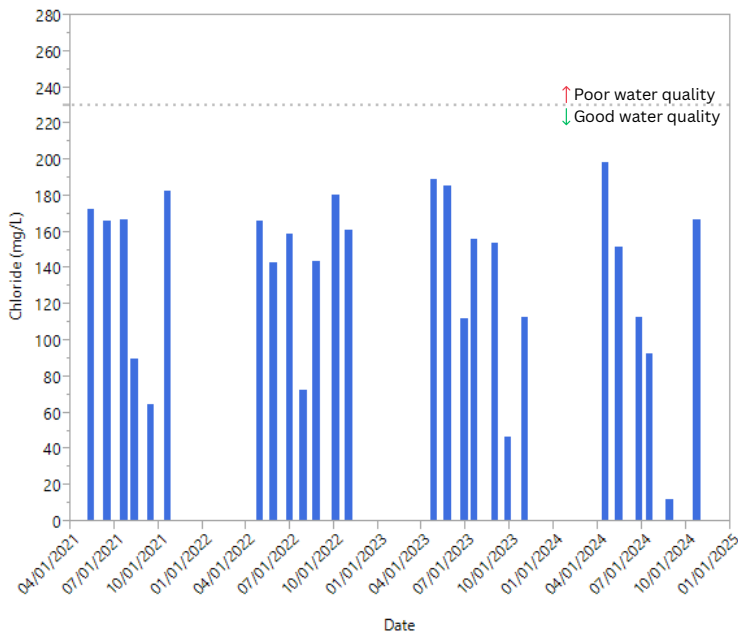
E. coli

Escherichia coli (*E. coli*) bacteria is a good indicator that disease-causing pathogens may be present in water. A standard of $\leq 1,260$ MPN/100mL (dashed line) has been established (MPN = most probable number of organisms).

How can you get involved?

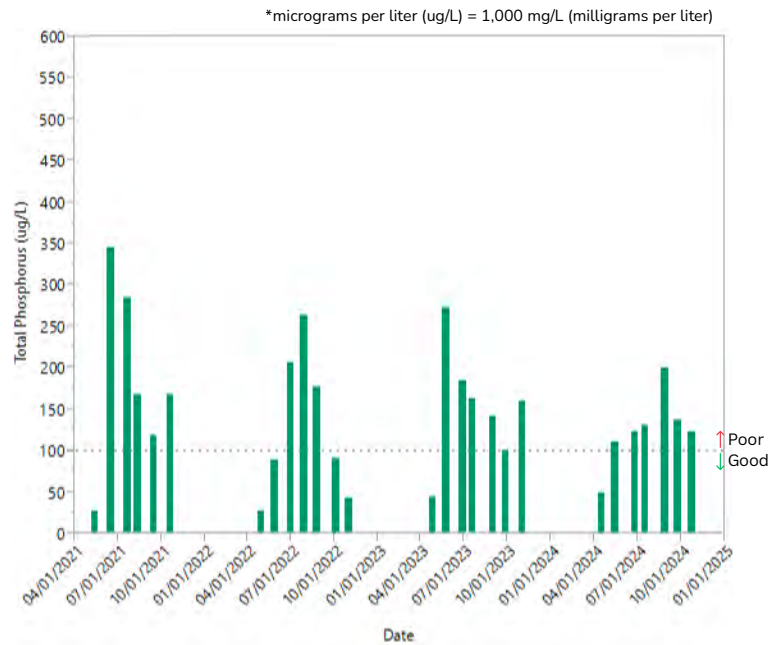
You don’t have to live on a lake to help improve water quality, **anyone can be part of the solution!** Installing a **raingarden increases water infiltration**, **decreases lawn maintenance**, and **reduces pollution runoff** that can negatively impact local water quality. The LMRWMO offers grants to residents to install raingardens, native gardens, and native shoreline plantings as part of the Dakota County Soil and Water Conservation District’s **Landscaping for Clean Water** program.

Unnamed Tributary Water Quality Data 2021 - 2024



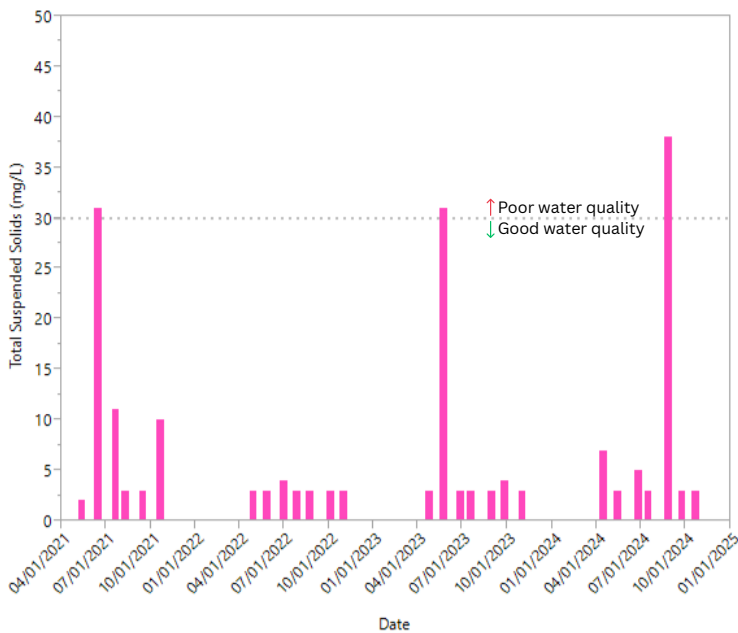
Chloride

Elevated chloride concentrations can be toxic to some aquatic life – altering community composition, as well as affecting mortality and reproduction capabilities. State standard for acute toxicity is ≤ 230 ug/L (dashed line).



