MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION
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Regular Meeting of the Middle St. Croix Watershed Management Organization
Remotely held as posted on www.mscwmo.org
Physical location - Washington Conservation District, 455 Hayward Ave N
Thursday, April 9, 2026
6:00PM

1. Call to Order – 6:00PM
   - **a.** Approval of Agenda

2. Approval of Minutes
   - **a.** Draft minutes – March 12, 2026 **pg 1-4**
3. Treasurer's Report
   - **a.** Report of savings account, assets for April 9, 2026
   - **b.** Approve payment of bills for April 9, 2026

4. Public Comment

5. Old Business
   - **a.** 2025 Water Quality Monitoring Report **pg 5-40**

6. New Business

7. Grant and Cost Share Applications
   - **a.** None this month

8. Plan Reviews/Submittals
   - **a.** Plan Review and Submittal Summary **pg 41**
     - i. CenterPoint Natural Gas – ACTION **pg 42**
     - ii. Grand Central House – INFORM
     - iii. Daycare Development – ACTION WITH CONDITIONS **pg 53**
   - **b.** Erosion and Sediment Control Inspection Reports **pg 65-77**

9. Staff Report **pg 78-79**
10. 1W1P Updates - Metro Funding Allocation
11. Other
12. Adjourn

Regular Meeting of the Middle St. Croix Watershed Management Organization
Washington Conservation District, 455 Hayward Ave N
Thursday, March 12th, 2026
6:00PM
Present: Annie Perkins, Afton; Ryan Collins, Stillwater; Avis Peters, Baytown; Orin Kipp, Bayport; Tom McCarthy, Lake St. Croix Beach (remote); Administrator Matt Oldenburg-Downing; Amanda Herbrand, WCD; Erik Anderson, WCD

Call to Order
Manager Perkins called the meeting to order at 6:02PM.

Approval of Agenda
Manager McCarthy is remote and states the reason for being remote is that he is out of town. All votes are taken by roll call due to Manager McCarthy being remote.

Manager Perkins motioned to approve the agenda. Manager Collins seconded the motion. The motion carried on a roll call vote with all in favor.

Approval of Minutes
Manager Collins motioned to approve the draft January 8th, 2026 board meeting minutes, Manager Peters seconded the motion. The motion carried on a roll call vote with all in favor.

Treasurer's Report
Administrator Oldenburg-Downing presented the treasurer's report. The remaining checking account balance at the end of February was $41,726.06. First Bank CD's were valued at $213,549.15. The ending value on the RBC savings account from February was $101,677.62. Manager Collins motioned to approve the report of the savings account and assets for March 12th, 2026. Manager Peters seconded the motion. The motion carried on a roll call vote with all in favor.

Bills to approve for January are four bills to the Washington Conservation District for admin (January), technical services (January), admin (February), and technical services (February) for $16,544.25, and one bill to Town Law Center for $66.00. The total for January bills is $16,610.25. Manager Collins motioned to approve payment of bills for March totaling $16,610.25. Manager Peters seconded the motion. The motion carried on a roll call vote with all in favor.

Administrator Oldenburg-Downing notes that all contributions from member communities for 2025 have been received. All communities except Baytown, Lake St. Croix Beach, and West Lakeland have paid first half contributions for 2026, Afton has paid its full contribution for 2026.

Public Comment
None

Old Business
None

New Business
2025 Water Monitoring Report
Included in the board packet is the 2025 Water Monitoring Report prepared by the Washington Conservation District (WCD). Erik Anderson from the WCD presented an overview of the report.

The report needs approval before being finalized and posted on the MSCWMO website. After discussion, board members present decide to table the item to give other members an opportunity to review the report.

2025 Annual Watershed Report
Included in the board packet is the 2025 Annual Watershed report. The report summarizes all WMO activities from the year and requires board approval before being finalized.

Manager Peters motioned to approve the 2025 Annual Watershed Report, Manager Collins seconded the motion. The motion carried on a roll call vote with all in favor.

2025 Adopt-a-Drain Summary
Included in the board packet is the 2025 Adopt-a-Drain summary. The summary shows that MSCWMO participants removed 454lbs of debris from their adopted storm drains in 2025.

This is an informational item.

Gully Erosion Analysis Authorization
At the end of 2025, the Minnesota Geospatial Information Office published second-generation lidar data. District engineer at the WCD is requesting the authorization of a task order amendment to the 2026 MSCWMO Services Agreement to complete further review of the lidar analysis output. The review could help to identify areas of potential concern where soil loss is not known and inventory areas of erosion that intersect with areas of steep slopes which indicate an actively eroding ravine. The estimated budget to complete the work is $3,264.00.

Manager McCarthy motioned to approve authorization of the gully erosion analysis for the estimated $3,264.00. Manager Perkins seconded the motion. The motion carried on a roll call vote with all in favor.

Grant and Cost Share Applications
Halsten Stewardship Grant Request
Bayport resident Margaret Halsten is applying for a 2026 MSCWMO Stewardship Grant to covert approximately 550 square feet of existing turf on her property to a native woodland pollinator garden. Stewardship Grant funds will be used to reimburse for native plant and seed purchases. The goal of the project is to reduce runoff volume from the property and to provide diverse pollen and nectar resources to pollinators throughout the season. Total project estimate is $1,500.00 and the requested cost share is $500.00.

Manager Peters motioned to approve encumbrance of $500.00 cost share for the Halsten Turf-to-Pollinator Garden project at 495 7th St N, Bayport, MN 55003. Manager Kipp seconded the motion. The motion carried on a roll call vote with all in favor.

FY27 Projects and Practices CWF Grant Request
The Board of Water and Soil Resources (BWSR) released a request for applications on Feb 11, 2026 for its Clean Water Fund Competitive Grants Program. More than $6 million in grants and up to $13 million in loans are available to local governments.

As part of the recently adopted MSCWMO WMP the 2024 BMP inventory and assessment was completed. This report identified ~25 practices in need of retrofit to restore and improve the water quality benefits to Lily, McKusick and St. Croix Lakes. Staff is seeking Board authorization to apply for a $120,000 CWF grant to implement the recommended actions from this report.

Manager McCarthy motioned to authorize staff to apply for a FY27 CWF Grant. Manager Peters seconded the motion. The motion carried on a roll call vote with all in favor.

Plan Reviews/Submittals
BayHaven Second Addition
Submittal items were received on December 23rd, 2025 for the ten single family detached villa homes at BayHaven Second Addition (4703 Stagecoach Trail). Revised submittals were received February 4th and 19th, 2026. The proposed project qualifies for full review under the MSCWMO 2025 Watershed Management Plan ((WMP) for subdivision of four or more lots. The proposed project fully meets MSCWMO volume retention and rate control standards. MSCWMO staff recommends board approval with one (1) condition:

1. Show and describe stabilization method for areas of concentrated flow (swales) and flatter slopes (including ALL exposed soils).

Manager Peters motioned to approve the project with the one condition. Manager Kipp seconded the motion. The motion carried with all in favor.

Bridgeview and Aiple Parking Lots
Submittal items were received on December 15th, 2025 for parking lot reconstruction of the Bridgeview Parking Lot within the MSCWMO boundaries and the City of Stillwater. Revised submittals including the Aiple Parking Lot were receive February 3rd, 2026. The proposed project qualifies for full review under the MSCWMO 2025 Watershed Management Plan (WMP) for over 6000 square feet of reconstructed impervious. The proposed project fully meets MSWCMO MIDS volume retention and rate control standards. MSCWMO staff recommends board approval with two (2) conditions:

1. Appropriate soil borings have been conducted that meet the minimum standards and demonstrate assumed design infiltration rate based on soil texture and three (3) feet of separation distance from the bottom of the infiltration system to the elevation of the seasonally saturated soils.

2. Appropriate variances are approved for a structure within the OHW setback in the St. Croix River Overlay District.

Manager Peters motioned to approve the project with the two conditions. Manager Collins seconded the motion. The motion carried on a roll call vote with all in favor.

