Thompson Lake

2024 Water Monitoring Report

LMRWMO
LOWER MISSISSIPPI RIVER
WATERSHED MANAGEMENT ORGANIZATION

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

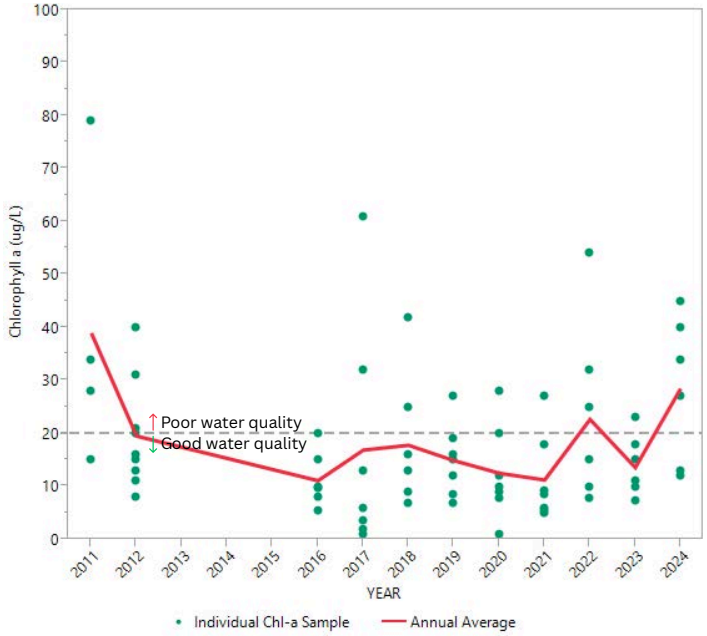
Thompson Lake is monitored on an annual basis as part of the LMRWMO's participation in the Metropolitan Council's Citizen Assisted Monitoring Program volunteer water monitoring program. The lake is the center of Dakota County's highly used Thompson Lake Regional Park and is considered a high value resource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

Water Quality

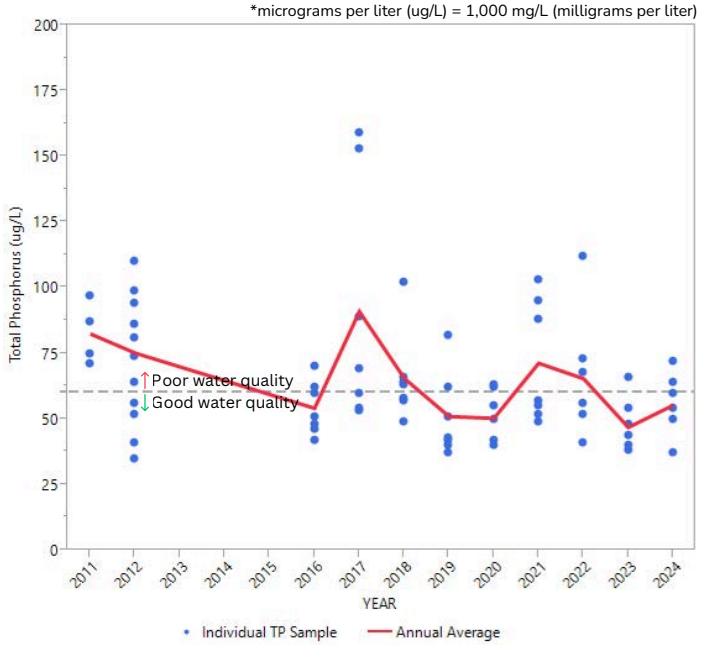
Sampling data collected throughout the assessment period provides a holistic view of water quality conditions since monitoring began in 2011. Water quality at Thompson Lake degraded from 2023 to 2024; returning to levels regularly seen in years prior to 2022. The seasonal average for total phosphorus 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



*micrograms per liter (ug/L) = 1,000 mg/L (milligrams per liter)

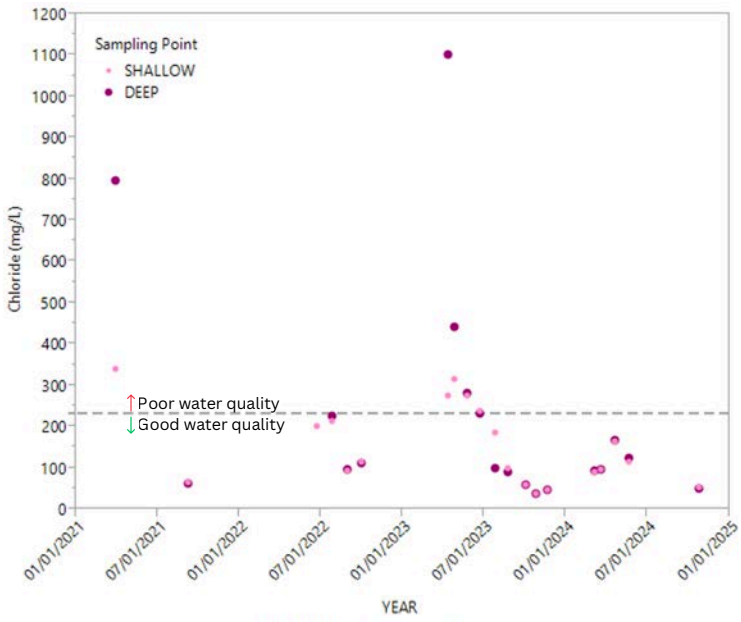


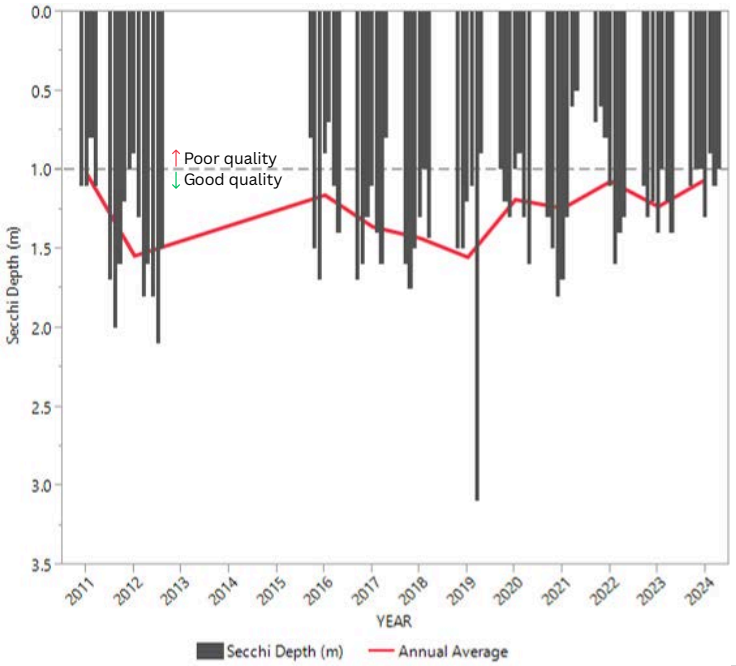
Chlorophyll-a*

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

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?

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-iwav
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

DAKOTA COUNTY
SOIL & WATER
CONSERVATION DISTRICT