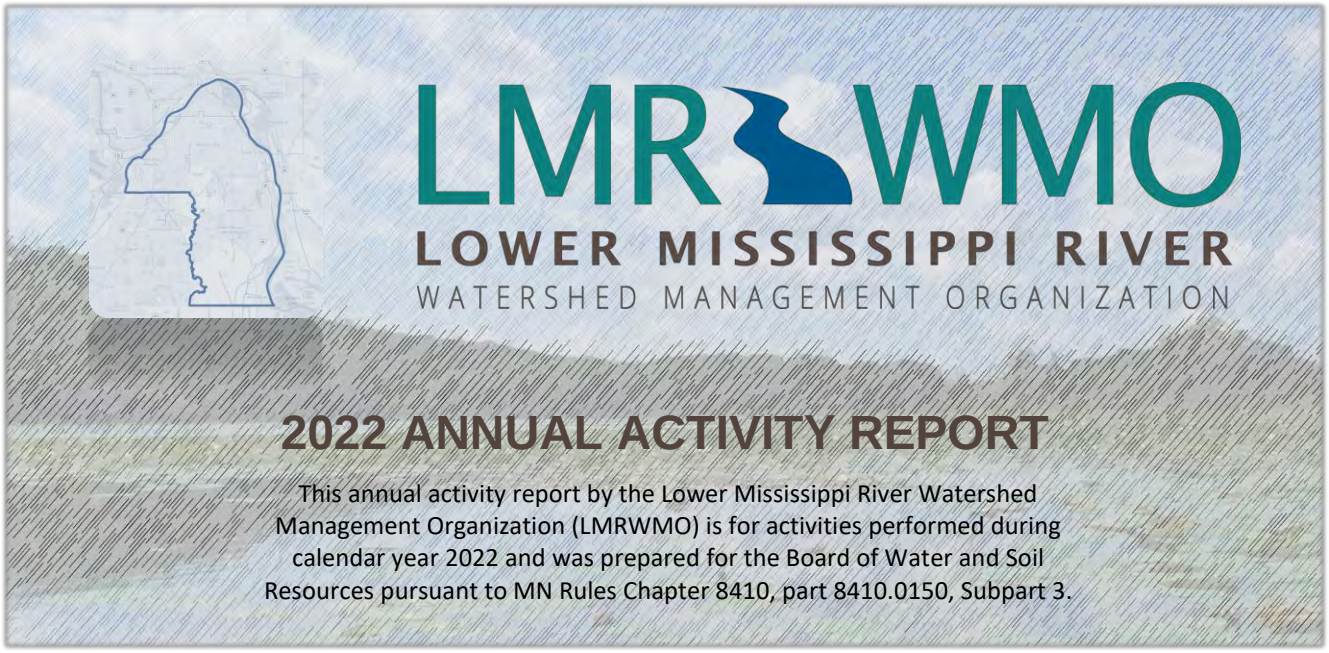


Background

A joint powers agreement was executed on October 25, 1985, which established and empowered the Lower Mississippi River Watershed Management Organization (LMRWMO). The LMRWMO is in the southeast part of the Twin Cities metropolitan area, in northern Dakota County and southern Ramsey County. The LMRWMO abuts the south and west sides of the Mississippi River, from the Mississippi River's confluence with the Minnesota River down to Rosemount.

The LMRWMO covers 55.8 square miles (35,493 acres) and is composed of seven cities within the WMO boundaries. The LMRWMO Member Cities include: Inver Grove Heights, Lilydale, Mendota Heights, Saint Paul, South St. Paul, Sunfish Lake, and West St. Paul. The Board of Managers, which consists of City Council appointed representatives from the member Cities (as of 12-31-22) is listed below:

Representative	Member City
Sharon Lencowski (Chair)	Inver Grove Heights Manager
Dawn Gaetke	Inver Grove Heights Alternate
Tom Sutton	Lilydale Manager
Lyle Hanzal	Lilydale Alternate
Mary Jeanne Schneeman (Secretary/Treasurer)	Mendota Heights Manager
Jill Smith	Mendota Heights Alternate
Karen Reid (Vice-Chair)	Saint Paul Manager
Michael Randle	South St. Paul Manager
Daniel Anderson	South St. Paul Alternate
Dan Halvorsen	Sunfish Lake Manager
Shannon Nelson	Sunfish Lake Alternate
Sheila Vanney	West St. Paul Manager
Julie Eastman	West St. Paul Alternate

A complete contact list of the Board of Managers is attached to this report.

The Dakota County Soil and Water Conservation District (SWCD) serves as the Administrator for the LMRWMO, with Joe Barten as the staff Administrator contact.

2022 Completed Activities

The LMRWMO's 2011 Watershed Management Plan (Plan) includes an implementation program. Tables 1, 2, and 3 below contain lists of implementation activities identified in the Plan and the status of the activities listed. Additional details on LMRWMO activities in 2022 include:

General:

- Contracted with the Dakota County Soil and Water Conservation District (SWCD) to provide administrative, education, technical assistance, project management, and grant administration services, and to act as the public liaison for the LMRWMO.
- Continued bi-monthly grant tracking program with sources of funding for all state and local stormwater related grant program to assist the LMRWMO and member cities in identifying additional funding sources for project implementation.
- Continued the Watershed Management Plan update process with the consultant, received community outreach information, held technical and citizen advisory committee meetings.
- Monitored lakes and streams within the LMRWMO for water quality parameters in coordination with the Metropolitan Council's Citizen Assisted Monitoring Program (CAMP) and numerous citizen volunteers.
- Performed a legal audit of LMRWMO finances and submitted to State of Minnesota.
- Coordinated with local and state agencies on all matters related to the LMRWMO duties.

Education:

- Participated in and provided funding to the Metro Watershed Partners Clean Water MN program, a coalition of public, private and non-profit organizations in the Twin Cities metro area that promotes public understanding through collaborative educational outreach that inspires people to act to protect and improve their local water resources.
- Participated in the Adopt-A-Drain program through the Metro Watershed partnership. Within the LMRWMO, there were 288 total participants with 456 drains adopted and 40 new participants. Based on data submittals of participants, it is estimated that this produced a total of 2,929 lbs of leaf litter, sediment, trash, dirt, and debris collected.
- Distributed stormwater educational articles from Clean Water MN to Member cities for use in social media, newsletter, website, and print public education and outreach materials.
- Re-designed and launched a new LMRMWO website to communicate water resource related information, programs, activities of the LMRWMO, water monitoring, and additional educational information to the public.
- Updated the LMRWMO water monitoring factsheets format for public distribution.

- Funded the creation of an Illicit Discharge educational video created in partnership with other Metro Watershed Orgs., Cities, and Counties. Bolton & Menk produced two videos, one public facing, and one for municipal staff, educating them on identifying and handling illicit discharges to storm sewers.
- Bolton & Menk staff were contracted to created content for a pilot Spanish Language Chloride training program (part of FY-2019 WBIF). All course content was created in Spanish with a translator from All In One Translation, contact was made with Cities and community leaders to promote training, marketing materials were created and distributed. The classes were unfortunately not held due to lack of interest. Research and interviews on lessons learned for this and future trainings is underway, and a final report was created.
- Young Environmental Consulting staff were contracted to create educational materials in both Spanish and English for distribution by the LMRWMO and Member Cities regarding waterbody impairments and general water resources issues. Storm drain stenciling kits were created and will be made available to Member Cities for use with volunteer groups in the spring of 2023.

Projects/Studies:

- The Lake Augusta feasibility study (part of FY-2019 WBIF) made extensive progress as Barr Engineering staff worked on lake and rain runoff monitoring, GIS basemapping, and compilation of background information. They also processed electronic monitoring, analytical lab data, lake modeling, and cormorant feces analysis, which will inform the final report.
- The Interstate Valley Creek Stabilization and Volume Reduction Feasibility study (part of FY-2019 WBIF) was completed by the consultant, WSB, to identify the presence of severe bank erosion and opportunities to reduce the volume of stormwater reaching the stream. All reaches of the stream were walked, assessed, and classified for amounts of erosion. Stabilization measures are being recommended with cost and pollutant reductions attached to different areas. Work is now underway in determing potential locations for volume reduction in the stream, to reduce peak flows. The report is on track to be finished by the end of the year.
- Progressed on the scope of work for the FY-2021 WBIF study of direct drainage watersheds to the Mississippi River within the LMRWMO to create a comprehensive and ranked water quality improvement project list for future implementation.
- Worked towards finalization of the FY-2023 Metro Watershed Based Funding grant workplan and agreement.
- Established a cooperative joint powers agreement with the Cities of Inver Grove Heights and South St. Paul for the Seidls Lake shoreline restoration project to reduce erosion and provide vegetative habitat.
- Facilitated discussions with MnDNR, Dakota County, City of Inver Grove Heights, and a private landowner (Interstate Trucking) to resolve questions surrounding responsibility and stabilization of an eroded ravine which drains to the Mississippi River.
- Participated in the Landscaping for Clean Water (LCW) workshop series and funded three classes in partnership with the Dakota SWCD. Through this program, 81 people attended an introduction class to learn about the benefits of raingardens, native gardens, and native shoreline plantings. Along with the

other LCW classes, this effort resulted in 34 residents of the LMRWMO attending the LCW design workshops to create project project designs. The LMRWMO then provided $250 grants for 14 residential conservation projects (raingardens and native gardens) installed by those participants. The LMRWMO also provided funding for technical assistance to be provided by the Dakota SWCD for those watershed residents. See https://dakotaswcd.org/conservation-projects/ for locations and descriptions of completed projects. The 2022 LCW Program fact sheet is attached to this report.

2023 Work Plan

The LMRWMO plans to conduct the following activities in 2023:

- Finalize the update the LMRWMO Watershed Management Plan.
- Finalize implementation of items identified in the FY-2019 Metro Watershed Based Implementation Funding grant and the FY-2021 Metro Watershed Based Implementation Funding grant.
- Begin implementation of FY-2023 Watershed Based Implementation Funding grant.
- Implement the Seidls Lake shoreline restoration project in partnership with Inver Grove Heights and South St. Paul in tandem with a trail restoration project.
- Continue to prioritize implementation of projects and programs, applying for grants, and assisting member cities in obtaining grants and identifying opportunities to partner on water quality projects through use of grant tracking program.
- Continue to maintain and update the LMRWMO website with information relevant to the public.
- Continue to provide educational workshops to LMRWMO residents through participation in the Landscaping for Clean Water education program.
- Continue cost sharing grant funding for the installation of residential raingardens and other stormwater management projects through the Dakota County SWCD's Landscaping for Clean Water program.
- Continue to monitor lakes and streams through the Met Council Citizen Assisted Monitoring Program (CAMP), including Lake Augusta, Sunfish Lake, Thompson Lake, Schmitt Lake, Dickman Lake, Seidls Lake, Simley Lake, Interstate Valley Creek, and Ivy Falls Creek.
- Assist in resolving issues surrounding the eroded ravine near Interstate Trucking in Inver Grove Heights through stakeholder coordination.

Watershed Management Plan Implementation Item Review

Key for Implementation Tables 1, 2, and 3.

Implementation item is complete, partially complete, or in progress.	Implementation item is no longer necessary, or no action is planned by the LMRWMO at this time.	Implementation item requires action by the LMRWMO.

Table 1. Implementation Status of Project List from 2011 Watershed Management Plan

Planned Actions or Activities	Proposed Timeframe	Actual Timeframe	Accomplishments to Date	Next Steps
Local government to construct BMPs to reduce negative impacts of development upstream of Hornbean Lake.	2014	-	To be constructed in coordination with new development.	Current development standards to drive water quality projects with future development.
Local government to construct improvements to reduce flooding/erosion at Marie Ave/Dodd Rd (feasibility study has been completed).	2012	2013	A rate control pond was constructed at NE corner of Dodd and Marie to control flow downstream, reducing erosion and allowing sediment to settle out of suspension and be removed.	Project complete.
Local government to construct improvements to provide rate control and stream bank stabilization north of Marie Ave in Interstate Valley Creek Watershed	2017	2011 to 2022	Some streambank stabilization projects have been constructed on the unnamed reaches of the Interstate Valley Creek headwaters. These have been constructed on an individual basis. LMRWMO's Landscaping for Clean Water program can help provide funding for landowner projects in coordination with the Dakota SWCD.	A feasibility study for streambank stabilization and rate control options will be completed as part of the FY-2019 Watershed Based Funding work plan.
Local government to construct improvements to stabilize erosion-prone areas along the Mississippi River.	2021	2018 to 2022	In progress. Inver Grove Heights completed a feasibility study for Stormwater Facilities in Areas Tributary to the Mississippi River in 2016 which identified 11 prioritized projects. The City is currently pursuing State and Met Council grant opportunities for implementation of these water quality and erosion stabilization projects. Watershed-wide study not yet initiated.	Continue to seek funding to implement those projects identified in the study.