Erosion and Sediment Control Inspection Reports
None

Staff Report
Administrator Oldenburg-Downing presented the staff report. Water monitoring and BMP maintenance activities will be starting up when weather temperatures allow.

1W1P Updates
None

Other
Administrator Oldenburg-Downing notes that he will be out for a period of time for parental leave, it is possible he will be out for the next board meeting.

Adjourn
Manager Peters motioned to adjourn the meeting, Manager Kipp seconded the motion. The motion carried on a roll call vote with all in favor. The meeting adjourned at 6:54PM.

Middle St. Croix Watershed Management Organization 2025 Water Monitoring Summary

Prepared For:

MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION

Prepared by:

WASHINGTON CONSERVATION DISTRICT

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ACKNOWLEDGEMENTS

Multiple agencies and individuals were directly involved in many aspects of this project, such as data collection and data analysis, as well as technical and administrative assistance.

Middle St. Croix WMO (MSCWMO) Board of Managers
Annie Perkins, Secretary
John Dahl
Orin Kipp
Avis Peters
Brian Zeller, Chair
Dave Millard
Tom McCarthy, Vice Chair
Carly Johnson, Treasurer
Tom Grahek
Ryan Collins
Rachel Dana

Washington Conservation District
Matthew Oldenburg-Downing, MSCWMO Administrator

Metropolitan Council
Brian Johnson
Monica Rose
Mallory Vanous

Minnesota Department of Natural Resources (MN DNR)
Nick Hayes

The WCD would also like to thank the volunteers and landowners who assist with data collection and allow property access.

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ABBREVIATIONS, DEFINITIONS, ACRONYMS, AND SYMBOLS

Anoxic	Lacking oxygen
BCWD	Brown's Creek Watershed District
Benthic	The area nearest lake bed
Biweekly	Every two weeks
BMP	Best management practice
cf	cubic feet
cfs	cubic feet per second
Chl-α	Chlorophyll-α
DO	Dissolved oxygen
E. coli	*Escherichia coli*
Littoral zone	The area of a body of water where sunlight penetrates to the sediment and allows aquatic plants (macrophytes) to grow
m	meters
MCES	Metropolitan Council Environmental Services
mg/L	milligram per liter
mL	milliliter
MN DNR	Minnesota Department of Natural Resources
MPCA	Minnesota Pollution Control Agency
MPN	Most probable number
MSCWMO	Middle St. Croix Watershed Management Organization
NAVD 88	North American Vertical Datum of 1988, used for determining lake elevations
NGVD 29	National Geodetic Vertical Datum of 1929, used for determining lake elevations
OHW	Ordinary high water level
SOP	Standard operating procedure
TKN	Total Kjeldahl nitrogen
TP	Total phosphorus
TSI	Trophic State Index
TSMP	Trout Stream Mitigation Project
TSS	Total suspended solids
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
VSS	Volatile suspended solids
WCD	Washington Conservation District

EXECUTIVE SUMMARY

This report focuses on the summary and comparison of lake and stream water quality data collected by the Washington Conservation District (WCD) in 2025, as well as previous years. In 2025 the Middle St. Croix Watershed Management Organization (MSCWMO) monitored water quality and water surface elevation on McKusick Lake and Lily Lake, water surface elevation on Brick Pond, and flow and water quality at Perro Creek at the Diversion Structure (Figure 1). The purpose of this monitoring is to assess and document current water quality conditions of the lakes and streams, as well as continuation of a long-term monitoring program that will enable the MSCWMO to identify trends associated with best management practice (BMP) implementation and land use changes in the watershed. Also included in this report is data collected at the Brown's Creek Diversion Structure, which is a tributary to McKusick Lake that is monitored by the WCD for the Brown's Creek Watershed District (BCWD). A period of record for historical water monitoring in MSCWMO is found in Table 1.

Lake Monitoring

Lily Lake was classified as mesotrophic and received an A grade in 2025 (APPENDIX A). All samples collected June – September met the Minnesota Pollution Control Agency's (MPCA) standards for total phosphorus (TP) and for chlorophyll-α (chl-α) corrected for pheophytin. All Secchi disk transparency measurements also met the MPCA standard (APPENDIX A).

In 2025 McKusick Lake was classified as eutrophic and received a grade of C+ (APPENDIX A). Five of the nine samples collected June – September did not meet the Minnesota Pollution Control Agency's standard for total phosphorus and one sample did not meet the standard for chlorophyll-α corrected for pheophytin. All Secchi disk transparency measurements met the MPCA shallow lake standard (APPENDIX A).

Stream Monitoring

In 2025 the total recorded discharge from Perro Creek at the Diversion Structure to the St. Croix River was 26,453,270 cubic feet (similar to 2024), which included discharge through the

overflow structure. The average baseflow TP concentration was 0.032 mg/L (similar to 2018-2021 and 2024) and the average baseflow TSS concentration was 3 mg/L (consistent since 2018). The average TP concentration from storm samples was 0.226 mg/L (second lowest since 2018) and the average TSS concentration from storm samples was 222 mg/L (highest since 2016). TP and TSS loads to the St. Croix River were calculated only during monitored periods, and in 2025 the TP load was 75.7 lbs. and the TSS load was 29,152 lbs.

Discharge at the Brown's Creek Diversion Structure in 2025 was 60,305,225 cubic feet (fifth highest since 2006). The total annual TP load was 416 lbs. (sixth lowest since 2006) and the TSS load was 73,469 lbs. (second lowest since 2006). Concentrations of metals were again low in 2025 with only one lead result exceeding the MPCA chronic standard.