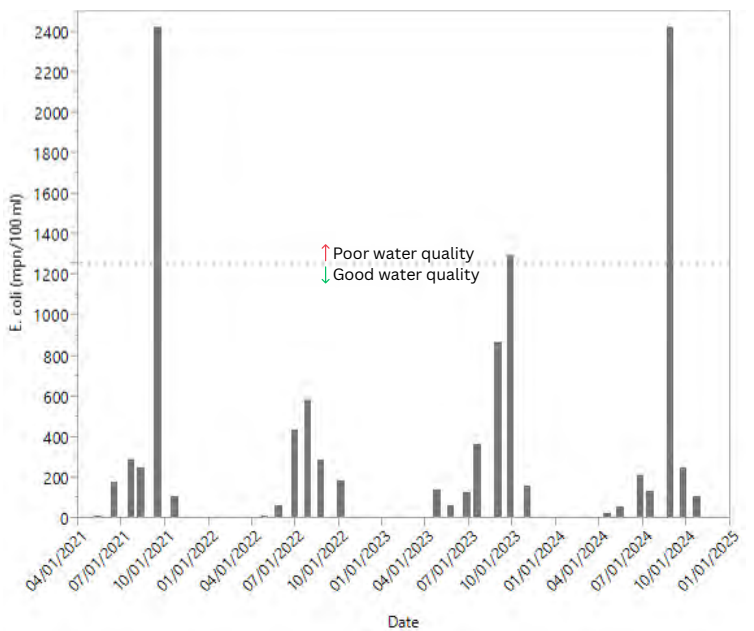
Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. State standard is 100 ug/L (dashed line).



Total Suspended Solids

A measurement of all suspended particles in the water. Potential sources include field and streambank erosion and stormwater runoff. Excessive levels can impair water quality and usability. State standard is ≤ 30 ug/L (dashed line).



E. coli

Escherichia coli (*E. coli*) bacteria is a good indicator that disease-causing pathogens may be present in water. A standard of ≤ 126 MPN/100mL (dashed line) has been established (MPN = most probable number of organisms).

Schmitt Lake

2024 Water Monitoring Report



Watershed

Schmitt Lake is located in the City of Inver Grove Heights within the Lower Mississippi River Watershed Management Organization (LMRWMO). Land use within the watershed is primarily commercial, institutional, low density residential, and parkland. The lake is not currently listed on Minnesota’s 303(d) List of Impaired Waters.

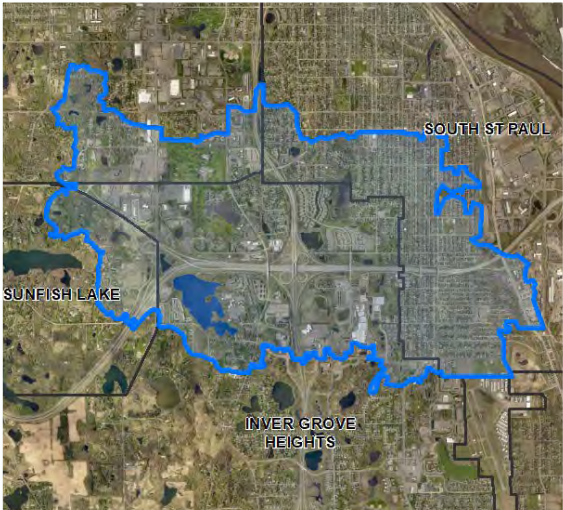
Lake Details

Max Depth: 8 feet

Major Watershed: Mississippi River

MPCA Lake Classification: Shallow

Met Council Lake Grade (2024): C



Monitoring

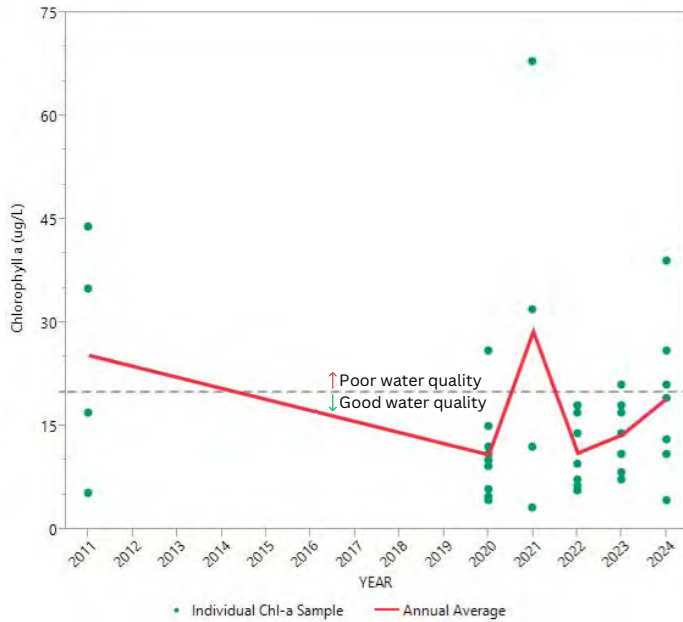
Schmitt Lake is monitored as part of the LMRWMO’s participation in the Metropolitan Council’s Community Assisted Monitoring Program volunteer water monitoring program. The volunteer monitors the deepest spot in the lake at two-week intervals from early June through the beginning of September. Field measurements collected include temperature and water clarity (measured with a Secchi disk), in addition to surface water samples collected for lab analyses (total phosphorus and chlorophyll-a).

Water Quality

Water quality in Schmitt Lake continues to be lower than desired, though continues to be closer to the state standards relative to other lakes in the watershed. Sampling data collected throughout the assessment period provides a holistic view of water quality conditions over time. All parameters exceed the state standard and have averages that are worse than samples collected in 2023. The below table shows the 2024 data.

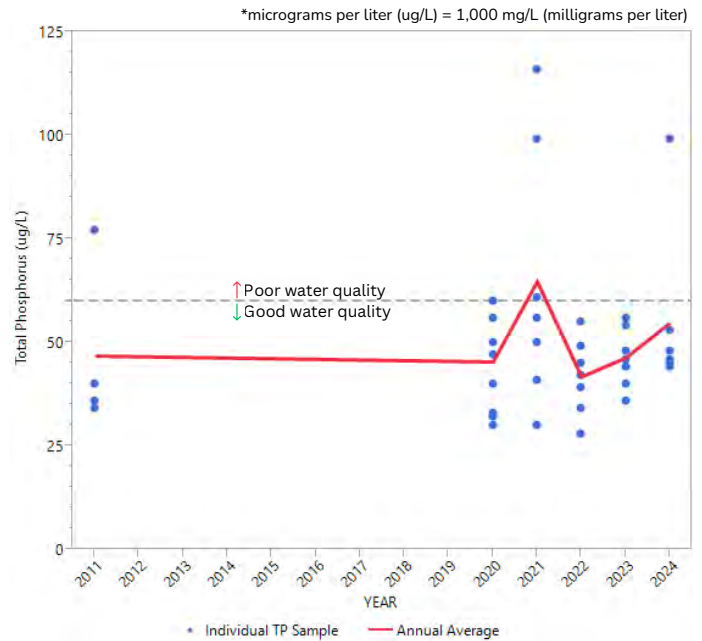
Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	20	15	75	57.71
Total Phosphorus (ug/L)	60	53	82	73.28
Secchi Depth (m)	1	0.4	0.7	0.49

Water Quality Data 2011 - 2024



Chlorophyll-a*

Chlorophyll-a is the pigment that gives plants their green color. High levels indicate excessive algae from high nutrient levels in the lake. Low chlorophyll-a levels indicate good water quality. MPCA standard is 20 ug/L (dashed line).