Local government to construct Lexington Avenue-Trunk Highway 13 Drainage and Erosion Improvements.	2015	2015 to 2016	Feasibility study completed in 2010 and identified cost share amounts for participating cities. Project implemented in 2015 with substantial completion in 2016. Received funding through 2016 Met Council stormwater program for sediment reduction improvements.	Project complete.
Local government to construct Seidls Pond/Lake lift station.	2016	2021 to 2022	Feasibility study was completed in 2004. Applied and turned down for Clean Water Fund grant in 2014. Applied for a 2017 grant and received a, ENRTF grant for water quality project at Seidl's Lake.	Lift station design is complete and project is out to bid for planned construction in 2021 or 2022.
Local government to construct Dawn Way Storm Sewer Improvement Project	2019	2019 to 2021	Allowable flow cost apportionment was completed in 2008. Funds have been allocated in budgets by the participating cities.	Finalize proposed approach for project implementation.
Stormwater BMPs or education to improve stormwater management upstream of Rogers Lake	2021	2011 to 2012	WRAPS Study completed in 2014. Stormwater BMPs planned to be implemented in conjunction with development / redevelopment. Raingardens and sump manholes installed with reconstruction of Robert Trail. Door knocking education campaign completed by St. Thomas Academy students. Educational material mailing campaign to watershed residents. LMRWMO's Landscaping for Clean Water program can help provide funding for projects and stormwater education within watershed going forward.	No longer necessary. Current development standards to drive water quality projects with future development. Continue LMRWMO's Landscaping for Clean Water program.
Ravine/bluff stabilization in Ivy Creek, Lilydale Park, and/or near Pickerel Lake	2019	2014 to 2021	In progress. Pickerel Lake was part of the 2014 WRAPS Study. Feasibility study initiated in 2014 and completed in 2015 in the Cherokee Heights portion of Lilydale Park near Pickerel Lake. Have received BWSR flood relief funds for repair of severely eroded "North Knob" area and Clean Water funds for stabilization. Additional projects will continue to be identified.	Continue to seek funding and coordinate with City of St. Paul, Ramsey County, and BWSR on implementing improvements to Lilydale Park area as they arise.

Phosphorus treatment in Sunfish Lake	2017	2017 to 2019	Part of the 2014 WRAPS Study. Awarded FY2016 CWF grant dollars for implementation.	Project complete, finalized grant.
Thompson Lake Stormwater/Sediment Improvement Project	2016	2017 to 2021	Separate Thompson Lake PAH contamination feasibility study completed in 2014. Part of the 2014 WRAPS Study. Awarded FY2016 CWF grant dollars for implementation.	Project complete, finalizing grant closeout.
Phosphorus treatment in Augusta Lake	2016	2017 to 2019	Part of the 2014 WRAPS Study. Awarded FY2016 CWF grant dollars for implementation.	Project complete, finalize grant. Will continue with lake study to identify further lake improvement activities.
Cherokee Heights culvert analysis and erosion control improvement project	2016	2018 to 2021	Feasibility study completed in 2015 for the upper Cherokee Heights ravine portion of Lilydale Park. Applied for but did not receive FY2016 and FY2017 CWF grant dollars for implementation. Received FY2018 CWF grant dollars for ravine stabilization and stormwater improvements.	Project complete, finalizing grant closeout.

Table 2. Implementation Status of Programs List from 2011 LMRWMO Watershed Management Plan

Planned Actions or Activities	Proposed Timeframe	Actual Timeframe	Accomplishments to Date	Next Steps
Address BWSR performance standards	Every year	Every year	On-going implementation. PRAP Level II Review Completed in 2016.	Continue to address on an annual basis.
Transition to an all citizen Board	TBD	TBD	All LMRWMO Board members are citizens.	Completed.
Revise JPA to reflect 3rd Generation Plan	2011	2011	JPA revised and approved by communities in 2012 - 3rd revision to change WMO boundary approved in 2014.	Completed.
Revise JPA to broaden membership of formal Technical Advisory Committee	2011	2011	JPA revised and approved by communities in 2012.	Completed.
Revise JPA to include a water quality cost allocation formula	2011	2011	Cost share allocation formula was developed and approved in 2012; JPA revised and approved by communities in 2012.	Completed.
Implement permanent Citizen Advisory Committee (CAC)	Every year	-	Involved citizens are kept informed of LMRWMO activities via an email list, informed about pertinent LMRWMO programs and projects via email, and invited to LMRWMO events as necessary.	No longer necessary and not planned at this time.
Maintain LMRWMO website to communicate water resource related information	Every year	Every year	On-going implementation; all meeting agendas, materials, and minutes are posted regularly. Created water monitoring web page in 2016. Full website re-do in 2021-2022.	Continue to update website with relevant information.
WMO administration	Every year	Every year	On-going.	Continue as planned.
WMO annual insurance premiums	Every year	Every year	On-going.	Continue as planned.
WMO attorney and audit expenses	Every year	Every year	On-going.	Continue as planned.
Publish annual WMO newsletter for public distribution	Every year	Every year	Published on an annual basis and distributed to member Cities for public posting and distribution.	Continue as planned.

Review annual evaluation reports from member cities	Every year	Every year	Cities may report activities at monthly LMRWMO meetings.	Continue as planned.
Review member City local plan updates for consistency with WMO Plan	2012 & 2013	2012 to 2018	3 of 7 cities have approved plans. Provided guidance to cities in 2016 on timeline for approval with revised State statutes.	Continue to review City local plans as updated.
Develop water resource educational content	Every year	Every year	Education opportunities annually available to residents through Landscaping for Clean Water classes and Metro Watershed Partners. Watershed education provided through FY16 CWF grant efforts in 2016-2018 as well as MWS program and continued implementation of the LMRWMO Education and Outreach Plan.	Continue as planned.
Coordinate/conduct non-certification training for member city staff to address items in MS4 permit	2012 & 2017	-	Member City representatives and topic experts regularly present to the LMRWMO Board on activities related to the MS4 permit.	Continue informal presentations by member City staff on MS4 activities and requirements.
Participate in the Dakota County SWCD's Landscaping for Clean Water Program	Every year	Every year	Provide yearly introduction and design courses to LMRWMO residents and have provided grants for hundreds of projects since 2011.	Continue to participate/provide program to residents of the LMRWMO.
Assist member cities in addressing the South Metro Mississippi TMDL and other TMDLs as they are completed	2012 to 2021	-	LMRWMO member Cities and staff have been engaged with agency staff on both the South Metro Mississippi TMDL and the Upper Mississippi River Bacteria TMDL. LMRWMO Engineers have assisted in data transmittals, as requested.	None planned at this time. Will continue involvement as requested.
Develop annual water quality monitoring program for water bodies and outfalls to the Mississippi River	2011	2012	Annual evaluation of water monitoring is performed by the Board.	Continue as planned.

Implement water quality monitoring program to assess water bodies and outfalls to the Mississippi River	2012 to 2021	2012 to 2021	The LMRWMO has conducted or financially supported monitoring numerous lakes within the watershed since 2012, often through CAMP. Interstate Valley Creek and Ivy Falls Creek monitored in 2019 and 2021.	Continue as planned.
Develop outreach program to assist member cities with MS4 permit renewal	2012	-	No activity to report. There has not been a need for this program.	None planned at this time/not necessary.
Pursue locations to conduct wetland restoration for a wetland bank program	2014	-	No activity to report. There has not been a need for this program.	None planned at this time.
Conduct or facilitate joint certification training for member city staff on designing and inspecting erosion control plans and inspecting erosion control measures	2013 and 2018	-	There is no longer a need for this task. All cities in the WMO have staff that assures proper certifications through the MnDOT certification program.	None planned at this time.
Develop a pond and BMP maintenance program	2012	-	No activity to report. New MS4 permit requirements will drive this program.	None planned at this time. Cities will continue responsibility via MS4 permit.
Assist member cities in pursuing grants available to watersheds	Every year	Every year	On-going. Documents that track grant opportunities are presented to Board members at monthly meetings. The LMRWMO has assisted member cities in preparing and submitting grant applications in since 2012.	Continue monthly tracking and assist member cities in pursuing grant opportunities.
Monitoring of Pickerel Lake and/or inflows to Pickerel Lake	2015 to 2021	2015 to 2021	Monitoring done through CAMP program. Monitoring on Ivy Falls Creek in 2019	Continue monitoring through CAMP program.

Table 3. Implementation Status of Studies List from 2011 LMRWMO Watershed Management Plan

Planned Actions or Activities	Proposed Timeframe	Actual Timeframe	Accomplishments to Date	Next Steps
Utilize MIDS, once complete, to determine effectiveness of existing BMPs throughout the WMO	2013	-	No activity to report.	None planned at this time. Individual Cities will maintain standards that meet LMRWMO minimum requirements.
Complete study to address PAHs in Thompson Lake	2012	2013 to 2014	Project initiated in 2013 and was completed in 2014.	Completed.
Complete feasibility study to investigate debris and floatables in Simley Lake	2012	-	This study is no longer considered necessary.	None planned at this time.
Evaluate landlocked basins with flood concerns or future flood potential or on an as needed basis	2014	2014 to 2021	This activity has and will continue to be pursued by individual Cities as needed.	None planned at this time.
Complete feasibility study to provide rate control and streambank stabilization north of Marie Ave. in Interstate Valley Creek Watershed	2013	2019 to 2021	Some stabilization improvements have been completed.	Included in Metro WBF work plan, feasibility study planned for 2022.
Investigate opportunities to implement access points to improve access to water resources (e.g. fishing pier, observation platform)	2015	-	Opportunities have been investigated at Rogers Lake. New fishing pier at Thompson Lake in West St. Paul in 2022.	None planned at this time. Will investigate as opportunities arise.
Evaluate DNR protected water bodies with known or potential problems and pursue shoreland restoration where needed	2014 to 2021	2014 to 2022	Grants for shoreline restoration are available from the LMRWMO through the Landscaping for Clean Water Program.	Continue providing shoreline restoration grants through Landscaping for Clean Water program.
Work with ACOE to identify location/extent of erosion issues on Mississippi River	2013	2021 to 2022	Will implement further study as part of FY2021 WBIF grant study of direct drainages.	Implement FY2021 WBIF grant work plan.

Monitor shoreland erosion around Golf Course pond and determine if remedial action is necessary	2012	2011 to 2012	City of Inver Grove Heights worked with golf course staff to remediate shoreland erosion in 2009. No additional erosion problems have occurred at that site. Additionally, 2011 and 2012 improvements were completed where the pond outlets near Babcock Trail to correct erosion issues.	Completed.
Verify the existing electronic and GIS boundary of the WMO matches the legal description from the JPA	2011	-	No longer necessary in original form as there is no legal description of boundary in JPA. BWSR now allows GIS boundary to serve as legal boundary.	None planned at this time. Is not deemed necessary.
Establish stormwater volume reduction requirements	2013	-	No activity to report. New MS4 permit requirements will drive this program	None planned at this time.
Set aside funding for 4th Generation Watershed Management Plan	Every year	Every year	On-going. Currently $5,000 per year is set aside for this purpose.	Continue as planned.
Cherokee Heights culvert analysis and erosion control feasibility study	2014	2015	Study completed in 2015.	Completed.
Feasibility Studies to evaluate ravine/bluff stabilization in Ivy Creek, Lilydale Park, and/or near Pickerel Lake	2018	2015 and 2022	Studies performed by the City of St. Paul for Lilydale park erosion issues. Will implement further study as part of FY2021 WBIF grant study of direct drainages.	Implement FY2021 WBIF grant work plan.

2022 Lake Monitoring Data

The LMRWMO has conducted or supported monitoring numerous lakes within the watershed. The LMRMWO Board prioritizes monitoring annually and typically selects those to track progress where water quality projects have been implemented. Eight lakes within the LMRMWO were monitored through the Metropolitan Council's Citizen Assisted Monitoring Program (CAMP) in 2022. Monitoring data, once available from the Metropolitan Council, is posted on the LMRWMO website. 2022 Monitoring reports for select lakes are attached and a summary table is below. *Some lakes have additional sampling events which are not counted as they are outside the time window for MPCA assessments.