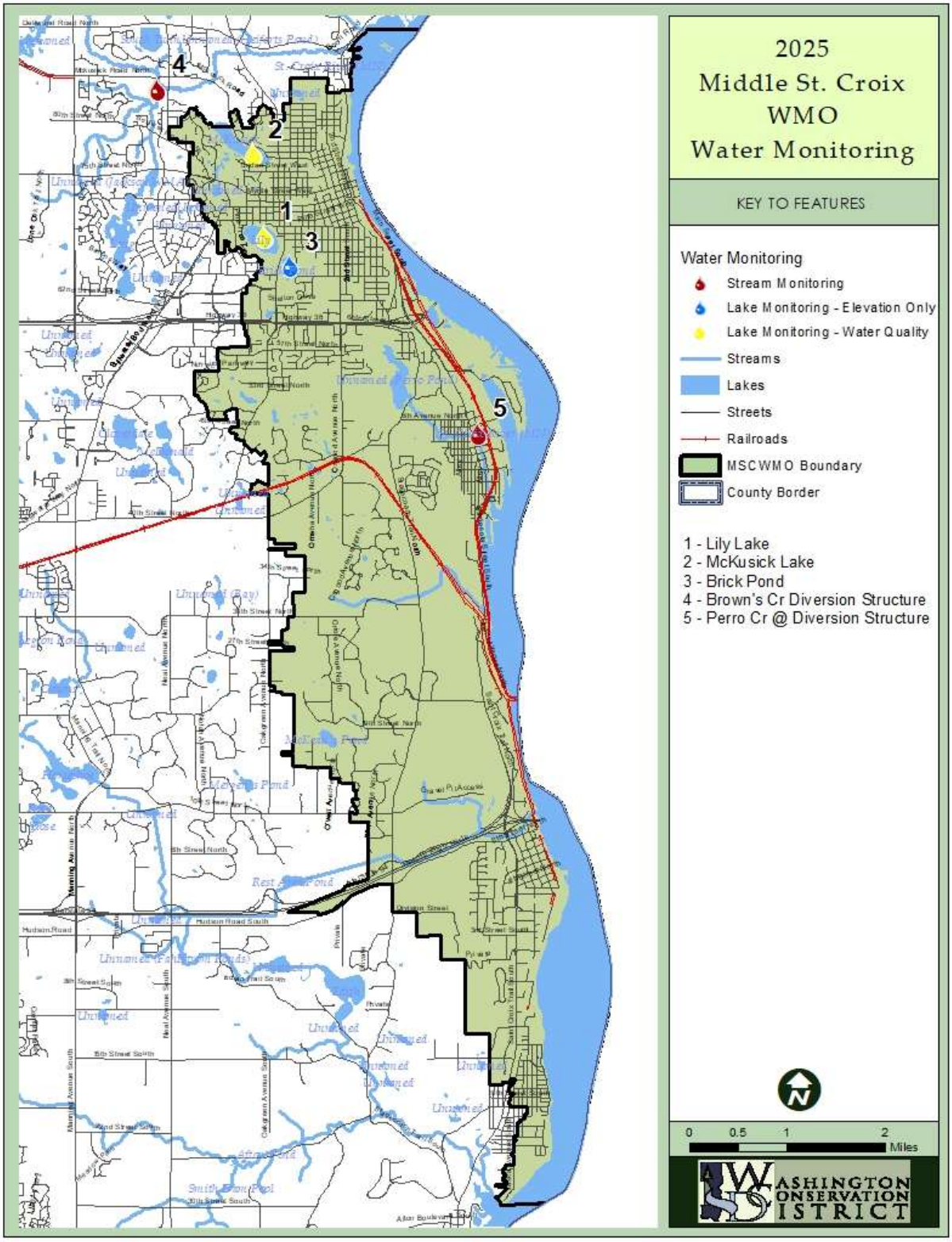

Figure 1. MSCWMO 2025 Water Monitoring Locations

Table 1. Water Monitoring Period of Record in MSCWMO

Monitoring Type	Location	Monitored Years	Monitored Parameters
Lake Monitoring	Lily Lake (82-0023)	1995-2025	Water Quality Samples, Elevation
Lake Monitoring	McKusick Lake (82-0020)	1994-2025	Water Quality Samples, Elevation
Lake Monitoring	Brick Pond (82-0308w)	2008-2013, 2022-2025	Water Quality Samples, Elevation
Stream/Stormw ater	Perro Creek at Diversion Structure	2016-2025	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Perro Creek Diversion Overflow	2016-2025	Stage and Discharge
Stream/Stormw ater	Perro Creek @ 3rd Ave.	2018-2020	Water Quality Samples
Stream/Stormw ater	Perro Creek @ 4th St.	2018-2019	Water Quality Samples
Stream/Stormw ater	Perro Creek @ 5th Ave.	2018-2019	Water Quality Samples
Stream/Stormw ater	Perro Creek @ 6th St.	2006-2013, 2016-2020	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Perro Creek @ 8th St.	2018-2019	Water Quality Samples
Stream/Stormw ater	Perro Creek @ 9th St.	2018-2020	Water Quality Samples
Stream/Stormw ater	Perro Creek @ Central Ave.	2018-2019	Water Quality Samples
Stream/Stormw ater	Perro Creek @ St. Croix Trl.	2018-2019	Water Quality Samples
Stream/Stormw ater	Perro Pond Outlet (Direct to the St. Croix)	2016-2017	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Perro Pond Outlet (To Perro Creek)	2016-2019	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Greeley St (Tributary to Lily Lake)	2015-2023	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Grove St. (Tributary to Lily Lake)	2015	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Lake St. (Tributary to Lily Lake)	2015-2016	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Pine Tree (Tributary to Lily Lake)	2015-2016	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Pump Station (Tributary to Lily Lake)	2015-2016	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Willard St. (Tributary to Lily Lake)	2015	Stage, Discharge, and Water Quality Samples
Stream/Stormw ater	Meadow lark Dr. (Trib. to McKusick Lake)	2009-2011	Water Quality Samples
Stream/Stormw ater	Myrtle St. (Trib. to McKusick Lake)	2009-2011	Water Quality Samples
Stream/Stormw ater	Brow n's Creek Diversion Structure (BCWD)	2006-2025	Stage, Discharge, and Water Quality Samples

LAKE MONITORING

A. METHODS, RESULTS AND DISCUSSION

In 2025 the WCD collected water quality data biweekly on Lily Lake and McKusick Lake, over seven consecutive months (April–October). Measurements obtained during the summer sampling season (June–September) are averaged for a comparison of individual lake dynamics from year to year between lakes within the watershed and to the Minnesota Pollution Control Agency's (MPCA) impairment standards. Lake grades are based on the averages of samples collected May–September. Average values for all parameters are presented in APPENDIX A and Figure 2 through Figure 5, which show the current and historic summer averages for each parameter. Water quality samples were collected by the WCD with a two-meter (6.56 feet) integrated surface water column sampler. A full description of WCD Standard Operating Procedures (SOP) is available on the Washington Conservation District website at http://www.mnwcd.org/water-

monitoring. The Metropolitan Council Environmental Services (MCES) Laboratory analyzed the surface water samples for TP, chl-α, and total Kjeldahl nitrogen (TKN).

Total phosphorus is analyzed because it is a major nutrient involved in the eutrophication of lakes and is generally associated with the growth of aquatic plants and/or algal blooms. Common sources of phosphorus include runoff from agricultural fields, livestock areas, urban areas, lakeshore lawns, and improperly operating septic systems. With most lakes in this region, phosphorus is the least available nutrient; therefore, its abundance or scarcity controls the extent of algal growth. Excess algal growth, in turn, negatively affects the clarity, or transparency, and ability of light to penetrate the water. The MPCA sets lake eutrophication standards for aquatic life and recreation. The standard for TP is 0.040 mg/L for deep lakes and 0.060 mg/L for shallow lakes. In general, shallow lakes are defined as less than 15 feet deep, with greater than 80% littoral area, and less than 10 acres. The 2025 summer average TP concentrations of MSCWMO lakes are found in Figure 2.

Chlorophyll-α is measured because it's the photosynthetic component found in algae and aquatic plants and is an indicator of algal productivity. The MPCA standard for pheophytin-corrected chl-α is 14 µg/L for deep lakes and 20 µg/L for shallow lakes. The 2025 summer average chl-α concentrations of MSCWMO lakes are found in Figure 3.

Total Kjeldahl nitrogen, which is the sum of organic nitrogen and ammonia, was analyzed in MSCWMO lakes. While no standard exists for TKN because TP is often the limiting nutrient, TKN can contribute to eutrophication. The 2025 summer average TKN concentrations of MSCWMO lakes are found in Figure 4.

Field measurements are recorded while collecting lake samples, including Secchi disk transparency. The measurement of light penetration using a Secchi disk gives a simple measure of water transparency, or clarity. A reduction in water transparency is typically the result of turbidity composed of suspended sediments, organic matter and/or phytoplankton (algae). The MPCA standard for Secchi disk transparency is 1.4 meters for deep lakes and 1.0 meter for shallow lakes. The 2025 summer average transparency of MSCWMO lakes are found in Figure 5.

User perception and physical/recreational suitability of lakes were recorded, along with temperature and dissolved oxygen (DO) profile measurements taken by the WCD during each sampling event. Profiles are recorded at one-meter increments from the water surface to the lake bottom. The data show the extent of summer stratification and are useful in identifying the development of a thermocline (the layer of water in which the temperature rapidly declines). As a lake stratifies, the water column becomes more stable and mixing is less likely to occur. If mixing occurs during the growing season, nutrients from the lake bottom become available and can result in increased algal production. Lake DO profile data is useful in determining excessive production (algae/plants) in a lake. Increased production creates more DO, for a time, but as plants and algae die off and decay, the bacteria that decompose them consume DO. Low DO conditions may stress fish populations and under anoxic conditions, nutrients may be released from the sediment. Data collected by the WCD can be found on the MPCA website at https://webapp.pca.state.mn.us/surface-water/search and can be obtained from the WCD by request.

A lake grading system is used in this summary, to allow for a better understanding of lake water quality data and to aid in the comparison of lakes. The lake water quality grading system was developed by MCES following the 1989 sampling season. The concept of the lake grading system is a ranking of water quality characteristics by comparing measured values to those of other metro area lakes. The grading system represents percentile ranges for three water quality indicators: the May through September average values of TP, uncorrected trichromatic chl-α, and Secchi disk transparency. These percentiles use ranked data from 119 lakes sampled from 1980-1988 and are shown in Table 2. This method has since been replicated and the grading system has been verified with more recent data. The variables used in the grading system strongly correlate to open-water nuisance aspects of a lake (i.e. algal blooms), which can indicate accelerated aging (cultural eutrophication). There is a strong correlation when comparing trophic status to the lake grade. Summaries of all lake results are presented in APPENDIX A.