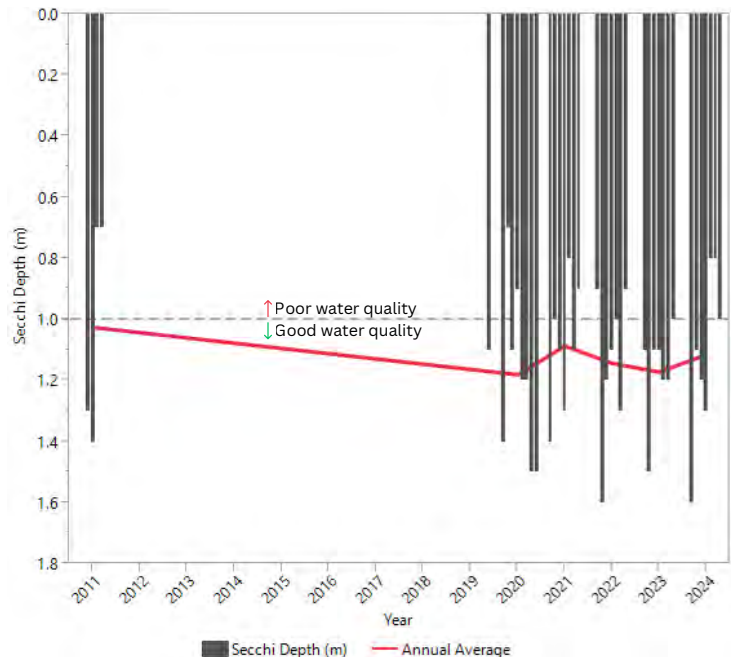


Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. MPCA standard is 60 ug/L (dashed line).

How can you get involved?

Anyone can help improve water quality! Installing a raingarden increases water infiltration and reduces pollution runoff that can negatively impact local water quality. The LMRWMO offers grants to residents to install raingardens, native gardens, and native shoreline plantings as part of the Dakota County Soil and Water Conservation District's **Landscaping for Clean Water** program.



Secchi Depth

A black and white secchi disc is lowered into the water until no longer visible and measures water clarity. High secchi disc depths indicate good water quality. MPCA standard is 1 m (dashed line).

Seidls Lake

2024 Water Monitoring Report

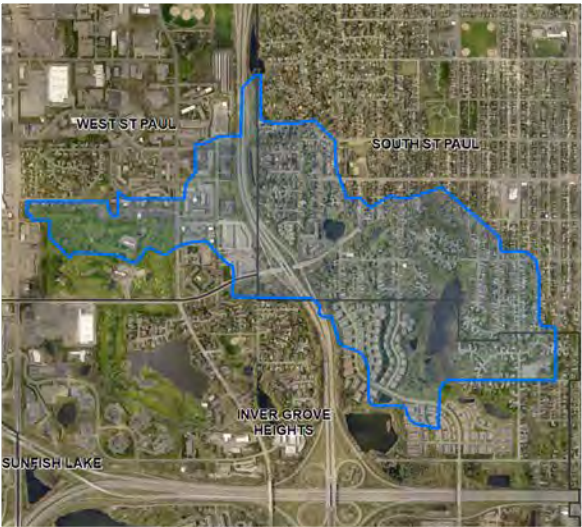


Watershed

Seidls Lake is located in the Cities of Inver Grove Heights and South Saint Paul, within the Lower Mississippi River Watershed Management Organization (LMRWMO). Land use within the watershed is primarily residential with a portion of the west watershed covered by a golf course and a portion of Highway 52. The lake is currently not listed on Minnesota’s 303(d) List of Impaired Waters.

Lake Details

- Max Depth: 17 feet
- Watershed Size (shown): 420 acres
- Major Watershed: Mississippi River
- MPCA Lake Classification: Shallow
- Met Council Lake Grade (2024): **D**



Monitoring

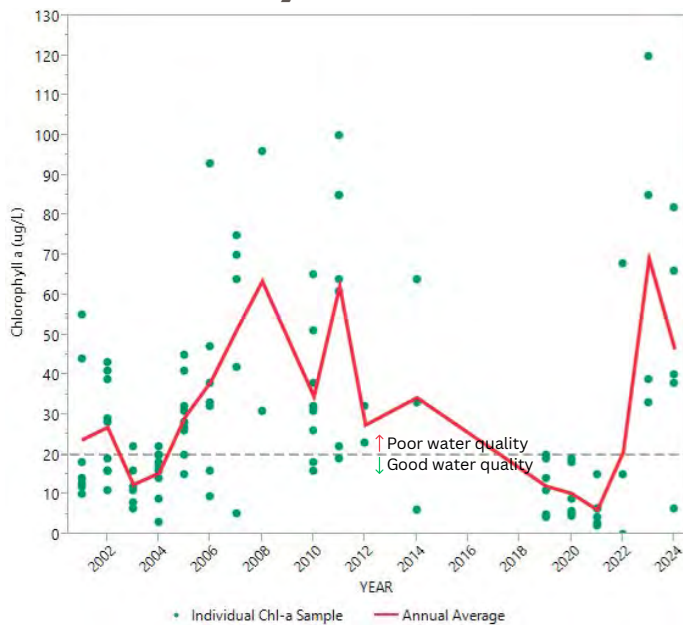
The LMRWMO supports Seidls Lake monitoring through the Metropolitan Council’s Community Assisted Monitoring Program (CAMP) volunteer lake monitoring program. The lake is surrounded by parkland and is as a priority waterbody for the Cities and LMRWMO. Due to the lack of a natural outlet, high lake water levels have been observed in the last 15 years compared to historic levels.