Table 4. Results of 2022 CAMP Monitoring in LMRWMO

Lake	City	Number of sampling events*	Secchi Depth (m) average	Chlorophyll-*a* (µg/l) average	Total Phosphorus (µg/l) average
Water Quality Standard – Deep Lake			**1**	**14**	**40**
Lake Augusta	Mendota Heights	9	0.18	157.13	164.50
Sunfish Lake	Sunfish Lake	7	4.25	1.93	14.25
Water Quality Standard – Shallow Lake			**1**	**20**	**60**
Dickman Lake	Inver Grove Heights	9	6.33	52.67	71.22
Hornbeam Lake	Sunfish Lake/ Inver Grove Heights	7	1.91	12.44	37
Horseshoe Lake	Sunfish Lake/ Inver Grove Heights	7	3.08	3.38	26.50
Lemay Lake	Mendota Heights	12	1.91	3.65	23.38
Rogers Lake	Mendota Heights	13	1.74	3.93	31.56
Schmitt Lake	Inver Grove Heights	7	1.14	11.13	41.71
Seidls Lake	South St. Paul/Inver Grove Heights	4	1.50	41.50	67
Thompson Lake	West St. Paul	7	1.07	22.69	65.43

Status of Local Plan Adoption and Implementation

All of the member cities have prepared local water management plans that conform to the 2011 LMRWMO Plan and have been formally approved by the LMRWMO. Table 6 shows the compliance dates of the local plans for municipalities withing the LMRWMO boundary. Updated requirements to MN Statutes 8410.0105, subdivision 9 and 8410.0160, subdivision 6 for the adoption of Local Water Management Plans will be followed by LMRWMO member Cities.

Table 6. Local Water Management Plan Status

Member City	LMRWMO Approval Date for conformance with 2001 Watershed Plan	LMRWMO Approval Date for Conformance with 2011 Watershed Plan
Inver Grove Heights	June 2008	December 2018
Lilydale	March 2008	October 2018
Mendota	None	June 2022
Mendota Heights	February 2006	July 2018
South St. Paul	January 2005	December 2018
St. Paul	September 2006	June 2018
Sunfish Lake	February 2009	November 2018
West St. Paul	September 2006	December 2018

Permits and Variances

The LMRWMO does not have a permitting program. The individual member cities provide permitting of projects for land use, construction stormwater management, post-construction stormwater management, floodplain management, and Wetland Conservation Act enforcement.

Consultant Services Selection

As required, every two years solicitations are made to retain legal, auditor, and engineering consulting services. On June 9th, 2021, the LMRWMO Board retained services from the following consultants:

Engineer: Barr Engineering Co.
Attorney: Campbell Knutson, PA
Auditor: Peterson Company Ltd.

Financial Statement and Audit

The LMRWMO maintains two checking accounts and a savings account. A financial audit was performed covering the 2022 finances. The 2022 LMRWMO financial audit was not ready at the time the document was created.

Wetland Banking

The LMRWMO does not have a wetland banking program.

Attachments

- 2022 Board of Managers Contact List
- 2022 Landscaping for Clean Water Summary
- 2022 Water Monitoring Table & Factsheets
- 2022 Adopted Budget
- 2023 Annual Newsletter

Lower Mississippi River WMO Board of Managers			
Board Member	**Position**	**City**	**Term Start Date**
Sharon Lencowski (Member)	Member	Inver Grove Heights	8/1/2013
Dawn Gaetke (Alternate)	Alternate Member	Inver Grove Heights	5/9/2022
Tom Sutton (Member)	Member	Lilydale	1/31/2017
Lyle Hanzal (Alternate)	Alternate Member	Lilydale	5/8/2017
Mary Jeanne Schneeman (Member)	Member	Mendota Heights	12/31/2011
Jill Smith (Alternate)	Alternate Member	Mendota Heights	1/17/2012
Karen Reid (Member)	Member	Saint Paul	5/3/2017
Vacant (Alternate)	Alternate Member	Saint Paul	
Michael Randle (Member)	Member	South St. Paul	3/2/2021
Daniel Anderson (Alternate)	Alternate Member	South St. Paul	2/22/2022
Dan Halvorsen (Member)	Member	Sunfish Lake	6/1/2021
Shannon Nelson (Alternate)	Alternate Member	Sunfish Lake	9/7/2021
Sheila Vanney (Member)	Member	West St. Paul	9/24/2018
Julie Eastman (Alternate)	Alternate Member	West St. Paul	1/11/2021

2022
Landscaping for Clean Water Program Summary

DAKOTA COUNTY
SOIL & WATER CONSERVATION DISTRICT

Providing Landowners with the Skills and Resources Needed to protect local water quality and provide habitat for pollinators through the installation of beautiful raingardens, native gardens, and native shoreline plantings.

Landscaping for Clean Water

2022 BY THE NUMBERS	
355	Individuals participated in Introduction Classes
176	Projects designed as part of virtual Design Workshops
39	Raingardens & Native Gardens & Shorelines Installed
3	Grant rounds with 12 week installation timelines
52	People received One-on-One Assistance via Zoom
93	Individuals participated in Maintenance Workshops

Rusty-Patched Bumble Bee
2021 LCW Native Garden

"I loved having support to make sure I was completing the project correctly."

"It was a wonderful experience all around. Will recommend."

2022 LCW Participants

The Landscaping for Clean Water program - Introduction class, Design course, and Maintenance workshop - was offered remotely again in 2022.

2022 Financial Contributors

BLACK DOG Watershed Management Organization

Eagan - Inver Grove Heights Watershed Management Organization

Lower Minnesota River Watershed District

LMR WMO Lower Mississippi River Watershed Management Organization

North Cannon River Watershed Management Organization

Vermillion River watershed reflecting life

4100 220th Street W, Suite 102, Farmington, MN 55024 Tel: (651) 480-7777 Fax: (651) 480-7775 www.dakotacountyswcd.org

2022 Landscaping for Clean Water Program Summary

DAKOTA COUNTY SOIL & WATER CONSERVATION DISTRICT

Thank you to everyone who joined the cause to reduce pollution, improve water quality, and increase pollinator habitat on your property this year! Participation at any level - watching the Introduction to Clean Water video, installing a project with the Design Course, or learning some tips and tricks on how to properly maintain your garden with the Maintenance Workshop series - helps to spread interest and know-how to all corners of Dakota County.

Summary of the 2022 participants by City

Apple Valley

Introduction class attendees	67
Projects designed	32
Installed raingardens	4
Installed native gardens	1
Installed Shoreline Planting	1

Burnsville

Introduction class attendees	44
Projects designed	32
Installed raingardens	4
Installed native gardens	3

Eagan

Introduction class attendees	56
Projects designed	24
Installed raingardens	4
Installed native gardens	1

Farmington

Introduction class attendees	12
Projects designed	1

Hastings

Introduction class attendees	12
Projects designed	5

Inver Grove Heights

Introduction class attendees	13
Projects designed	3
Installed raingardens	1
Installed native gardens	1

Lakeville

Introduction class attendees	39
Projects designed	23
Installed raingardens	2
Installed native gardens	3

Mendota Heights

Introduction class attendees	17
Projects designed	8
Installed raingardens	1
Installed native gardens	1

Rosemount

Introduction class attendees	34
Projects designed	18
Installed raingardens	1
Installed native gardens	1

South Saint Paul

Introduction class attendees	24
Projects designed	7
Installed raingardens	2

Sunfish Lake

Introduction class attendees	4
Projects designed	2

West Saint Paul

Introduction class attendees	18
Projects designed	11
Installed raingardens	4
Installed native gardens	1

Installed in partnership with Ramsey County

Raingardens—St. Paul	3

Non-Dakota County Introduction Participant Cities

Bloomington, Dundas, Maplewood, Minneapolis, Saint Paul, Savage, Stillwater, Waite Park, Woodbury

2022 PARTNERS

Cities

- Apple Valley
- Burnsville
- Eagan
- Lakeville
- Rosemount
- South St Paul

Dakota County

Ramsey County

SIXTEEN YEARS OF CLEAN WATER ACCOMPLISHMENTS

Workshop Participants 2007-2022 **5,491**

Projects Completed 2007-2022 **705**

4100 220th Street W, Suite 102, Farmington, MN 55024 Tel: (651) 480-7777 Fax: (651) 480-7775 www.dakotacountyswcd.org

2022
Landscaping for Clean Water
Project Summary

2022 LandscapiNative Garden for Clean Water Projects

Lower Mississippi River WMO

Total Available WS LCW Partner FundiNative	$15,000
Landowner incentives	$5,000
Technical Assistance	$10,000

Grants Available	**16**

Completed Projects	14

	Project ID	First	Last	City	Practice	Sq ft	Cost Est.
	Round 1						
1	22-SSP-059	Names removed	Conama	South St Paul	Raingarden	192	1,265.00
2	22-WSP-061		Deziel	West St Paul	Native Garden	100	354.00
3	22-MDH-062		Smith	Mendota Heights	Native Garden	100	300.00
4	22-IGH-063		Moryn	Inver Grove Heights	Native Garden	300	528.00
5	22-SSP-064		Baudouin	South St Paul	Raingarden	130	250.00
6	22-WSP-065		Walz	West St Paul	Raingarden	250	590.00
7	22-STP-066		Bakkum	Saint Paul	Raingarden	175	582.00
8	22-STP-067		Blurton	Saint Paul	Raingarden	390	464.00
9	22-STP-068		Hoffman	Saint Paul	Raingarden	175	539.00
	Round 2						
10	22-MDH-082		Moris	Mendota Heights	Raingarden	375	1,302.00
11	22-WSP-083		Gebauer	West St Paul	Raingarden	400	926.00
12	22-IGH-060		Errante	Inver Grove Heights	Raingarden	100	750.00
	Round 3						
13	22-WSP-122		McAllister	West St Paul	Raingarden	128	$814.00
14	22-WSP-123		Shillcox	West St Paul	Raingarden	225	$317.00
						3,040	**$8,981.00**

Total Projects
14

Avg. sf of Proj.
217

Average Cost
$642

Project Type	Number
Raingarden	11
Native Garden	3

City	Raingarden	Native Garden
Inver Grove Heights	1	1
Mendota Heights	1	1
St Paul *	3	0
South St Paul	2	0
West St Paul	4	1

* Completed in partnership with Ramsey County SWCD

Summary of Water Monitoring in the LMRWMO

Waterbody	DNR ID	Area (Acres)	Waterbody Location	MPCA Waterbody Type	Public Access?	Impairments	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Long Term Monitoring Notes:	Frequency
Monitoring Goal: Tracking Trends or Changes in Water Quality (Monitor Frequently)																	5 year Monitoring Plan						
Mississippi River					Public	Nutrients/Eutrophication biological indicators																None planned.	
Lake Augusta	19-0081	33	Mendota Heights	Lake (deep or shallow)	Private - no access	Nutrients/Eutrophication biological indicators		(CITY CAMP)			WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	Continue WMO CAMP monitoring.	14 Events
Thompson Lake	19-0048	7	West St. Paul	Shallow Lake	Public - dock access	Nutrients/Eutrophication bio. indicators, Chloride	(MPCA WRAP)				WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	Continue WMO CAMP	7 Events
Seidl's Lake	19-0095	7	South St. Paul/Inver Grove Heights	Shallow Lake	Public - dock access		(CITY CAMP)	(CITY CAMP)	(CITY CAMP)				WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	Continue WMO CAMP monitoring.	7 Events
Rogers Lake	19-0080	107	Mendota Heights	Shallow Lake	Public - dock access		(MPCA WRAP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	Monitoring expected to continue through City	
Sunfish Lake	19-0050	45	Sunfish Lake	Deep Lake	Private - no access	Delisted in 2022	(MPCA WRAP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	Monitoring expected to continue through City	
Hornbean Lake	19-0047	22	Sunfish Lake/Inver Grove Heights	Shallow Lake	Private - no access		(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	Monitoring expected to continue through City	
Horseshoe Lake	19-0051	14	Sunfish Lake/Inver Grove Heights	Shallow Lake	Private - no access		(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)		(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	Monitoring expected to continue through City	
Simley Lake	19-0037	11	Inver Grove Heights	Shallow Lake	Public - dock access		(WMO)	(WMO)												WMO (CAMP)	WMO (CAMP)	Monitor for 5 years to re-establish baseline.	
Lemay Lake	19-0082	25	Mendota Heights	Shallow Lake	Private - no access				(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	(CITY CAMP)	Monitoring expected to continue through City	
Interstate Valley Creek			Mendota Heights	Stream	N/A	Ecoli							WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	Continue monitoring with willing volunteer.	7 Events
Ivy Falls Creek			Mendota Heights	Stream	N/A											WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	Continue monitoring with willing volunteer.	7 Events
Kaposia Creek			South St. Paul	Stream	N/A																		