Table 2. Lake Grade Ranges

Grade	Percentile	TP (µg/L)	Chl-α (µg/L)	SD (m)
A	<10	<23	<10	>3.0
B	10-30	23-32	10-20	2.2-3.0
C	30-70	32-68	20-48	1.2-2.2
D	70-90	68-152	48-77	0.70-1.2
F	>90	>152	>77	<0.70

There are several metrics and systems that can be used to assess lakes, including the Carlson Trophic State Index (TSI) and ecoregion values. The Carlson Trophic State Index is used to quantify the relationship between water quality data and trophic status. Trophic states vary from oligotrophic (low biological activity and high clarity) to hypereutrophic (highly productive with very low clarity). The MSCWMO is located in the North Central Hardwood Forest Ecoregion where lakes are often mesotrophic. Ecoregion values are assigned for TP, TKN, chl- α, and Secchi disk transparency. This report will focus on the methods used by the MPCA and the Metropolitan Council, as previously discussed.

Water elevation monitoring was conducted on two lakes, McKusick and Lily, from March to October 2025. Lake elevation readings are compared to the lake's Ordinary High Water level (OHW)[1]. The OHW for Lily and McKusick Lakes are 844.8 ft. and 851.7 ft., respectively (NGVD 29). Changes in lake water elevation are often attributed to the changes in precipitation. Complete lake elevation data for 2025 are found in APPENDIX A. For historical lake elevations, visit the MN DNR Lake Finder webpage at http://www.dnr.state.mn.us/lakefind/index.html.

[1] Minnesota State Statutes defines the ordinary high water level (OHW) as follows: Minnesota Statutes 103G.005 Subd. 14. Ordinary High Water Level. "Ordinary high water level" means the boundary of water basins, watercourses, public waters and public waters wetlands, and: The ordinary high water level is an elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial;

1) For watercourses, the ordinary high water level is the elevation of the top of the bank of the channel; and
2) For reservoirs and flowages, the ordinary high water level is the operating elevation of the normal summer pool.

Water elevation monitoring also occurred on Brick Pond by a citizen volunteer, April to November. The lowest recorded elevation was 847.47 ft. (NAVD 88) on 11/10/2025 and the highest was 848.84 ft. on 8/19/2025.

1. LILY LAKE

In 2025 WCD staff conducted two-tailed Kendall's Tau statistical analysis based on data collected by professional agencies for both lakes monitored in MSCWMO to determine trends for TP, Secchi, and chl-α ($p<0.05$). Lily Lake had a statistically significant improving trend for TP, average Secchi disk transparency, and chl-α. Lily Lake had an average summertime TP concentration of 0.021 mg/L, which is higher than 2024 average of 0.017 (Figure 2). All nine summertime results met the MPCA lake nutrient impairment standard for TP. The 2025 average summertime concentration of chl-α was 3.8 µg/L, lower than the 4.5 µg/L measured in 2024 (Figure 3). All nine summertime water quality results for chl-α met the MPCA lake impairment standard (APPENDIX A). Lily Lake had an average summertime TKN concentration of 0.56 mg/L in 2025, which is higher than the average of 0.53 mg/L in 2024 (Figure 4). Secchi disk readings were measured in 2025 with a summertime average of 3.91 meters (Figure 5), with all nine summertime water quality readings meeting the MPCA lake standard for Secchi disk transparency (APPENDIX A). Lily Lake received an A grade in 2025, matching the A it received in 2024. Temperature and DO profiles indicate that Lily Lake exhibited thermal stratification during the summer months with the thermocline between 4 and 5 meters; therefore, the lake was less likely to completely mix throughout the summer. The elevation was above the OHW for the entire monitoring season, with the highest recorded level of 846.23 ft. occurring on 6/30/2025 and the lowest recorded level of 845.37 ft. occurring on 5/19/2025. A summary of all lake results is presented in APPENDIX A.

2. MCKUSICK LAKE

A two-tailed Kendall's Tau analysis based on data collected by professional agencies showed that McKusick Lake has statistically significant ($p<0.05$) improving trends for TP and average Secchi transparency, and no trend for chl-α. The McKusick Lake summertime average TP concentration in 2025 was 0.074 mg/L, which is higher than the 0.064 mg/L observed in 2024

(Figure 2). Five of the nine summertime samples collected in 2025 did not meet the MPCA shallow lake standard for TP (APPENDIX A). McKusick Lake had a summertime average chl-α concentration of 10.8 µg/L, which is lower than the chl-α average of 15.6 µg/L from 2024 (Figure 3). One of the nine summertime samples collected in 2025 did not meet the MPCA shallow lake standard for chl-α. The average summertime TKN concentration in 2025 was 0.76 mg/L, lower than the 0.79 mg/L in 2024 (Figure 4). The 2025 summertime average water transparency measured by Secchi disk was 1.93 meters (Figure 5). All nine summertime Secchi disk readings in 2025 met the MPCA shallow lake impairment standard. McKusick Lake received a grade of a C+ in 2025, the same grade it received in 2024. No temperature and DO profiles were collected, so the occurrence of thermal stratification in the deepest part of the lake cannot be determined. A majority of McKusick Lake is very shallow and does not stratify, and therefore is likely to have mixed throughout the summer. The elevation of McKusick Lake remained above the OHW for the entire monitoring season, reaching its highest recorded level of 855.43 ft. on 6/30/2025 and the lowest recorded level of 854.43 ft. on 9/8/2025. A summary of all lake results is presented in APPENDIX A.