Water Quality

Water quality in Seidls Lake continues to be lower than desired. Sampling data collected throughout the assessment period provide a more holistic view of water quality conditions than in previous years. All parameters exceed the state standard - both chlorophyll-a and total phosphorus depth results are worse than 2023 whereas secchi average improved from 2023. The below table shows the 2024 data.

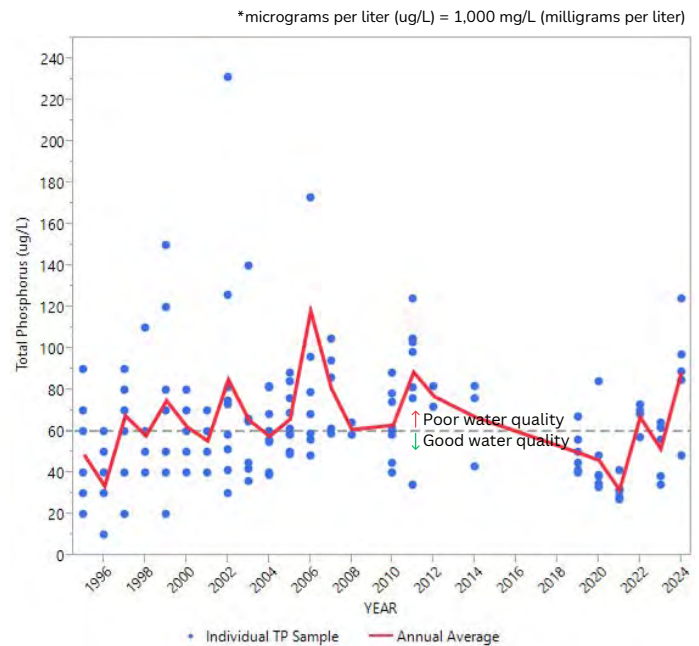
Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	20	6.4	82	46.48
Total Phosphorus (ug/L)	60	48	124	88.6
Secchi Depth (m)	1	0.5	1.8	0.92

Water Quality Data 1995 - 2024



Chlorophyll-a*

Chlorophyll-a is the pigment that gives plants their green color. High levels indicate excessive algae from high nutrient levels in the lake. Low chlorophyll-a levels indicate good water quality. MPCA standard is 20 ug/L (dashed line).



Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. MPCA standard is 60 ug/L (dashed line).

Watershed Projects

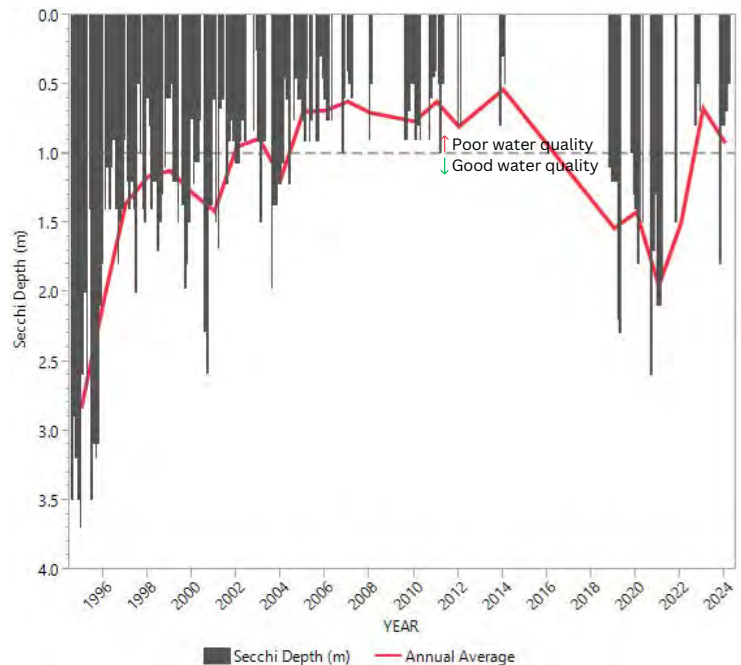
Multiple watershed stormwater management projects have been implemented since 2010 to treat stormwater before entering Seidls Lake.

A lake outlet project to maintain consistent water levels was completed in 2022 and a natural shoreline restoration project was installed in 2024 along with trail improvements.



Native shoreline and trail improvement project

The lake will continue to be monitored to track changes in water quality. Investigation into the impacts of carp populations on poor water quality may be implemented in the future.



Secchi Depth

A black and white secchi disc is lowered into the water until no longer visible and measures water clarity. High secchi disc depths indicate good water quality. MPCA standard is 1 m (dashed line).

How can you get involved?

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Additional Information: MN Impaired Waters Map: <https://www.pca.state.mn.us/water/impaired-waters-viewer-iwaw>
DNR Lake Finder: <https://www.dnr.state.mn.us/lakefind/index.html>
LMRWMO Contact: Joe Barten, Administrator - joe.barten@co.dakota.mn.us - 651-480-7784
LMRWMO Website: www.LMRWMO.org

Simley Lake

2024 Water Monitoring Report

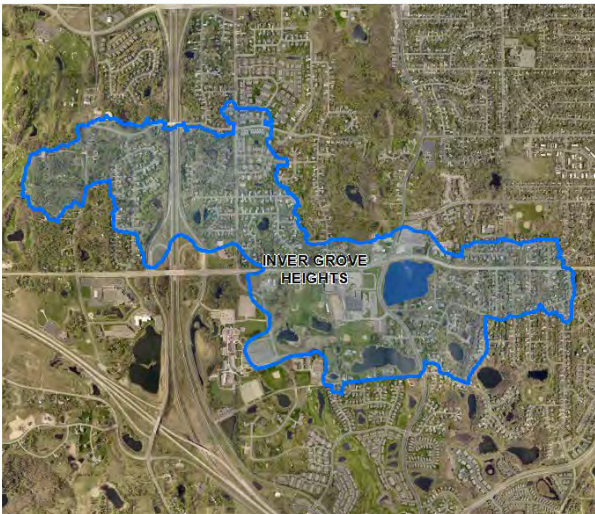


Watershed

Simley Lake is located in the Inver Grove Heights within the Lower Mississippi River Watershed Management Organization (LMRWMO). Land use within the watershed is a mix of primarily commercial, institutional, low density residential, freeway, and parkland. The lake is *not* currently listed on Minnesota’s 303(d) List of Impaired Waters.