Monitoring Goal: Establishing Baseline Conditions (Monitor Infrequently)																							
Pickerel Lake	19-0079	107	Lilydale/St. Paul	Shallow Lake	Public - boat landing	Mercury in fish tissue	(MPCA WRAP)			WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)							Monitor for 5 years to re-establish baseline in 2027.	
Ohmans Lake (Marcott Chain)	19-0042	22	Inver Grove Heights	Deep Lake	Private - no access		(WMO)	(WMO)												WMO (CAMP)	WMO (CAMP)	Monitor for 5 years to re-establish baseline.	
Rosenberger Lake (Marcott chain)	19-0041	20	Inver Grove Heights	Deep Lake	Private - no access		(WMO)	(WMO)												WMO (CAMP)	WMO (CAMP)	Monitor for 5 years to re-establish baseline.	
Dickman Lake	19-0046	24	Inver Grove Heights	Shallow Lake	Private - no access										WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)			Monitor for 5 years to re-establish baseline.	7 Events
Schmitt Lake	19-0052	61	Inver Grove Heights	Shallow Lake	Private - no access										WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)	WMO (CAMP)			Monitor for 5 years to re-establish baseline.	7 Events
Anderson Pond	19-0094	3	South St. Paul	(Wetland or shallow lake)	Public - no access		(CITY CAMP)	(CITY CAMP)	(CITY CAMP)													Monitor for 5 years to re-establish baseline in 2027.	
LeVander Pond	19-0088	3	South St. Paul	(Wetland or shallow lake)	Private - no access		(CITY CAMP)	(CITY CAMP)	(CITY CAMP)													Monitor for 5 years to re-establish baseline in 2027.	
Bohrer Pond	19-0034	14	South St. Paul/Inver Grove Heights	Lake (possibly deep or shallow)	Public - no access																	Monitor for 5 years to re-establish baseline in 2027.	

Summary originally developed in 2011 and last updated in March 2013 by Barr Engineering Co.

Sunfish Lake

2022 Water Monitoring Report

LMRWMO
LOWER MISSISSIPPI RIVER
WATERSHED MANAGEMENT ORGANIZATION

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

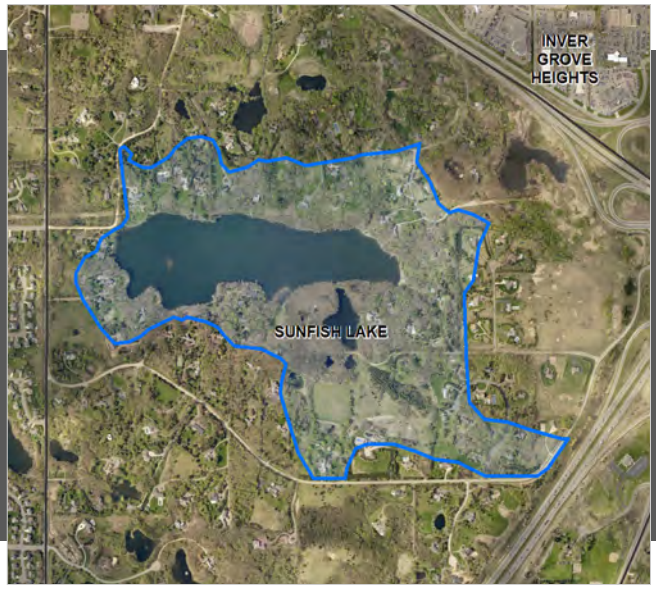
Max Depth: 32 feet

Watershed Size (shown): 235 acres

Major Watershed: Mississippi River

MPCA Lake Classification: Deep

Met Council 2022 Lake Grade: **A** (2021)



Monitoring

Sunfish Lake is monitored on an annual basis as part of the City of Sunfish Lake's participation in the Metropolitan Council's Citizen 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.

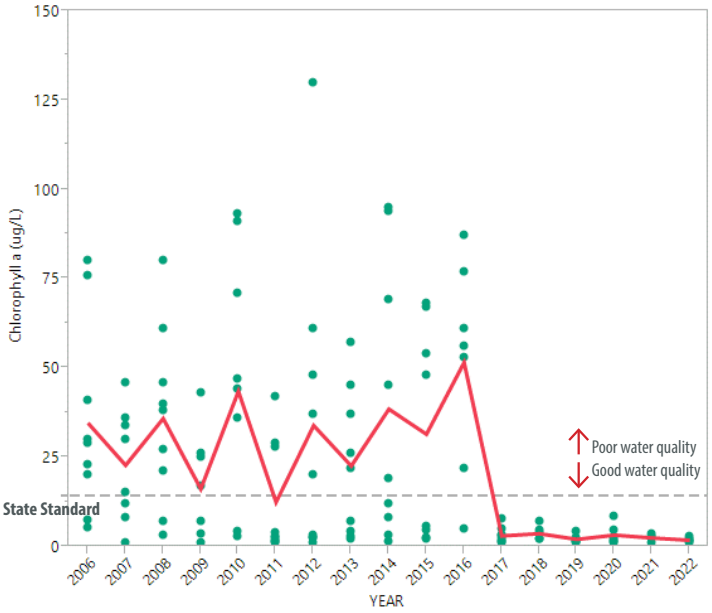
Water Quality

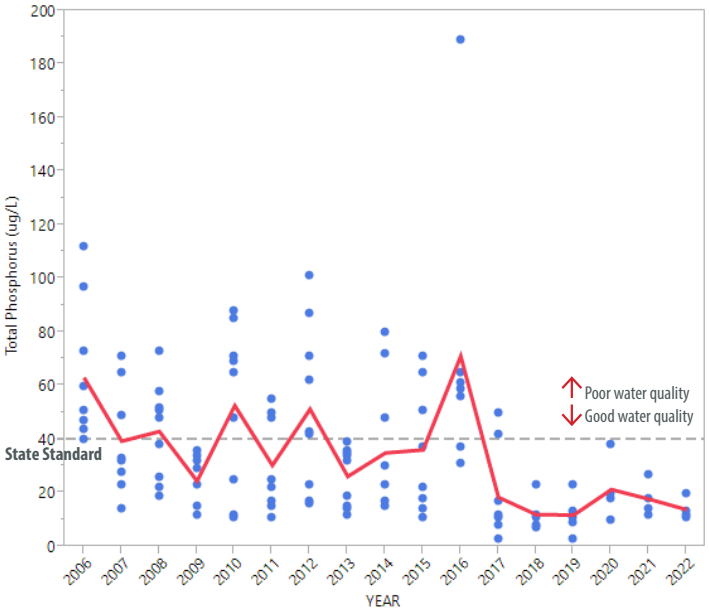
Following the 2017 alum treatment, there were improvements for all three eutrophication parameters when compared to data collected pre-treatment. Lake water quality continues to improve when considering the total phosphorus and chlorophyll-a levels in comparison to historical levels. The secchi readings show improvement from past years, with the minimum value and the average increasing from 2021. The below table shows the 2022 data.

Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	14	1.1	2.9	1.80
Total Phosphorus (ug/L)	40	11	20	13.80
Secchi Depth (m)	2.6	3.2	5.1	4.12

Water Quality Data 2006-2022

*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 chlorphophyll-a levels indicate good water quality. State standard is 14 ug/L (dashed line).

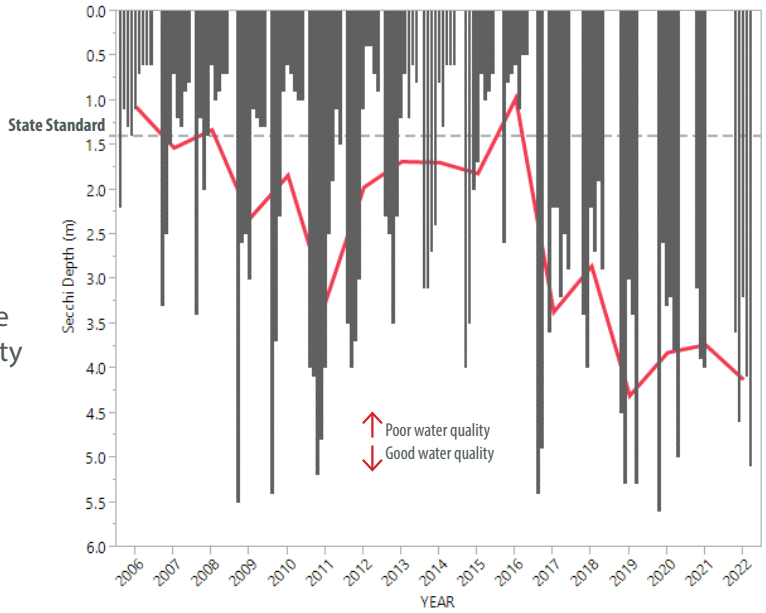
Phosphorus*

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. State 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 in-lake aluminum sulfate (alum) treatment to improve water quality. Upon application, the alum binds with phosphorus as aluminum phosphate 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. State standard is 1.4 m (dashed line).

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 or 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 - joe.barten@co.dakota.mn.us 651-480-7784
LMRWMO Website: www.lmrwmo.org

DAKOTA COUNTY SOIL & WATER CONSERVATION DISTRICT

Lake Augusta

2022 Water Monitoring Report

LMRWMO
LOWER MISSISSIPPI RIVER
WATERSHED MANAGEMENT ORGANIZATION

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: Minnesota River
MPCA Lake Classification: Deep
Met Council 2022 Lake Grade: **F** (2021)

Monitoring

Lake Augusta continues to not meet the deep lake water quality criteria from the Minnesota Pollution Control Agency. Further study of the lake is needed to understand the poor water quality causes. In 2022, the LMRWMO began an intensive water quality study to identify long term action items to improve lake water quality. 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.

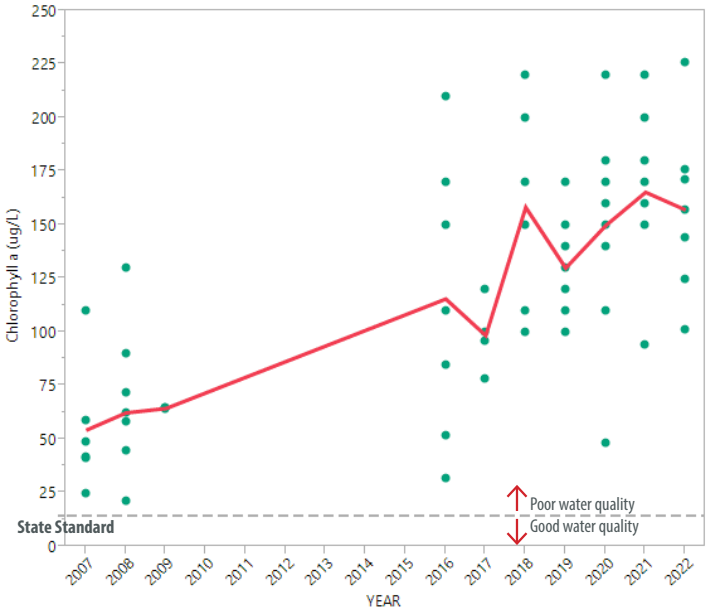
Water Quality

Monitoring data from 2022 showed an increase in the total phorphosus average, but not the maximum value. The seasonal average for chlorophyll-a decreased, though both the minimum and maximum values increased. The 2022 Secchi reading remained very poor which is consistent with previous monitoring efforts. The below table shows the 2022 data for the three main monitoring parameters.

Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	14	101	226	157.13
Total Phosphorus (ug/L)	40	90	219	164.50
Secchi Depth (m)	1.4	0.15	0.2	0.18

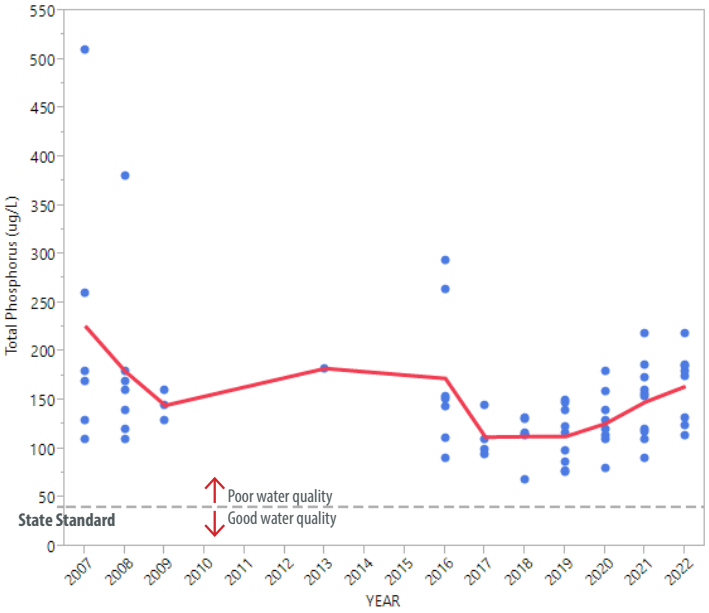
Water Quality Data 2007-2022

*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 chlorphophyll-a levels indicate good water quality. State standard is 14 ug/L (dashed line).



Phosphorus*

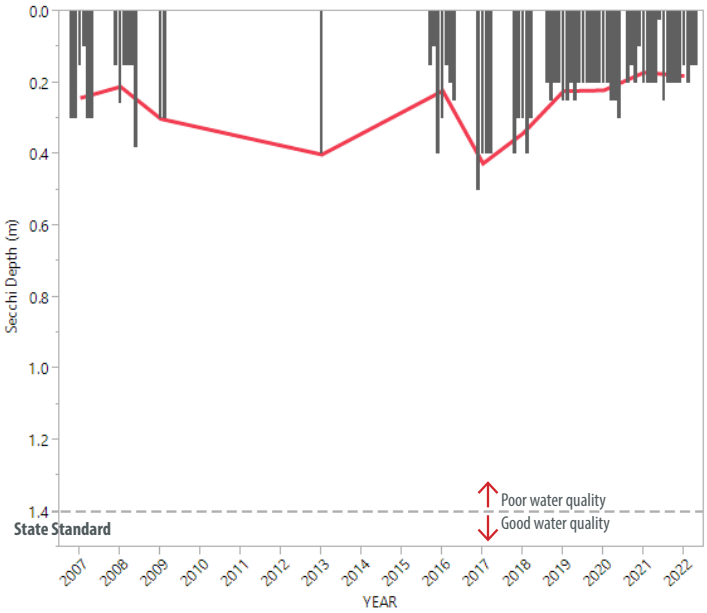
Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. State standard is 40 ug/L (dashed line).

Watershed Studies and Projects

The LMRWMO has been studying the poor water quality of Lake Augusta since 2012.

In 2017, the LMRWMO implemented an aluminum sulfate treatment (shown below) to improve water quality which provided slight phosphorus reductions.

The LMRWMO is undergoing a comprehensive study of the lake to identify long term implementation actions to improve lake water quality and a lake outlet and water quality improvement report will be complete in 2023.



Secchi Depth

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How can you get involved?

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Additional Information:

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LMRWMO Website: www.lmrwmo.org

DAKOTA COUNTY SOIL & WATER CONSERVATION DISTRICT

Thompson Lake

2022 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).

Lake Details

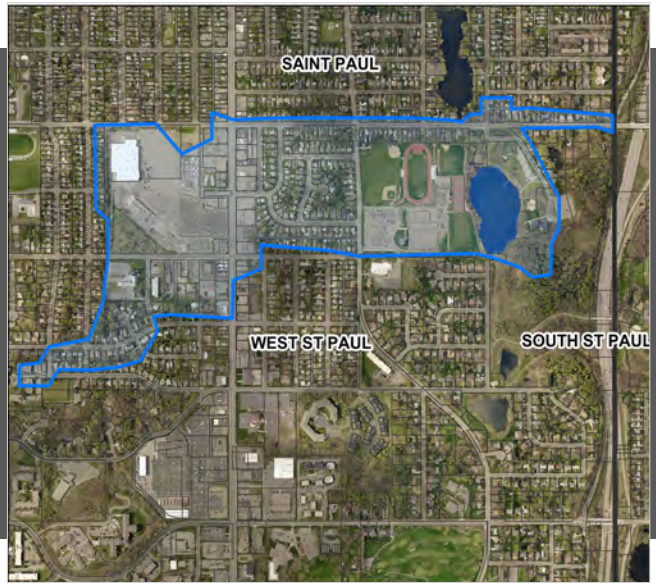
Max Depth: 8 feet

Watershed Size (shown): 180 acres

Major Watershed: Mississippi River

MPCA Lake Classification: Shallow

Met Council 2022 Lake Grade: **C** (2021)



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. Currently, the lake does not meet the shallow lake water quality criteria set forth by the Minnesota Pollution Control Agency (MPCA).

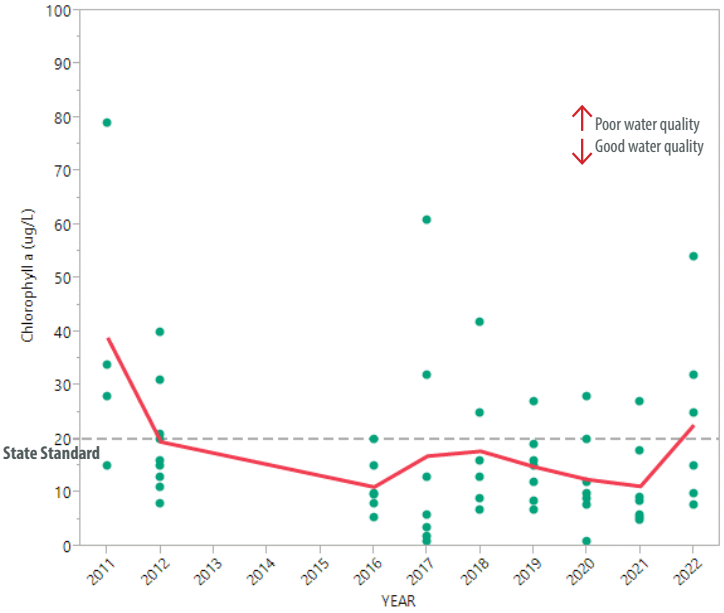
Water Quality

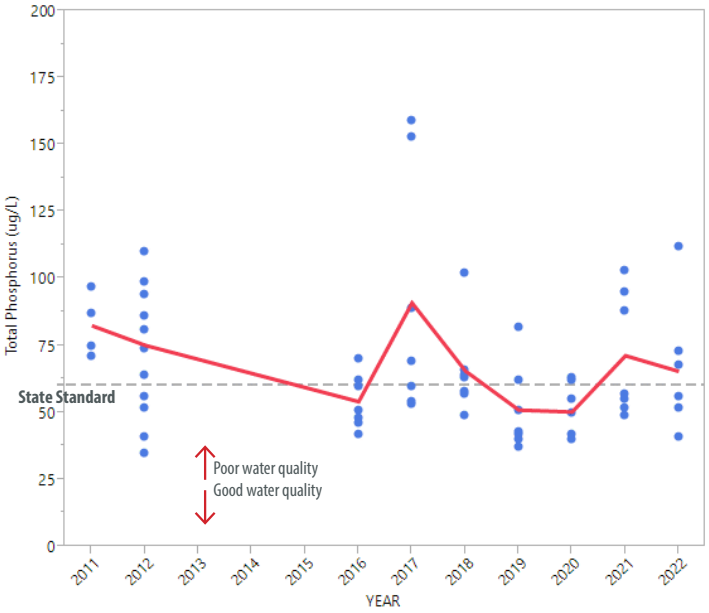
In 2018 and 2019, the LMRWMO led the installation of a comprehensive "treatment train" stormwater improvement project. This included installation of two underground sediment capture chambers, a stormwater settling treatment pond, a stormwater treatment wetland, and raingarden. In 2021, both chlorophyll-a and secchi disc readings showed poorer water quality relative to past years. Phosphorous levels decreased in comparison to 2021 (still higher than 2019 and 2020). The below table shows the 2022 data.

Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	20	7.8	54	22.69
Total Phosphorus (ug/L)	60	41	112	65.43
Secchi Depth (m)	1	0.6	1.6	1.07

Water Quality Data 2011-2022

*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 chlorphophyll-a levels indicate good water quality. State standard is 20 ug/L (dashed line).

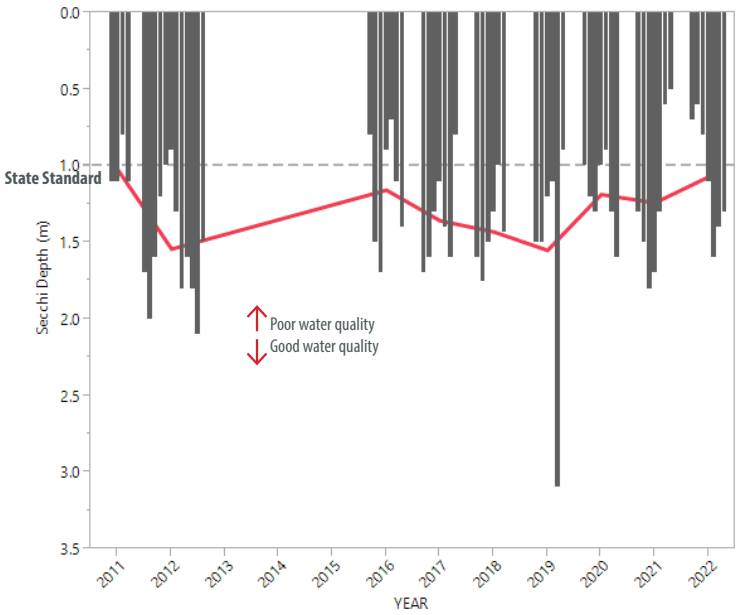
Phosphorus*

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

The LMRWMO partnered with Dakota County and the City of West St. Paul on the 2018-2019 installation of stormwater projects at Thompson Lake. These projects are expected to provide long term, incremental water quality improvements which will be tracked with continued water monitoring.

Additional opportunities for stormwater treatment and infiltration of stormwater in the watershed of Thompson Lake will be sought out and implemented as they arise.



Secchi Depth

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How can you get involved?

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LMRWMO Website: www.lmrwmo.org

DAKOTA COUNTY SOIL & WATER CONSERVATION DISTRICT

Seidls Lake

2022 Water Monitoring Report

LMRWMO
LOWER MISSISSIPPI RIVER
WATERSHED MANAGEMENT ORGANIZATION

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 not currently listed on Minnesota's 303(d) List of Impaired Waters.

Lake Details

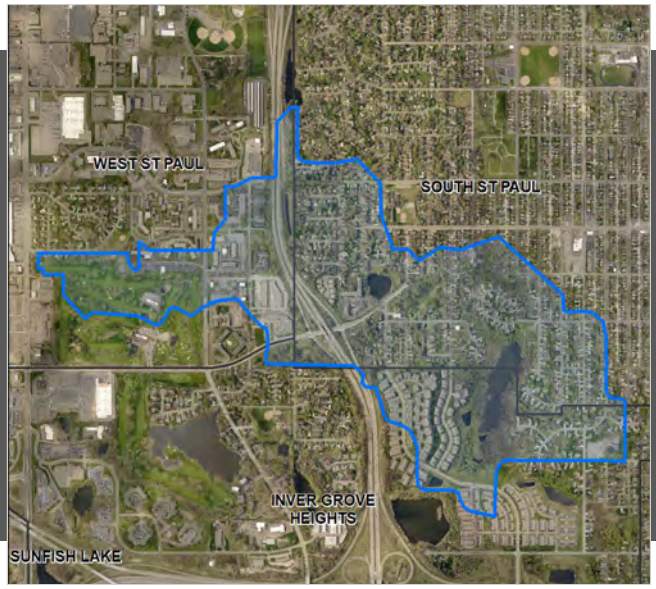
Max Depth: 17 feet

Watershed Size (shown): 420 acres

Major Watershed: Mississippi River

MPCA Lake Classification: Shallow

Met Council 2022 Lake Grade: **C** (2021)



Monitoring

Seidls Lake is monitored as part of the LMRWMO's participation in the Metropolitan Council's Citizen Assisted Monitoring Program (CAMP) volunteer water monitoring program. The lake is surrounded by parkland and is identified as a priority waterbody by 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.