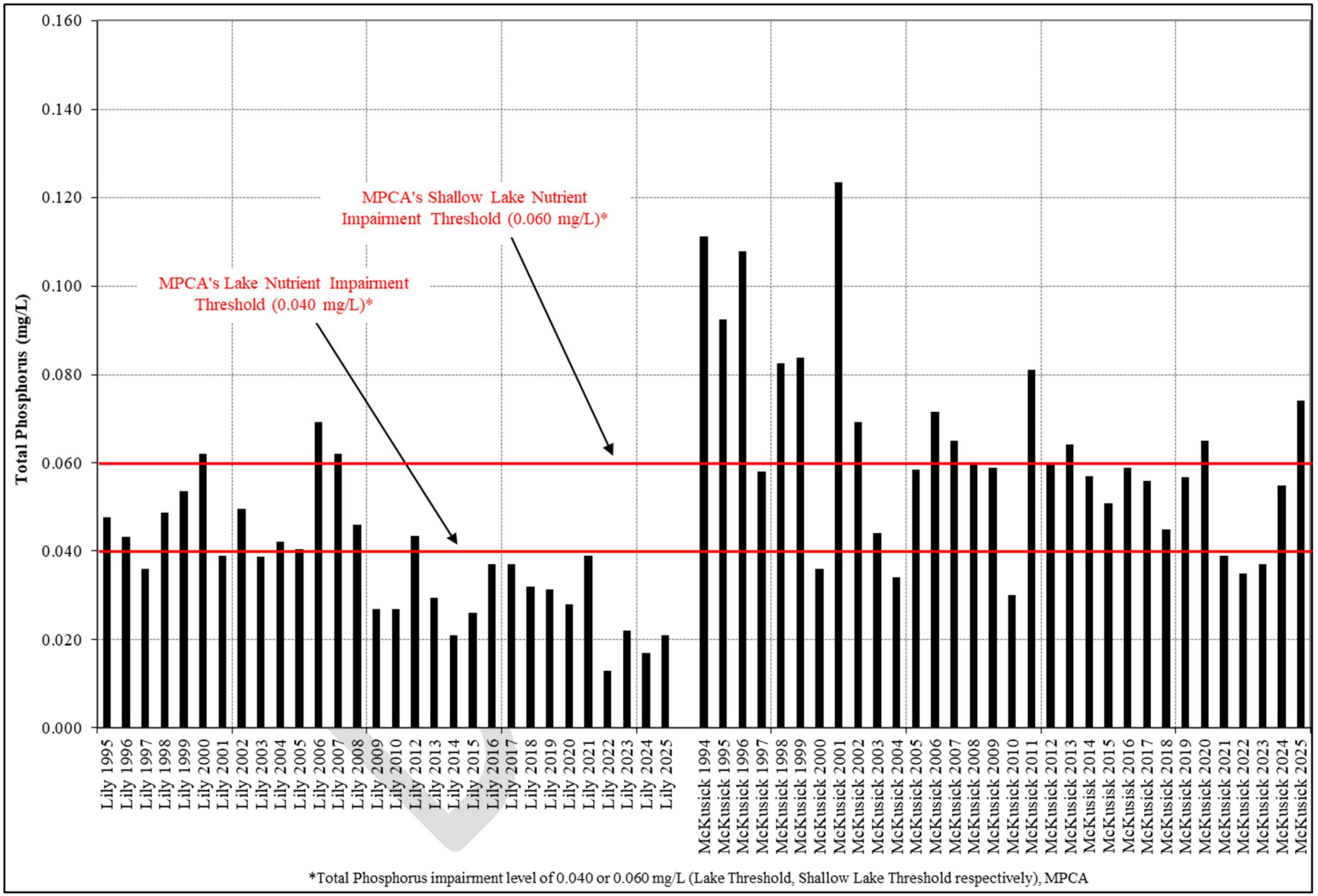

Figure 2. MSCWMO Historic Summer Average Total Phosphorus

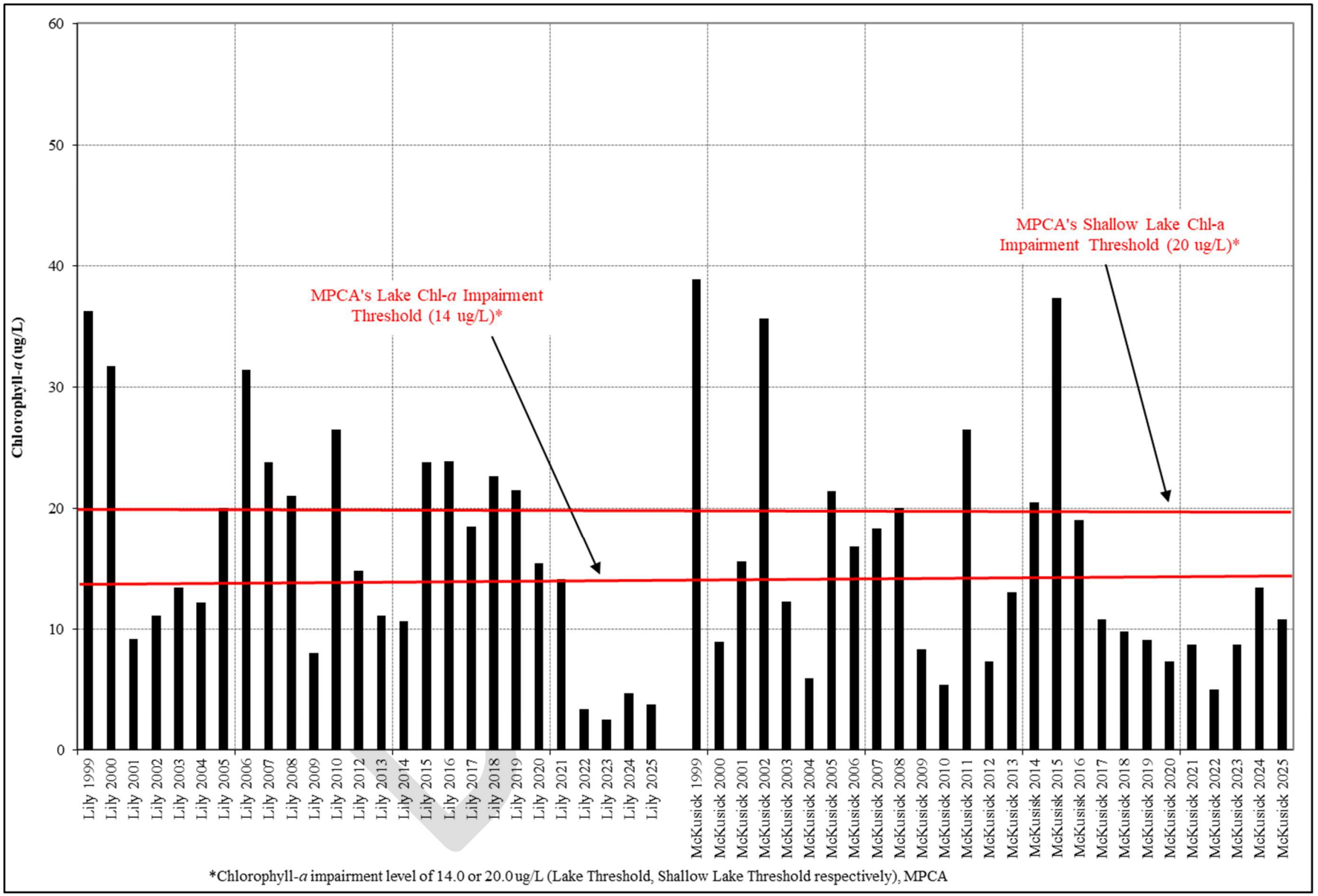

Figure 3. MSCWMO Historic Summer Average Chlorophyll-α

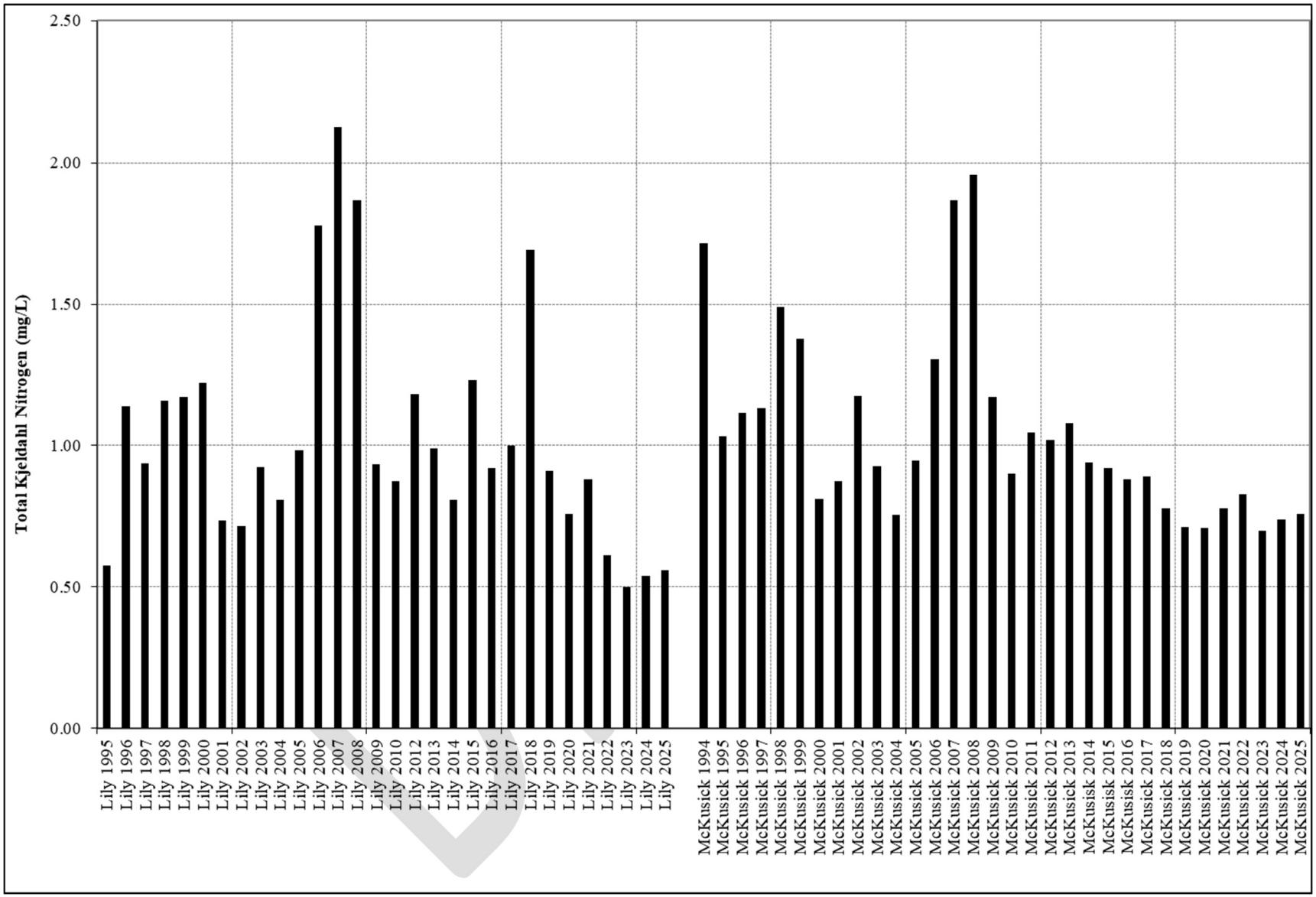

Figure 4. MSCWMO Historic Summer Average Total Kjeldahl Nitrogen

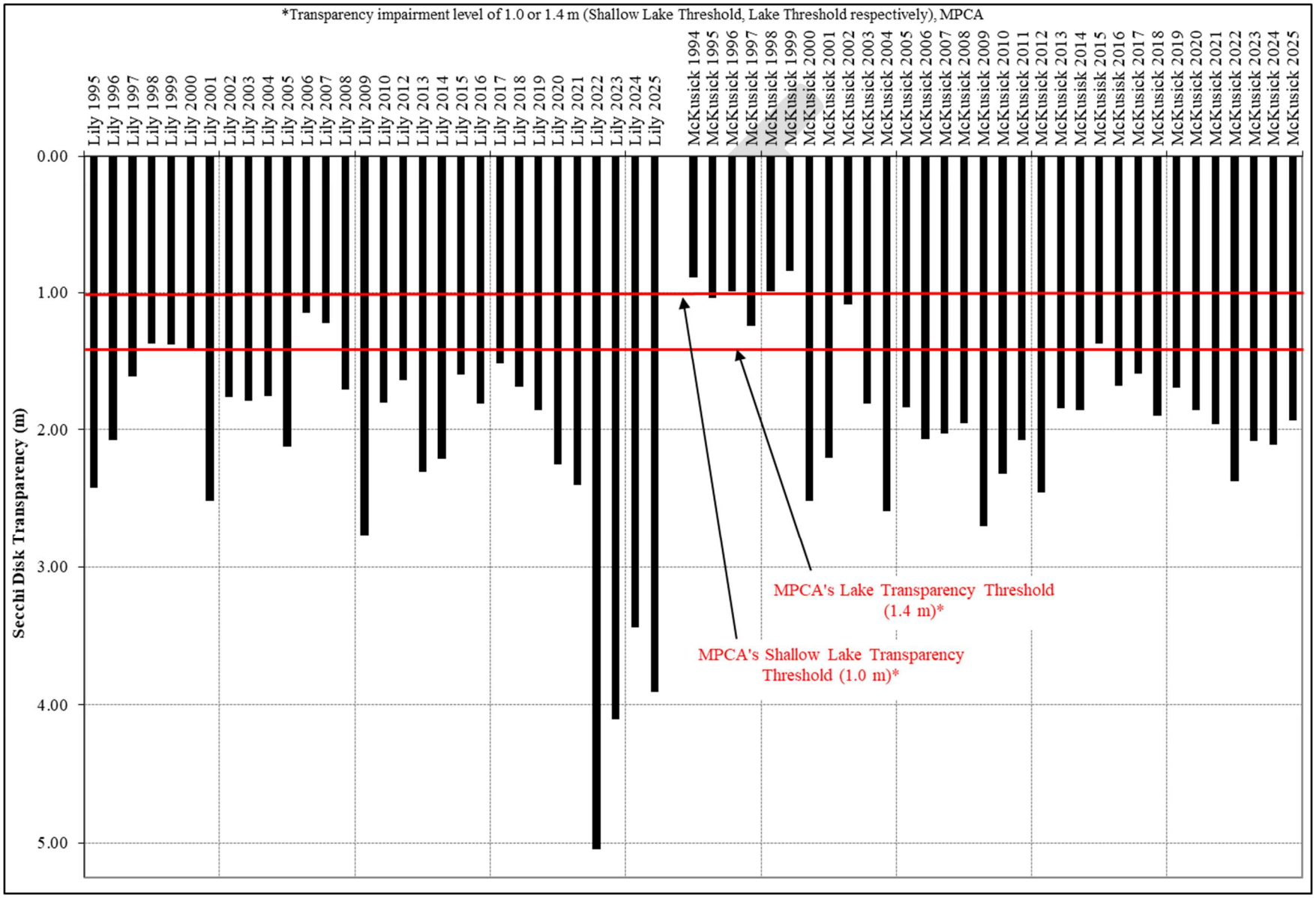

Figure 5. MSCWMO Historic Summer Average Secchi Disk Transparency

STREAM MONITORING

A. PERRO CREEK MONITORING

The goal of monitoring Perro Creek in 2016-2017 was to identify where the greatest contribution of nutrients and sediment to the St. Croix River was occurring. Monitoring continued in 2018 and 2019 to further refine previous observations. In 2020 water monitoring activities were reduced on Perro Creek and no traditional water quality samples were collected. Beginning in 2021, and continuing through 2025, water quality sampling was conducted on Perro Creek at the Diversion Structure site by collecting in-stream grab samples during baseflow periods and using an automated sampler to collect flow-weighted composite storm samples. The automated sampler allowed for multiple samples to be collected during storm events, which were then combined into one sample representing the storm event. This methodology can provide more accurate data for calculating nutrient loads during storm events than grab samples alone. Continuous 15-minute stage and velocity data were collected at the site and in the Diversion Structure Overflow from 5/8/25 – 10/28/25. Discharge was calculated using an area/velocity relationship, and the recorded discharge in 2025 to the St. Croix River was 26,453,270 cubic feet (Table 3).