Lake Details

- Max Depth: 17 feet
- Lake Size: 15 acres
- Major Watershed: Mississippi River
- MPCA Lake Classification: Shallow
- Met Council Lake Grade (2024): C



Monitoring

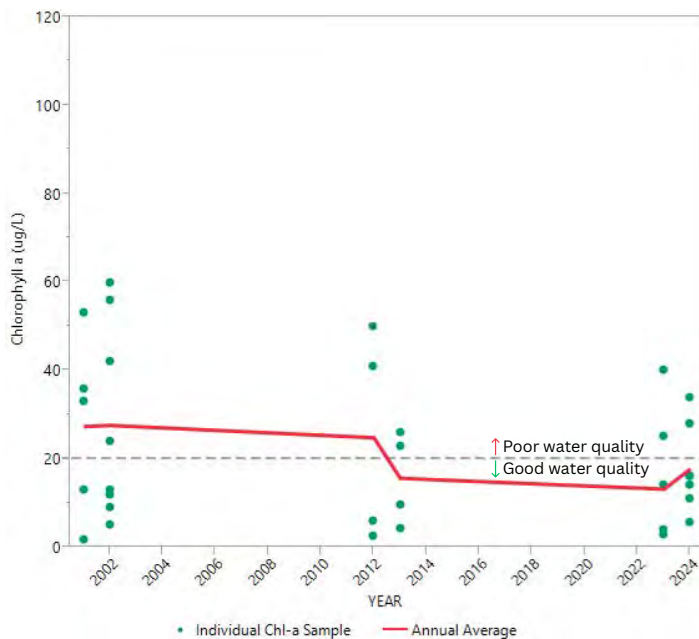
Simley Lake is monitored as part of the LMRWMO’s participation in the Metropolitan Council’s Community Assisted Monitoring Program volunteer water monitoring program. Simley Lake is a very popular fishing lake for local residents. Shoreline restorations to improve habitat in the nearshore area have occurred at multiple areas on this lake over the last 20 years.

Water Quality

Water quality in Simley Lake is good. All parameters met their respective state standard in 2024 and show improvement since the initial sampling effort back in 2013. Continued monitoring of this lake is recommended to ensure that good water quality is maintained over time. The below table shows the 2024 data.

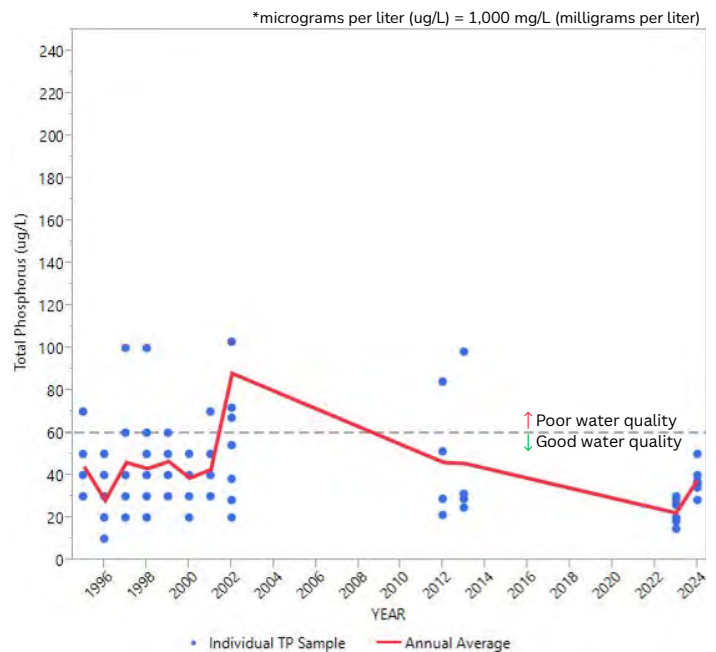
Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	20	5.6	34	17.80
Total Phosphorus (ug/L)	60	28	50	37.86
Secchi Depth (m)	1	1	2.2	1.39

Water Quality Data 1995 - 2024



Chlorophyll-a*

Chlorophyll-a is the pigment that gives plants their green color. High levels indicate excessive algae from high nutrient levels in the lake. Low chlorophyll-a levels indicate good water quality. State standard is 20 ug/L (dashed line).



Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. State standard is 60 ug/L (dashed line).

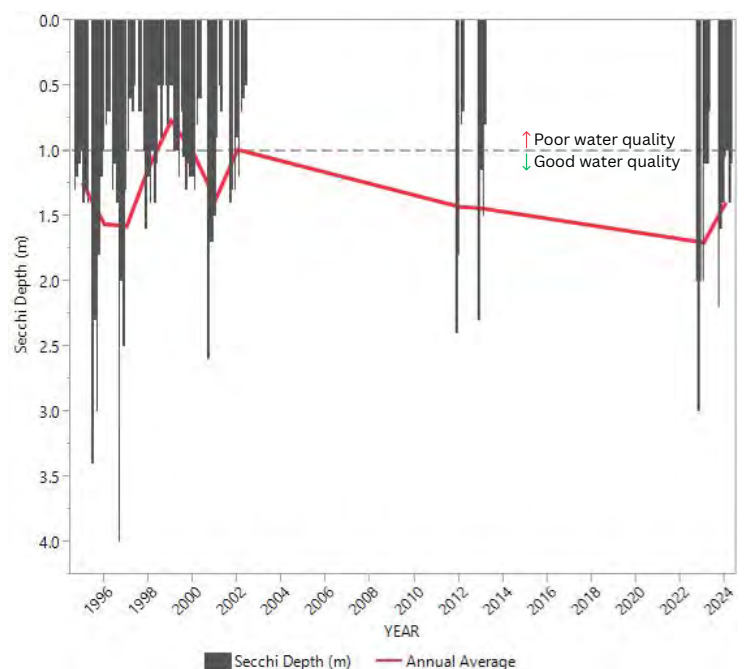
Watershed Projects

Simley lake is surrounded by Simley Island Park, a 3-acre park wedged between two of Inver Grove Heights' busiest thoroughfares. The island, a few feet off the shore of Simley Lake, is reached via a small bridge.