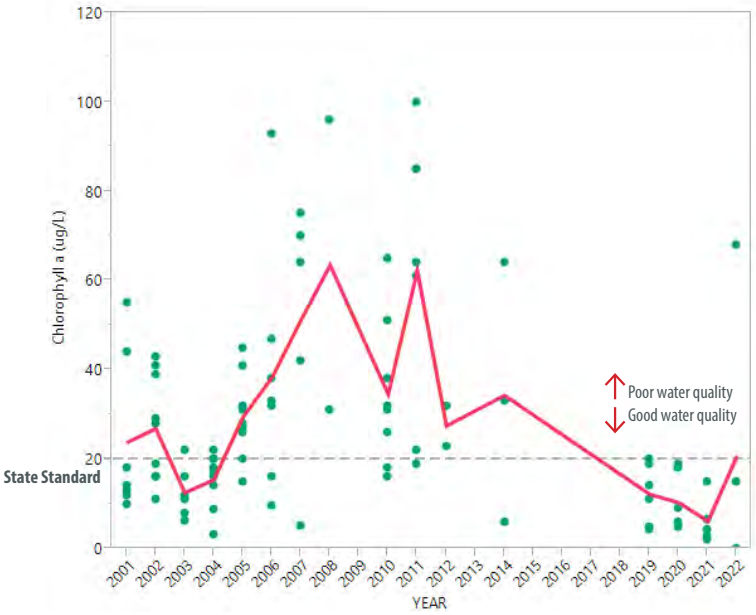
Water Quality

Water quality was drastically reduced in 2022 compared to sampling results from 2021. Due to construction in the near shore area, in-lake water quality may have been impacted as bottom sediment was disturbed or runoff entered the lake. Lake access issues also limited the number of samples collected, reducing the dataset and preventing a holistic picture of Seidl's current water quality. The below table shows the 2022 data.

Water Quality Parameters	MPCA Standard	Minimum	Maximum	Average
Chlorophyll-a (ug/L)	20	15	68	41.5
Total Phosphorus (ug/L)	60	57	73	67
Secchi Depth (m)	1	1.5	1.5	1.5

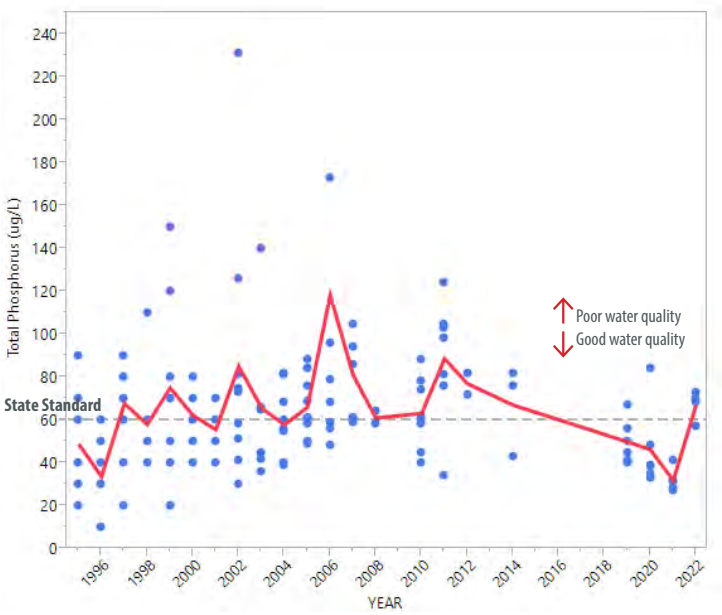
Water Quality Data 1995-2022

*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 chlorphophyll-a levels indicate good water quality. State standard is 20 ug/L (dashed line).



Phosphorus*

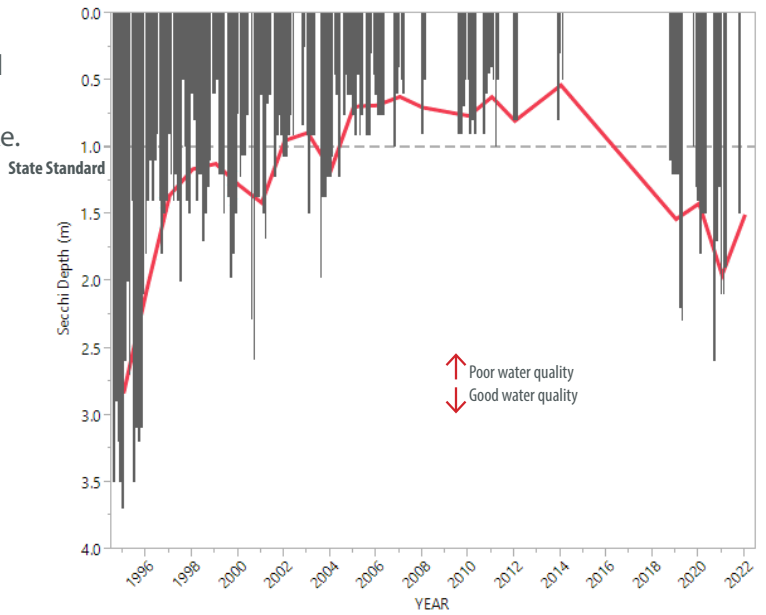
Phosphorus is a nutrient required for plant growth. High phosphorus levels can lead to algae blooms, turning water green. Low phosphorus levels indicate good water quality. State standard is 60 ug/L (dashed line).

Watershed Projects

The LMRWMO partnered with the City of South St. Paul to install large buried pipes (shown below) in 2018 to clean and infiltrate stormwater before entering the Lake.

A lake outlet project to maintain consistent water levels was completed in 2022 and a natural shoreline restoration project is planned for 2023.

The lake will continue to be monitored to track water quality.



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?

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 or 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 - joe.barten@co.dakota.mn.us 651-480-7784
LMRWMO Website: www.lmrwmo.org

DAKOTA COUNTY SOIL & WATER CONSERVATION DISTRICT

Interstate Valley Creek

2022 Water Monitoring Report

LMRWMO
LOWER MISSISSIPPI RIVER
WATERSHED MANAGEMENT ORGANIZATION

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

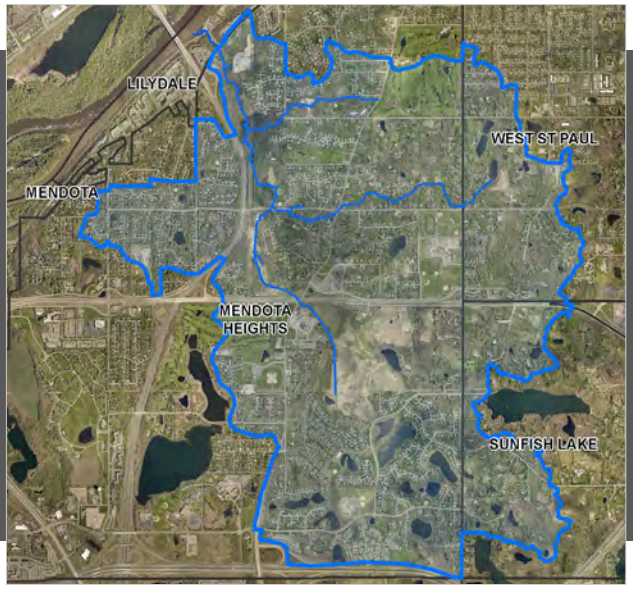
Mainstem Length: 2.5 miles

Watershed Size (shown): 3,272 acres

Major Watershed: Mississippi River

Impairment: *E. coli* (2014)

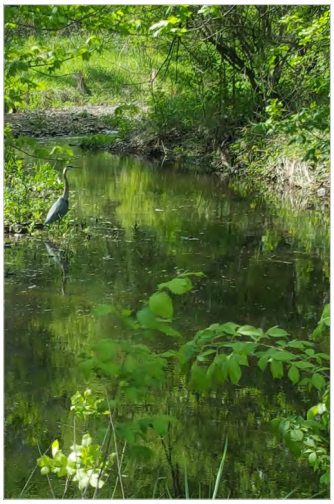
Years monitored: 3



Monitoring

A volunteer takes water samples 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 seven times in 2022 - monthly in April through October. The water was tested for levels of the following pollutants: chloride (salt), phosphorus (nutrients), total suspended solids, and *E. coli*. It was also tested for chlorophyll-a, nitrates, temperature, total phosphorus, total suspended solids, and water transparency.



Water Quality

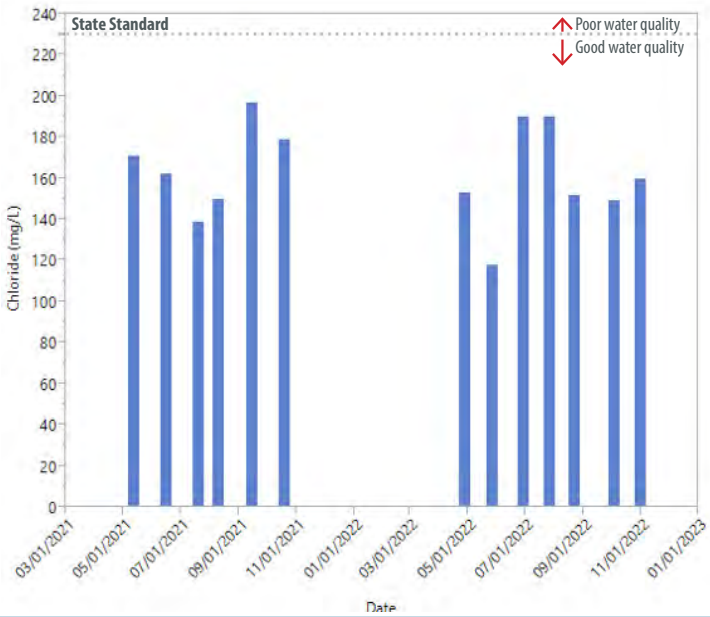
Interstate Valley Creek shows low levels of chloride, below the state standard. Phosphorus levels have average below the standard since 2020, though were higher in 2019. Total suspended solids are consistently below the standard. E-coli levels are consistently above, and not meeting state standards.

Water temperature is below 61 degrees all season and transparency is high during baseflow (low flow) conditions, though (the unnamed tributary shows some variability). Chlorophyll-a and Nitrate levels are consistently below applicable standards.

See the following page for more detailed monitoring results.

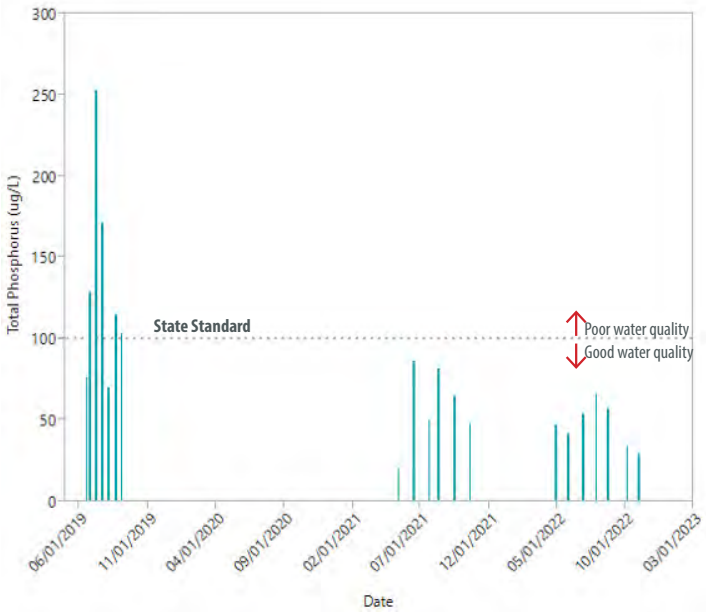
Water Quality Data 2019-2022

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



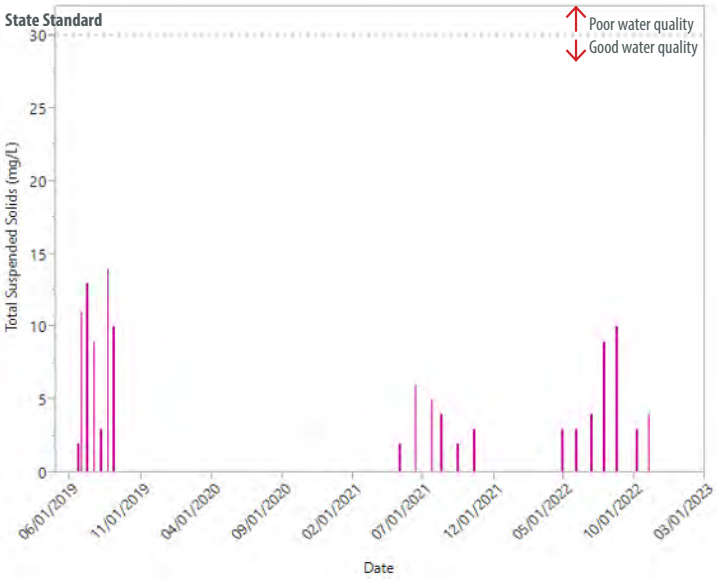
Chloride

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).