Thirteen water quality samples were collected in 2025 and analyzed for total phosphorus, dissolved phosphorus, and total suspended solids (Table 4). Six baseflow grab samples were collected May – October, along with field measurements for temperature, dissolved oxygen, pH, and specific conductivity. Seven storm composite samples were collected May – August. The 2025 baseflow average TP concentration was 0.032 mg/L, which is similar to the baseflow averages for 2018-2021 and 2024 (Table 5). The baseflow average TSS concentration was 3 mg/L, which is similar to the baseflow averages since 2018. The average TP concentration from storm samples collected in 2025 was 0.226 mg/L, which is similar to 2023 and is lower than 2024 (Table 5). The average TSS concentration from storm samples was 222 mg/L, which is similar to 2021 and the highest since monitoring began in 2016. TP and TSS loads to the St. Croix River were calculated for both the creek and the Diversion Structure Overflow during

monitored periods. The TP load in 2025 was 75.7 lbs. (Table 3 and Figure 6) and the TSS load was 29,152 lbs. (Table 3 and Figure 7).

Perro Creek is listed as impaired for TSS on the MPCA's 303(d) Impaired Waters List. The stream is in the Central River Nutrient Region and the MPCA standard is 30 mg/L for class 2B waters. The MPCA's protocols for assessments are as follows:

"A stream is considered to exceed the standard for TSS if 1) the standard is violated more than 10% of the days of the assessment season (April through September) as determined from a data set that gives an unbiased representation of conditions over the assessment season, and 2) at least three measurements violate the standard. A stream is considered to meet the standard for TSS if the standard is met at least 90% of the days of the assessment season. A designation of meeting the standard for TSS generally requires at least 20 suitable measurements from a data set that gives an unbiased representation of conditions over at least two different years. However, if it is determined that the data set adequately targets periods and conditions when exceedances are most likely to occur, a smaller number of measurements may suffice."