The City of Inver Grove Heights installed a shoreline restoration project in partnership with



the Dakota County SWCD in 2011 with a variety of native plant species to naturally stabilize the shoreline.



Secchi Depth

A black and white secchi disc is lowered into the water until no longer visible and measures water clarity. High secchi disc depths indicate good water quality. State standard is 1 m (dashed line).

How can you get involved?

Anyone can help improve water quality! Installing a raingarden increases water infiltration and reduces pollution runoff that can negatively impact local water quality. The LMRWMO offers grants to residents to install raingardens, native gardens, and native shoreline plantings as part of the Dakota County Soil and Water Conservation District's **Landscaping for Clean Water** program.

Additional Information: MN Impaired Waters Map: <https://www.pca.state.mn.us/water/impaired-waters-viewer-iwaw>
DNR Lake Finder: <https://www.dnr.state.mn.us/lakefind/index.html>
LMRWMO Contact: Joe Barten, Administrator - joe.barten@co.dakota.mn.us - 651-480-7784
LMRWMO Website: www.LMRWMO.org

Sunfish Lake

2024 Water Monitoring Report



Watershed

Sunfish Lake is located in the City of Sunfish Lake, within the Lower Mississippi River Watershed Management Organization (LMRWMO). Land use within the watershed is primarily low density residential. Sunfish Lake was placed on Minnesota’s 303(d) List of Impaired Waters in 2010 for aquatic recreation due to excess nutrients (phosphorus).

Lake Details

- Max Depth: 32 feet
- Watershed Size (shown): 235 acres
- Major Watershed: Mississippi River
- MPCA Lake Classification: Deep
- Met Council Lake Grade (2024): **A**



Monitoring

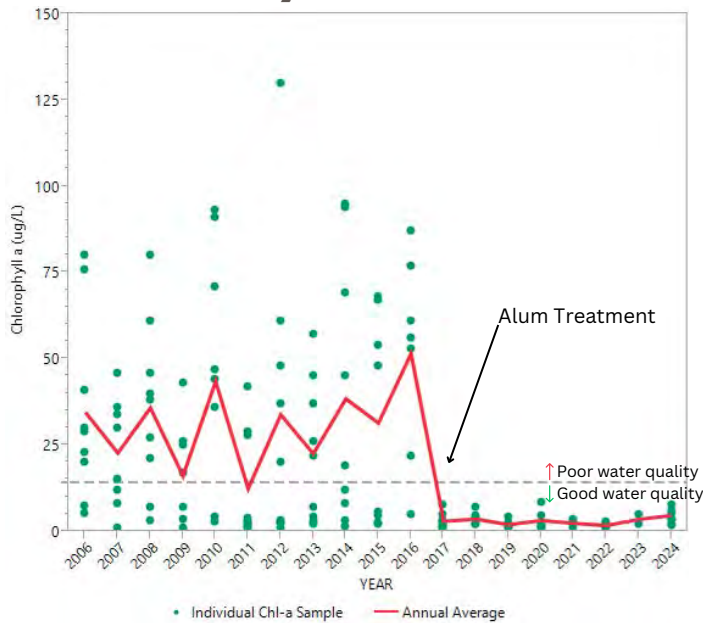
Sunfish Lake is monitored on an annual basis as part of the City of Sunfish Lake’s participation in the Metropolitan Council’s Community Assisted Monitoring Program (CAMP) volunteer water monitoring program. The lake has been meeting the deep lake water quality criteria set forth by the Minnesota Pollution Control Agency since 2017 when an aluminum sulfate treatment was implemented by the LMRWMO.

Water Quality

Following the 2017 alum treatment, there were improvements for all three eutrophication parameters when compared to data collected pre-treatment. Lake water quality continues to improve when considering the total phosphorus and chlorophyll-a levels in comparison to historical levels. The secchi readings show improvement from past years, with the maximum value continuing to improve over time. The below table shows the 2024 data.

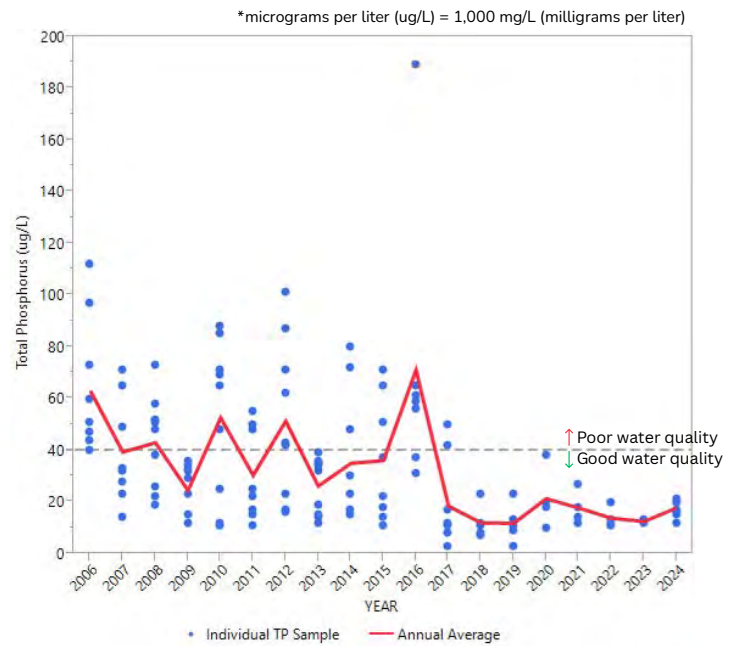
Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	14	1.6	7.8	4.7
Total Phosphorus (ug/L)	40	12	21	17.75
Secchi Depth (m)	1.4	1.8	4.6	2.88

Water Quality Data 1995 - 2024



Chlorophyll-a*

Chlorophyll-a is the pigment that gives plants their green color. High levels indicate excessive algae from high nutrient levels in the lake. Low chlorophyll-a levels indicate good water quality. MPCA standard is 14 ug/L (dashed line).