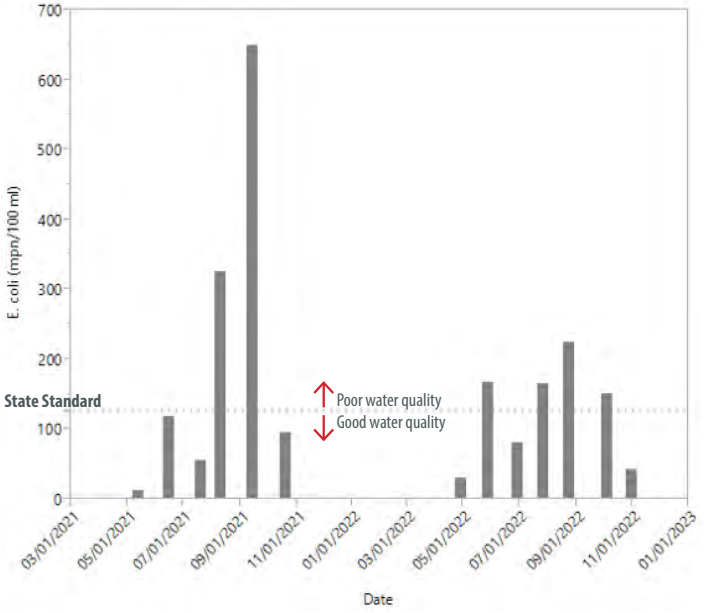
Phosphorus*

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).

How can you get involved?

You don't have to live on a river or stream to help improve water quality, **anyone can be part of the solution!** Installing a raingarden **increases water infiltration,** decreases lawn maintenance, and **reduces pollutant runoff** that can negatively impact local water quality. The LMRWMO offers grants to residents to install raingardens or native 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
LMRWMO Contact: Joe Barten - joe.barten@co.dakota.mn.us 651-480-7784
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DAKOTA COUNTY SOIL & WATER CONSERVATION DISTRICT

Ivy Falls Creek

2022 Water Monitoring Report

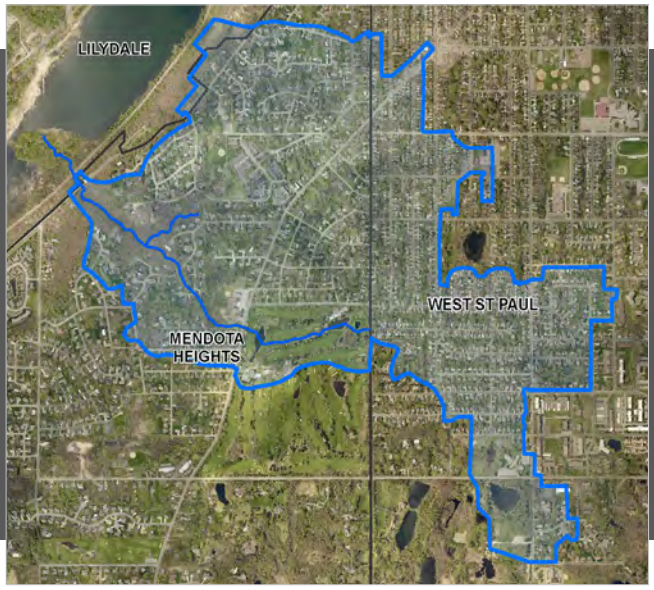
LMRWMO
LOWER MISSISSIPPI RIVER
WATERSHED MANAGEMENT ORGANIZATION

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
Watershed Size (shown): 746 acres
Major Watershed: Mississippi River
Impairment: None
Years monitored: 2



Monitoring

A volunteer takes water samples from Ivy Falls Creek and the main tributary 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 unnamed tributary were monitorined seven times in 2022 - once per month April- October. The water was tested for levels of the following pollutants: chloride (salt), phosphorus (nutrients), total suspended solids, and *E. coli*. It was also tested for chlorophyll-a, nitrates, temperature, total phosphorus, total suspended solids, and water transparency.

Water Quality

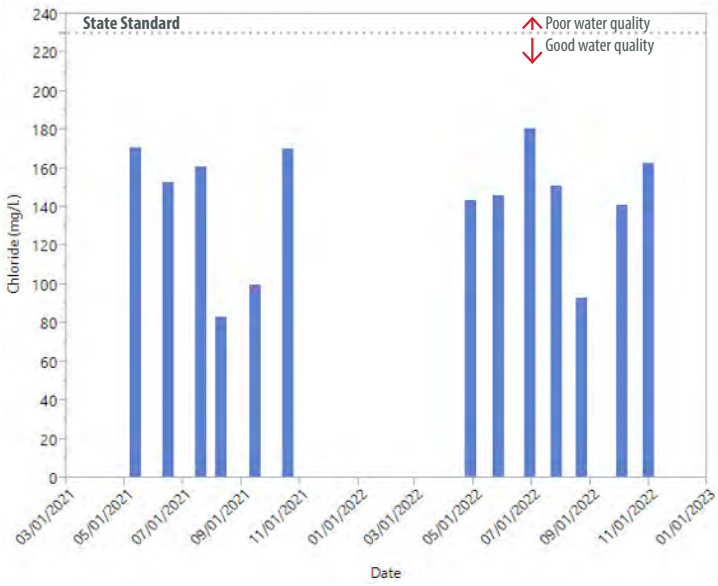
Both stream reaches show levels of chloride below the state standard. Phosphorus levels average just at the standard. Total suspended solids are typically below the standard, though with spikes of concentrations above the standard. E-coli levels are consistently not meeting state standards.

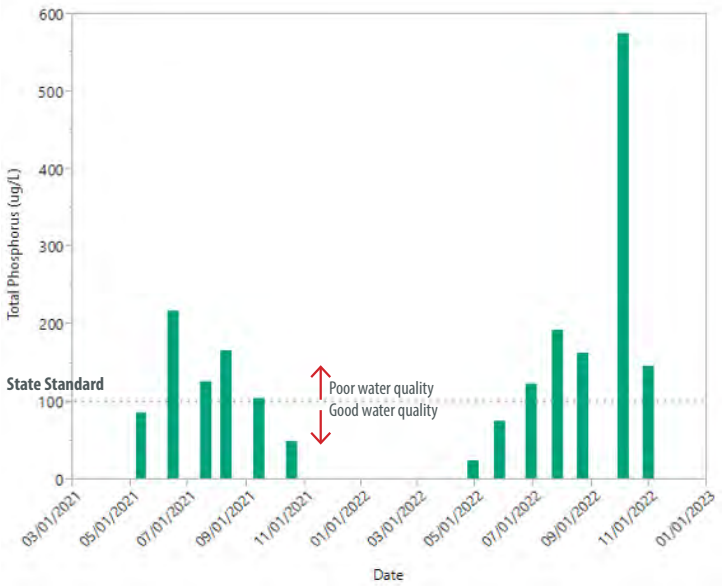
Water temperature is below 66 degrees all season and transparency is high during baseflow (low flow) conditions, though (the unnamed tributary shows some variability). Chlorophyll-a and Nitrate levels are consistently below applicable standards.

See the following page for more detailed monitoring results.

Ivy Falls Creek Mainstem

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





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*

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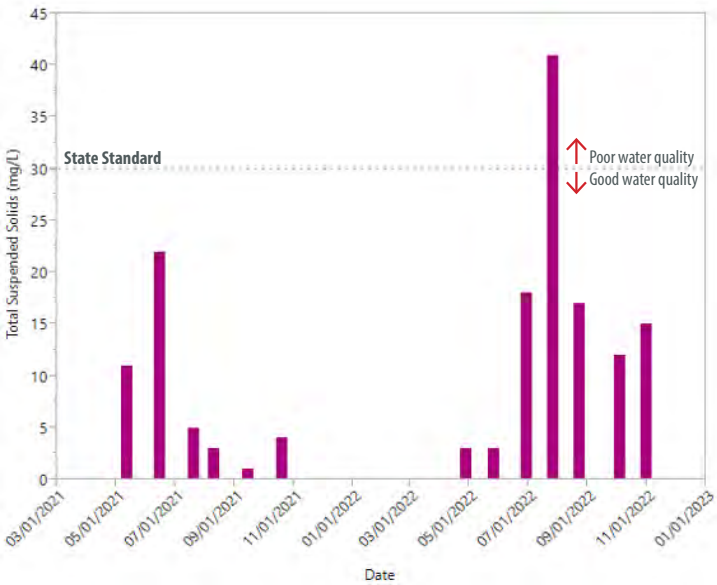

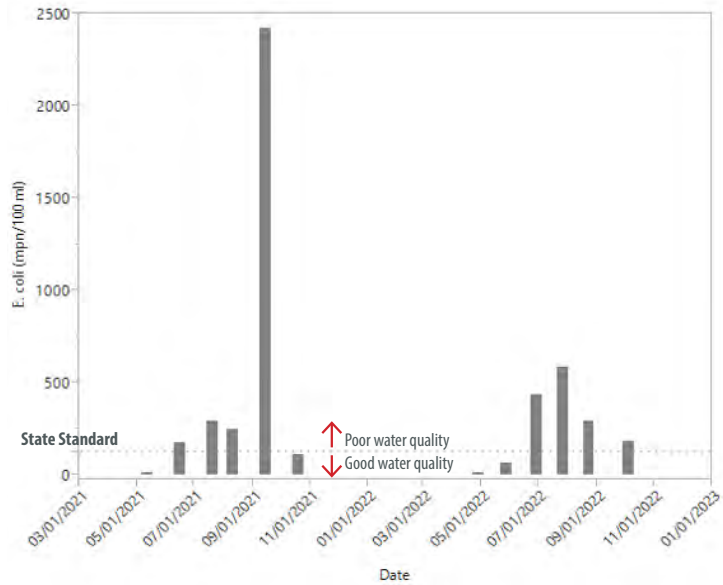

Total Suspended Solids

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 has been established (MPN stands for most probable number of organisms).

How can you get involved?

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Unnamed Tributary - Ivy Falls Creek

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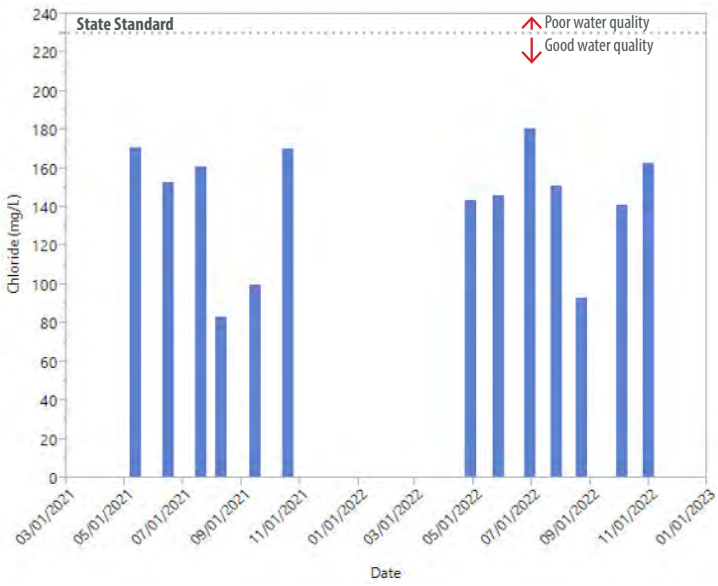