Perro Creek is also listed as impaired for *E. coli* bacteria on the MPCA's 303(d) Impaired Waters List. *E.* coli is used as an indicator in waterbodies for the possible presence of fecal contamination, including pathogens. The primary source of *E. coli* is human and animal waste, making high *E. coli* presence a concern for human health. A summary by month is found in Table 6. The MPCA standard is defined as follows, and is based on the latest ten years of data as per MPCA protocol:

"*Not to exceed 126 organisms per 100 milliliters as a geometric mean of not less than five samples representative of conditions within any calendar month, nor shall more than ten percent of all samples taken during any calendar month individually exceed 1,260 organisms per 100 milliliters. The standard applies only between April 1 and October 31.*"

Table 3. Perro Creek 2025 Monitored Discharge and TP & TSS Loading

Site	Date range	Discharge (cf)	Discharge (ac-ft)	Percent of Total Discharge	TP Load (lbs)	Percent of TP Load	TSS Load (lbs)	Percent of TSS Load
Perro at Diversion Structure Baseflow [1]	5/8/25 - 10/28/25	22,167,406	509.16	84%	44.0	58%	4,151	14%
Perro at Diversion Structure Stormflow	5/8/25 - 10/28/25	1,167,110	26.81	4%	15.9	21%	14,627	50%
Perro at Diversion Overflow Baseflow [1 2]	5/8/25 - 10/28/25	2,389,234	54.88	9%	4.7	6%	447	2%
Perro at Diversion Overflow Stormflow [2]	5/8/25 - 10/28/25	729,520	16.76	3%	11.0	15%	9,926	34%
Total to the St. Croix River		26,453,270	607.60	100%	75.7	100%	29,152	100%

[1] *7/9/25 results were excluded from averages used for load calculations*

[2] *Result averages from samples collected in-stream at the Diversion Structure were used for Diversion Overflow loading calculations*

Table 4. Perro Creek at Diversion Structure 2025 Water Quality Results

Sample Type	Start	End	TP (mg/L)	Dissolved P (mg/L)	TSS (mg/L)	E. coli (mpn/100 mL)	Temperature (°C)	DO (mg/L)	pH	Specific Conductivity (umhos/cm)
Base Grab [1]	5/12/25 15:07	5/12/25 15:07	0.046	0.017	<3	105	23.8	7.45	8.52	418
Base Grab	6/11/25 9:15	6/11/25 9:15	0.046	0.018	6	201	20.5	8.10	8.45	409
Base Grab [2]	7/9/25 10:19	7/9/25 10:19	0.058	0.032	9	1733	24.2	7.34	8.14	425
Base Grab	8/12/25 9:38	8/12/25 9:38	0.026	0.014	3	276	22.9	6.71	8.10	404
Base Grab [1]	9/4/25 13:04	9/4/25 13:04	0.021	0.014	<3	178	16.5	9.23	8.31	472
Base Grab	10/8/25 11:01	10/8/25 11:01	0.020	0.012	3	76	13.8	10.01	8.32	508
Storm Composite	5/19/25 20:03	5/20/25 23:41	0.094	0.019	28					
Storm Composite	6/25/25 14:45	6/25/25 15:44	0.311	0.057	275					
Storm Composite	7/16/25 2:26	7/16/25 3:46	0.093	0.035	137					
Storm Composite	7/23/25 14:23	7/23/25 14:59	0.327	0.045	575					
Storm Composite	7/27/25 20:40	7/27/25 21:25	0.304	0.074	189					
Storm Composite	8/9/25 4:51	8/9/25 7:05	0.323	0.155	266					
Storm Composite	8/16/25 7:32	8/16/25 9:14	0.130	0.032	81					

[1] *TSS results that are less than the Reporting Limit were divided in half for calculating averages.*

[2] *Results excluded from averages. Sample was collected shortly after a spike in stream stage.*

Table 5. Perro Creek Historical TP and TSS Averages and Ranges

Perro @ Diversion Sample Type	2016	2017	2018	2019	2020	2021 [b]	2022 [b]	2023 [c]	2024	2025
Baseflow Samples	**8**	**6**	**8**	**6**		**6**	**5**	**6**	**7**	**6**
Stormflow Samples	**5**	**5**	**4**	**3**		**8**	**9**	**5**	**5**	**7**
TP (mg/L) - Baseflow Average	0.051	0.046	0.036	0.034		0.035	0.015	NA	0.034	0.032
Baseflow Range	*~0.023 - 0.090*	*<0.020 - 0.120*	*0.020 - 0.058*	*0.021 - 0.065*		*0.024 - 0.210*	*<0.020 - 0.065*	*<0.05*	*0.022 - 0.054*	*0.020 - 0.058*
TP (mg/L) - Stormflow Average	0.435	0.108	0.124	0.372		0.427	0.279	0.216	0.283	0.226
Stormflow Range	*0.126 - 1.330*	*~0.023 - 0.218*	*0.047 - 0.252*	*0.133 - 0.597*		*0.185 - 0.862*	*<0.020 - 0.524*	*0.089 - 0.370*	*0.040 - 0.396*	*0.093 - 0.327*
TSS (mg/L) - Baseflow Average	16	12	4	2		2	3	2	3	3
Baseflow Range [a]	*<1 - 77*	*~1 - 60*	*1 - 16*	*1 - 3*		*1 - 33*	*<3 - 18*	*<3 - 18*	*<3 - 6*	*<3 - 9*
TSS (mg/L) - Stormflow Average	118	36	20	58		217	86	102	208	222
Stormflow Range	*32 - 308*	*12 - 76*	*8 - 31*	*21 - 97*		*75 - 429*	*3 - 154*	*10 - 243*	*5 - 327*	*28 - 575*

No Samples

[a] *Beginning in 2022 the laboratory changed TSS reporting to as low as the Reporting Limit (3 mg/L) rather than the Method Detection Limit (1 mg/L)*

[b] *Results from base composite sample excluded from averages (Sampled during initial opening of Perro Pond outlet)*

[c] *In 2023 the laboratory reported TP results to as low as the Reporting Limit (0.05 mg/L) rather than the Method Detection Limit (0.02 mg/L). All baseflow results were <0.05 mg/L*

Table 6. Monthly Geometric Means of *E. coli*- Latest Ten Years

Site	April	May	June	July	August	September	October
Perro at Diversion Structure [1]	Insufficient Data	108	297	266	168	405	145

Exceeds geometric mean of 126 #/100mL from not less than 5 samples in a calendar month, collected in last 10 yrs