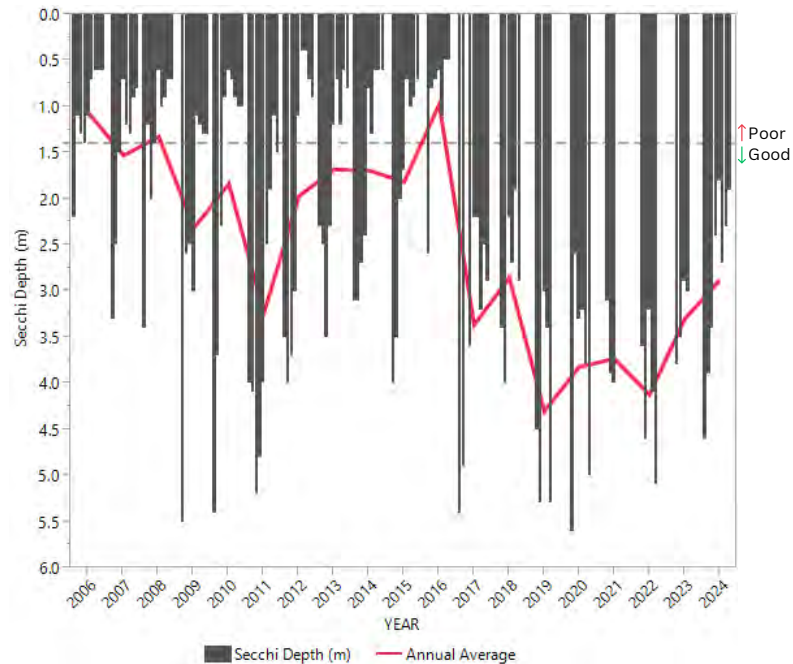
Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. MPCA standard is 40 ug/L (dashed line).

Watershed Projects

A 2012 study conducted by the LMRWMO identified internal phosphorus from the lake bottom as the primary source of phosphorus in Sunfish Lake.

In 2017, the LMRWMO implemented an aluminum sulfate (alum) treatment to improve water quality. Upon application, the alum binds with phosphorus and settles to the lake bottom. A significant improvement in water quality has been shown from this treatment, with the lake removed from the impaired waters list in 2022.



Secchi Depth

A black and white secchi disc is lowered into the water until no longer visible and measures water clarity. High secchi disc depths indicate good water quality. MPCA standard is 1.4 m (dashed line).

How can you get involved?

Anyone can help improve water quality! Installing a rain garden increases water infiltration and reduces pollution runoff that can negatively impact local water quality. The LMRWMO offers grants to residents to install rain gardens, native gardens, and native shoreline plantings as part of the Dakota County Soil and Water Conservation District's **Landscaping for Clean Water** program.

Additional Information: MN Impaired Waters Map: <https://www.pca.state.mn.us/water/impaired-waters-viewer-iwaw>
DNR Lake Finder: <https://www.dnr.state.mn.us/lakefind/index.html>
LMRWMO Contact: Joe Barten, Administrator - joe.barten@co.dakota.mn.us - 651-480-7784
LMRWMO Website: www.LMRWMO.org

Thompson Lake

2024 Water Monitoring Report

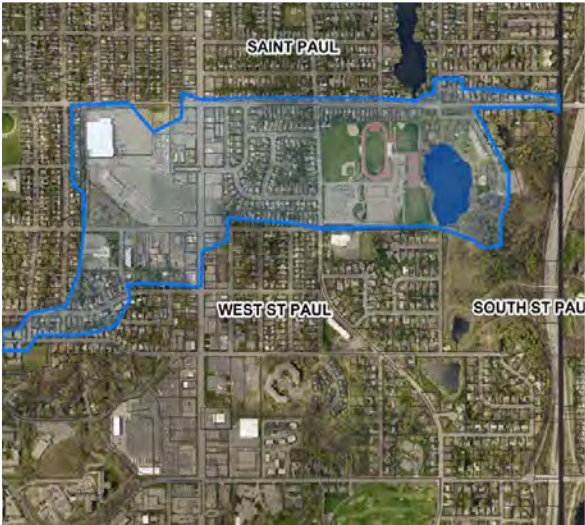


Watershed

Thompson Lake is located in the City of West Saint Paul within the Lower Mississippi River Watershed Management Organization (LMRWMO). Land use within the watershed is primarily commercial, institutional, low density residential, and parkland. Thompson Lake was placed on Minnesota’s 303(d) List of Impaired Waters in 2014 for aquatic recreation due to excess nutrients (phosphorus) and aquatic life due to chloride.

Lake Details

- Max Depth: 8 feet
- Watershed Size (shown): 180 acres
- Major Watershed: Mississippi River
- MPCA Lake Classification: Shallow
- Met Council Lake Grade (2024): C



Monitoring

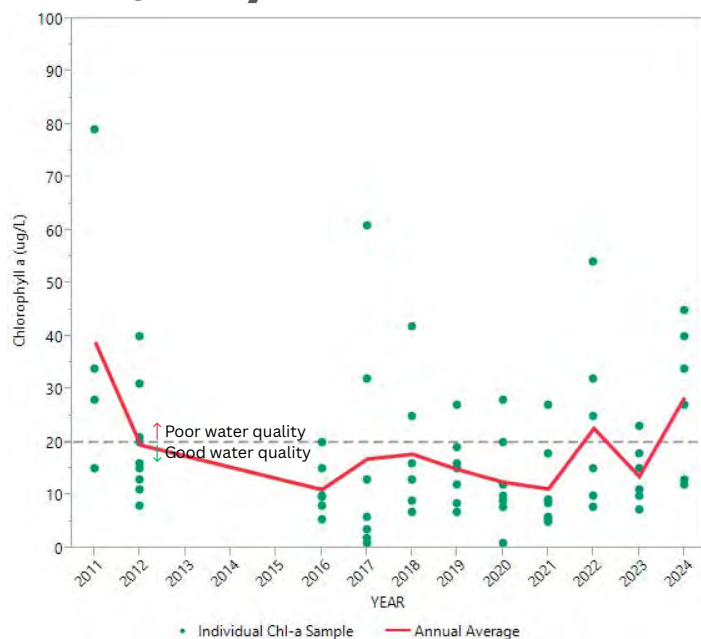
Thompson Lake is monitored on an annual basis as part of the LMRWMO’s participation in the Metropolitan Council’s Citizen Assisted Monitoring Program volunteer water monitoring program. The lake is the center of Dakota County’s highly used Thompson Lake Regional Park and is considered a high value resource by both the LMRWMO and Dakota County Parks.