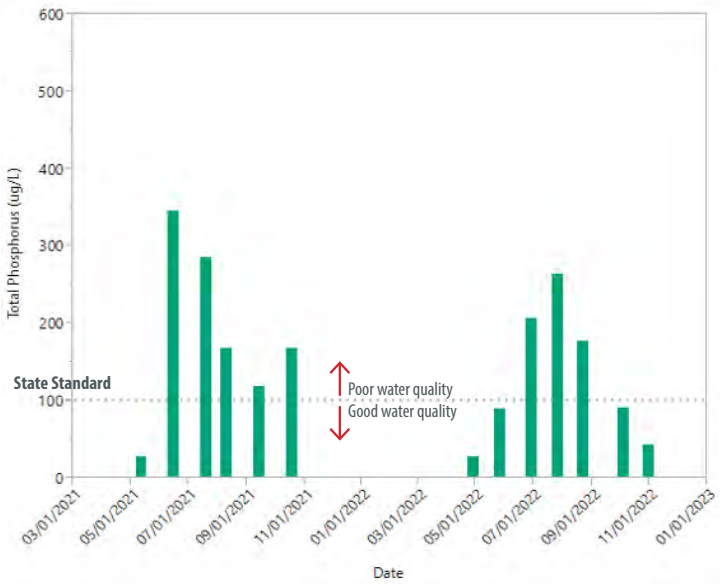

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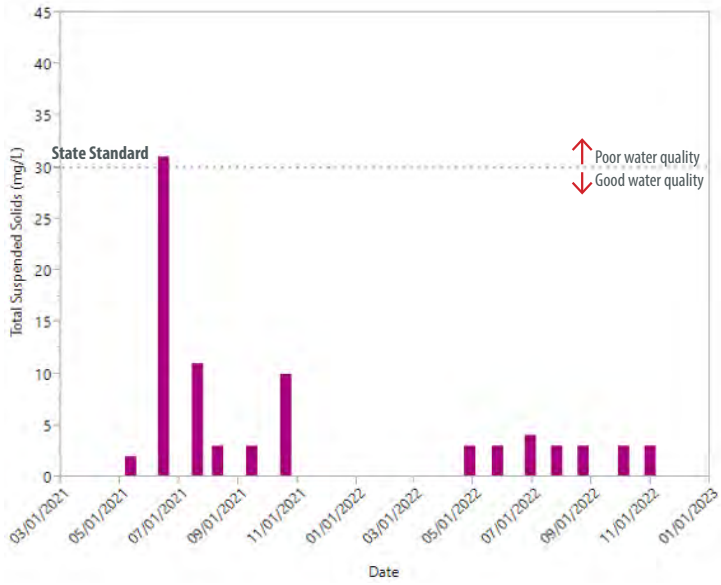

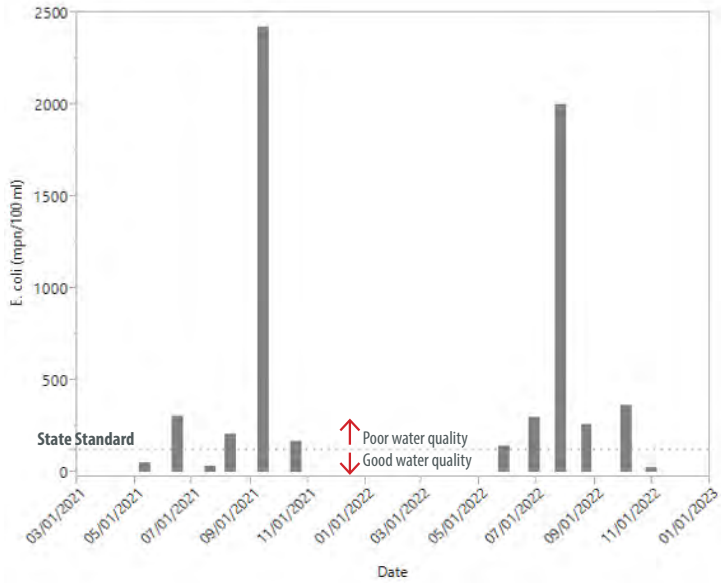

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Additional Information:
MN Impaired Waters Map: https://www.pca.state.mn.us/water/impaired-waters-viewer-iwav

Contact Information:
LMRWMO Website: www.lmrwmo.org
LMRWMO Administrator: Joe Barten - joe.barten@co.dakota.mn.us - 651-480-7784

DAKOTA COUNTY
SOIL & WATER
CONSERVATION DISTRICT

LMRWMO Approved 2022 Budget

ESTIMATED REVENUES AND ASSETS	2022 Budget
Dues from Members	$115,735
Interest	$600
Other/Grant Match	$0
LMCIT Rebate	$200
TOTAL	**$116,535**
ESTIMATED EXPENSES AND LIABILITIES	**2022 Budget**
Engineering/Technical Assistance	
Technical Assistance	$6,000
Meetings	$6,500
Plan Reviews	$0
Watershed Plan Amendment	$40,000
Subtotal	**$52,500**
Project Implementation	
General Plan Implementation	$5,000
Landscaping for Clean Water Projects	$12,000
Water Monitoring	$9,000
Subtotal	**$26,000**
Education	
Landscaping for Clean Water Classes	$6,400
Master Water Stewards	$10,000
Storm Drain Stenciling Program	$0
Stormwater Signage Program	$2,500
WMO Tabling at Events	$500
Host Neighborhood or Lake Assn. Mtgs.	$0
General Education Requests	$2,000
Metro Watershed Partners Membership	$1,000
Board Tour / Boat Tour	$0
Website Maint./ Redo	$4,000
CAC Coordination	$0
Board Education	$500
Subtotal	**$26,900**
Administration	
General Administration	$36,000
Insurance	$2,500
Attorney and Audit	$5,000
Subtotal	**$43,500**
Cumulative Set Aside for 4th Gen Plan	**$10,000**
TOTAL	**$148,900**
40% Goal of Unencumbered Fund Balance	$59,560
Year End Fund Balance (Estimated)	**$127,635**
Unencumbered Year End Fund Balance	**$117,635**

LMRWMO

LOWER MISSISSIPPI RIVER

WATERSHED MANAGEMENT ORGANIZATION

2023 NEWSLETTER

LMRWMO MISSION: *Water resources and related ecosystems are managed to sustain their long-term health and integrity through member city collaboration and partnerships with other water management organizations with member city citizen support and participation.*

Interstate Valley Creek

Erosion & Stormwater Volume Reduction Study

The LMRWMO was awarded $48,000 in grant funds for the Interstate Valley Creek Stabilization and Volume Reduction Feasibility study. The City of Mendota Heights also provided $25,000 in matching funds for the study. This will identify areas and severity of streambank erosion, methods for streambank protection, and opportunities to reduce the flow of stormwater to IVC.

Interstate Valley Creek runs from Friendly Hills Marsh in Mendota Heights north along I-35-E to the Mississippi River. There are two tributaries, Marie and Wentworth Creeks, that feed into the mainstem of IVC. Severe erosion was identified which required prioritization of eroded areas and identification of stormwater volume reduction projects.

This first involved computer-based assessment of the watershed of IVC, which extends into Sunfish Lake and West St. Paul. All the stream reaches were then walked, assessed, and catalogued based on amounts of erosion. Additionally, 2-D-modeling was performed throughout the stream channel to gauge erosion intensity during rainfalls. A final report which prioritizes areas to be stabilized based on their cost/benefit, outlines stabilization methods (rock, vegetation, re-grading, etc.), and identifies stormwater volume reduction opportunities, is complete.

Severe erosion areas along Interstate Valley Creek

This study will next be used to seek grant funding for stabilization measures in partnerships with the City of Mendota Heights and Dakota County, who are planning a trail reconstruction project within the same corridor.

Funding for this study is provided by the Board of Water and Soil Resources (BWSR) via the State Clean Water Fund and Metro Watershed Based Implementation Funding (WBIF) grant program.

Become A Citizen Water Quality Monitor!

Help us gather the vital data to inform our lake and stream management decisions and ensure the lasting health of the LMRWMO waterbodies.

Monitoring involves Secchi disk measurements to track the water transparency as well as measurements of phosphorus and chlorophyll in a lake. These indicate how excess nutrients in the lake are causing algae growth and making lakes unusable.

If you would like to learn how to become a water monitor, contact the LMRWMO Administrator below:

(651) 480-7784

joe.barten@co.dakota.mn.us

Using a Secchi disk to measure water clarity

WATERSHED MANAGEMENT ORGANIZATION FACTS:

- *WMOs are funded by the cities within their jurisdiction.*
- *WMOs are governed by a citizen board appointed by the member cities.*
- *The WMO was formed in 1985 after the Metro Surface Water Mgmt. Act was passed.*

Landscaping for Clean Water $250 Grants

Online and In Person Design Courses Available!

The Landscaping for Clean Water program makes it easy for residents of the LMRWMO to turn their yards into an attractive force for clean water. Each of us has the opportunity to create a landscape on our property which will benefit our lakes, streams, and wetlands by soaking water into the ground, providing pollinator habitat, and stabilizing eroded slopes and shorelines.

The online Introduction Class and both online and in person Design Classes give you the tools and knowledge to transform your yard for the better. Register today to get access to the in-person classes, online materials, and online one-on-one office hours for personal and professional design assistance for your native gardens, raingardens, or native shoreline project.

The program provides an overview of water quality challenges and provides beautiful and practical ways to transform your yard into a beneficial landscape. You will also learn about $250 grants available to participants. After the Introduction Class you can sign up for a $25 online design workshopbeing offered now! Register online or call for more information: (651) 480-7777 or visit: *www.dakotaswcd.org*

New Website

The LMRWMO website has a new look! Check out the new and improved site that includes information on studies and projects implemented by the WMO, as well as educational information and data on lake water quality: www.LMRWMO.org

About the WMO

The Lower Mississippi River Watershed Management Organziation, located in northern Dakota County and southern Ramsey County, covers 55.8 square miles and includes Inver Grove Heights, St. Paul, South St. Paul, West St. Paul, Lilydale, Mendota Heights, and Sunfish Lake. The LMRWMO was established by a Joint Powers Agreement to meet the requirements of the Metropolitan Surface Water Management Act of 1982.

The premise of the Surface Water Management Act is that rain and stormwater runoff are not contained within municipal boundaries. Rain that falls in one community may run through another causing flooding, erosion, or the degradation of water quality downstream. The LMRWMO addresses intercommunity stormwater issues works to protect surface waters. Visit the LMRWMO website for more information: www.LMRWMO.org

Did you Know?

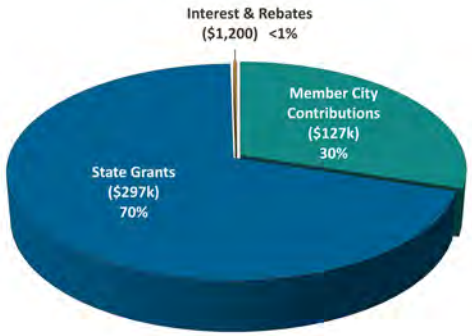
The LMRWMO Board is made up of citizen appointees who set the budget and direction of the organization. Contact us to fill a Board vacancy for the City of Saint Paul if you live on the West Side.

- Inver Grove Heights
- Lilydale
- Mendota Heights
- Sunfish Lake
- South St. Paul
- **Saint Paul**
- West St. Paul

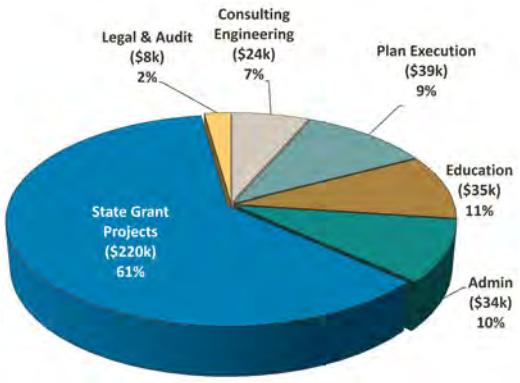
2023 Budget

The LMRWMO is funded by member City dues based on land area and property value. Grant assistance is also provided through partnership entities to fulfill the mission of the LMRWMO. See below for more information.

Revenue



Expenditures



The LMRWMO Board of Managers is comprised of up to two appointed representatives from each member city, listed below

Sharon Lencowski (Chair) - Inver Grove Heights
Karen Reid (Vice Chair) - Saint Paul
Mary Jeanne Schneeman (Sec/Tres) - Mendota Heights
Jill Smith (Alternate) - Mendota Heights
Dawn Gaetke (Alternate) - Inver Grove Heights
Tom Sutton (Member) - Lilydale
Lyle Hanzal (Alternate) - Lilydale
Michael Randle (Member) - South St. Paul
Daniel Anderson (Alternate) - South St. Paul
Dan Halvorsen (Member) - Sunfish Lake
Shannon Nelson (Alternate) - Sunfish Lake
Sheila Vanney (Member) - West St. Paul
Julie Eastman (Member) - West St. Paul

Staff Contact - Joe Barten (651) 480-7784