Water Quality

Sampling data collected throughout the assessment period provides a holistic view of water quality conditions since monitoring began in 2011. Water quality at Thompson Lake degraded from 2023 to 2024; returning to levels regularly seen in years prior to 2022. The seasonal average for total phosphorus and secchi disc met the state standard, though some individual samples did exceed it. Chlorophyll-a levels exceeded the state standard and individual samples were higher and showed more variability than in past years. The below table shows data for 2024.

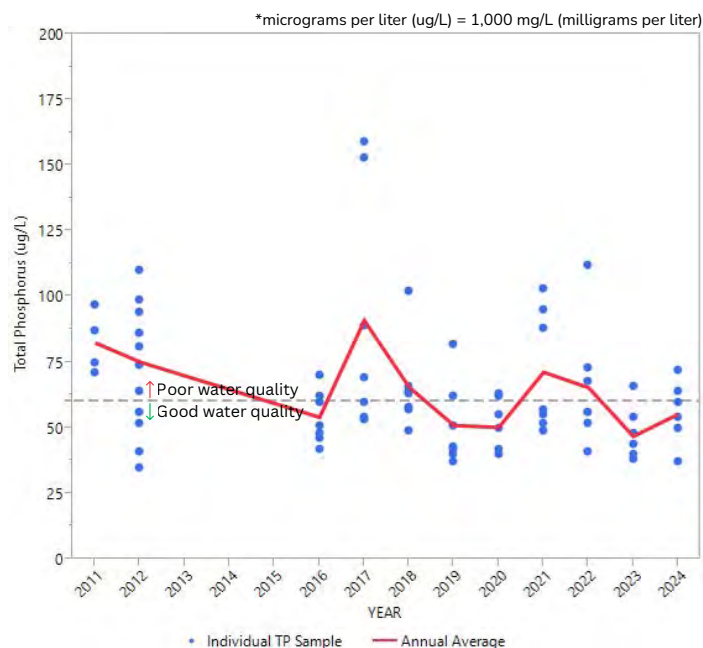
Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	20	12	45	28.5
Total Phosphorus (ug/L)	60	37	72	55.29
Secchi Depth (m)	1	0.9	1.3	1.06

Water Quality Data 2011 - 2024



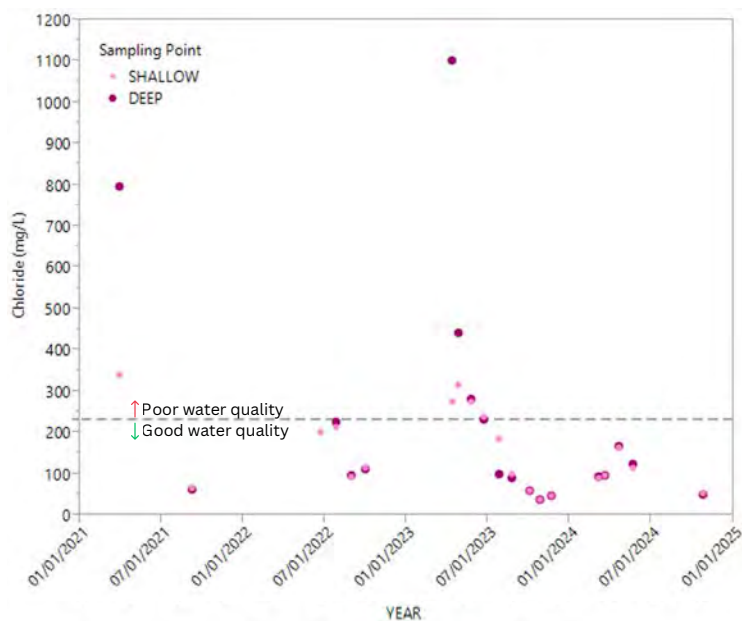
Chlorophyll-a*

Chlorophyll-a is the pigment that gives plants their green color. High levels indicate excessive algae from high nutrient levels in the lake. Low chlorophyll-a levels indicate good water quality. MPCA standard is 20 ug/L (dashed line).



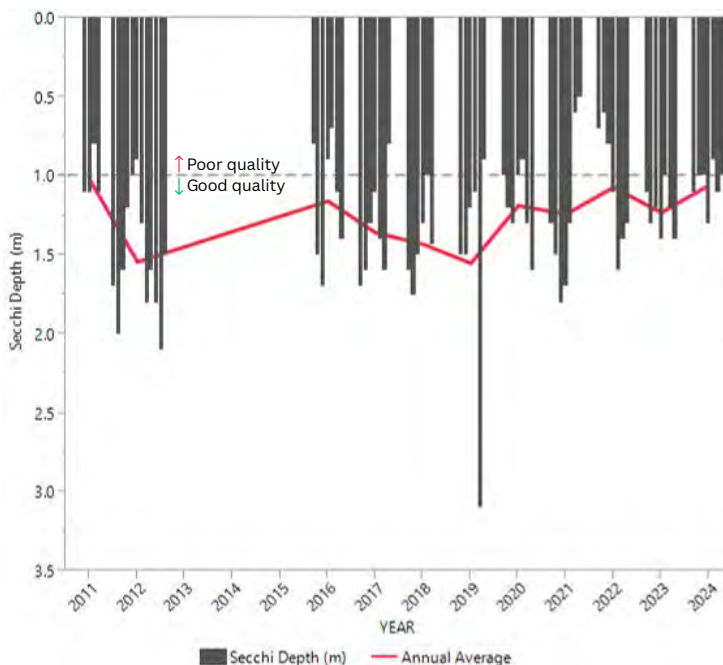
Phosphorus*

Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. MPCA standard is 60 ug/L (dashed line).



Chloride

Elevated chloride concentrations can be toxic to some aquatic life – altering community composition, as well as affecting mortality and reproduction capabilities. MPCA standard for chronic toxicity is 230 ug/L (dashed line).



Secchi Depth

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