[1] *>10% of samples collected in the last 10 years exceeded 1,260 #/100mL*

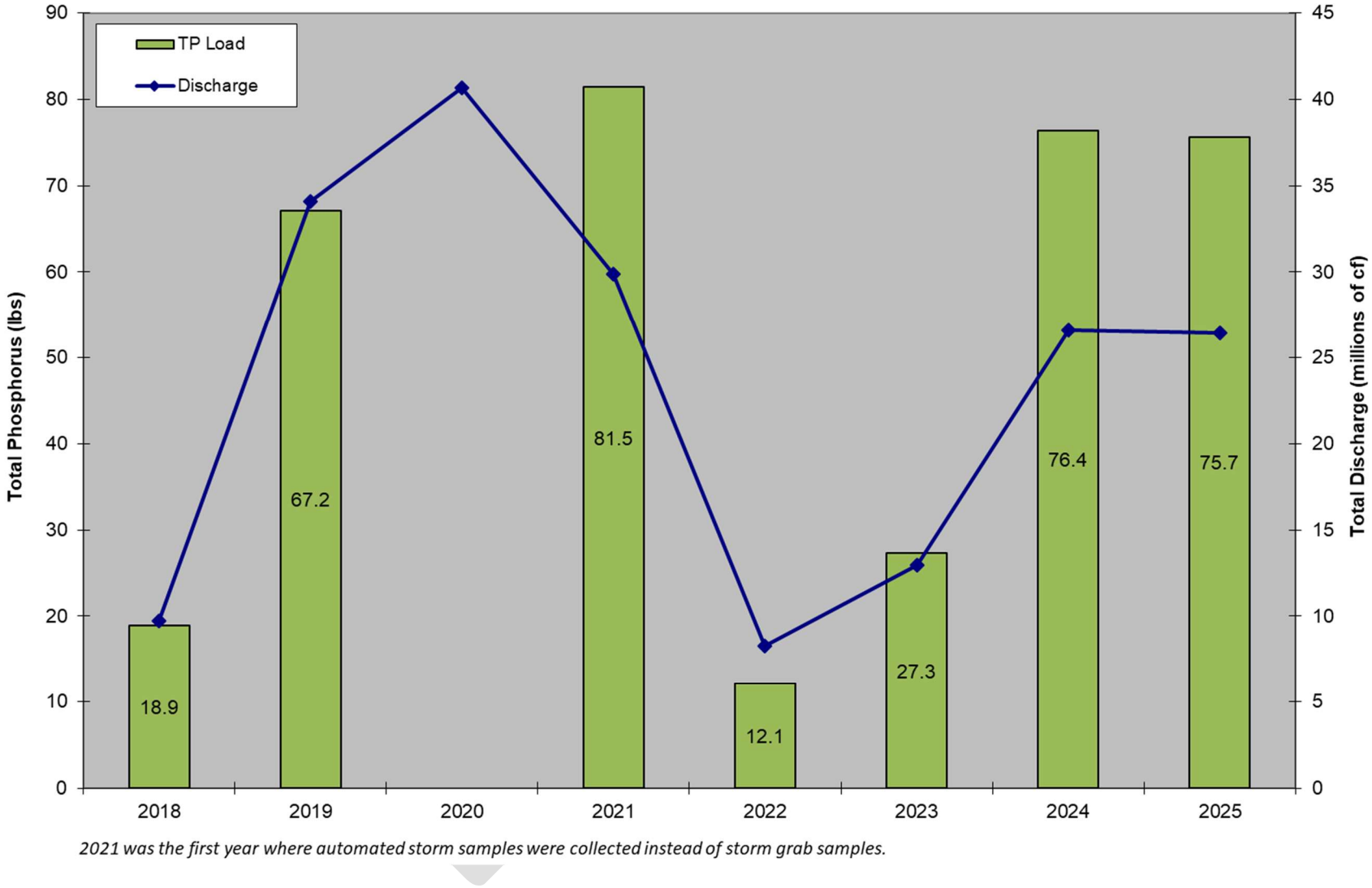

Figure 6. Perro Creek at Diversion Structure Monitored Discharge and Total Phosphorus Load

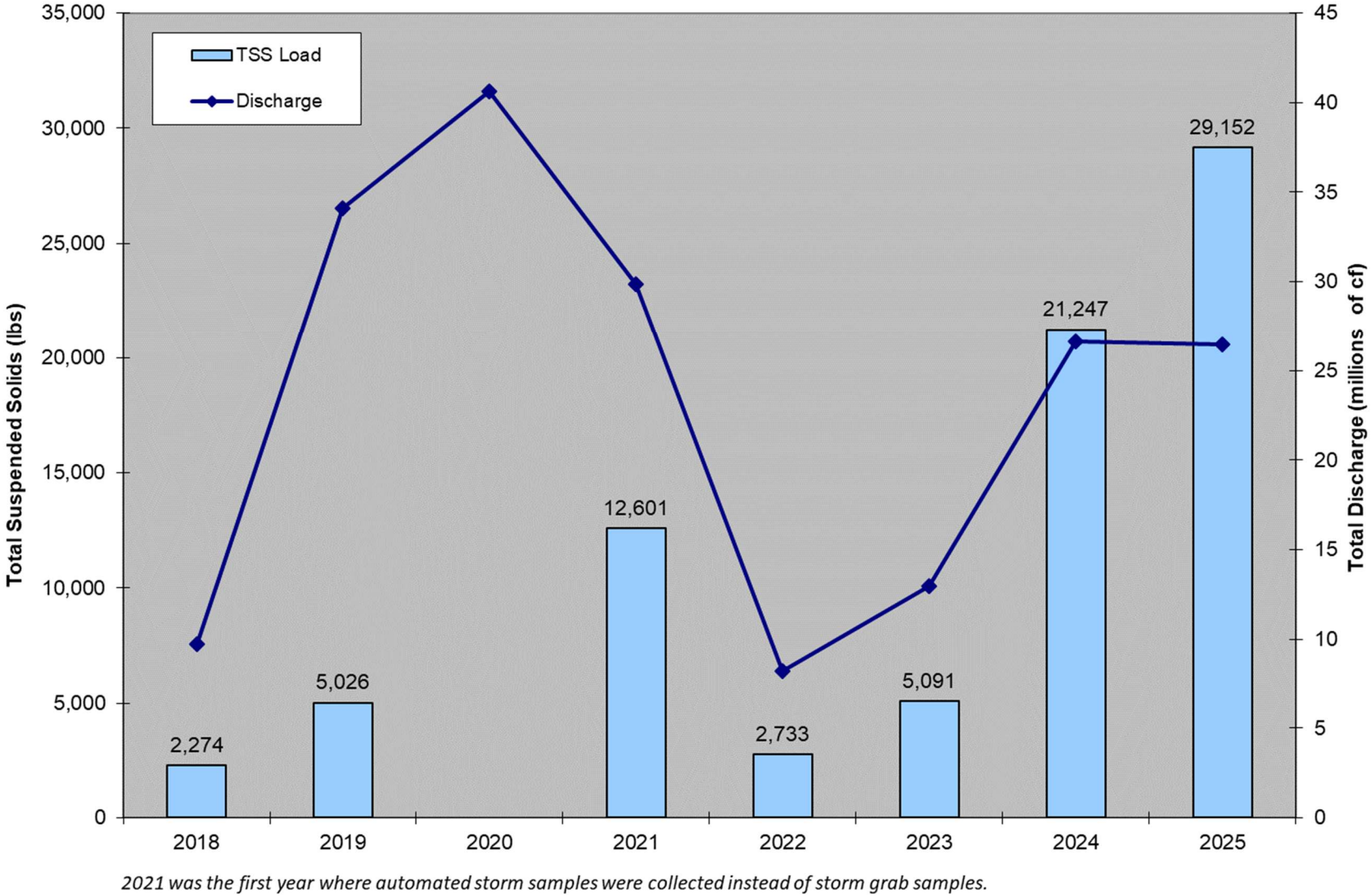

Figure 7. Perro Creek at Diversion Structure Monitored Discharge and Total Suspended Solids Load

B. BROWN'S CREEK DIVERSION STRUCTURE

As part of Brown's Creek Watershed District's long-term monitoring, the WCD collected grab samples and automated flow-weighted samples during both baseflow and storm event conditions at the Brown's Creek Diversion Structure in 2025. The City of Stillwater constructed the diversion structure in June of 2003, as part of the completion of the Trout Stream Mitigation Project (TSMP). It has been functioning to divert water from the 1,800-acre annexation area away from Brown's Creek through McKusick Lake, and ultimately to the St. Croix River. While this diversion structure keeps the warmer urban stormwater runoff from the southern tributary out of the temperature and nutrient sensitive Brown's Creek Ravine, it means that this is discharged to McKusick Lake and can affect the lake water quality. Data collected at this site by the WCD includes continuous stage and total discharge, and water quality samples analyzed for nutrients, sediment, and metals. Discharge in 2025 was 60,305,225 cubic feet, which is the fifth highest recorded since monitoring began in 2006 and was a decrease from 2024 (Table 7). Stream flow and chemistry data from 2025 are found in Table 7 and Table 8.

The TP load to McKusick Lake was 416 lbs., or 0.108 lbs. of phosphorus per acre of watershed land, and the TSS load was 73,469 lbs. of sediment, or 19.06 lbs. per acre (Table 7). In spite of wetter than average conditions, the TP and TSS loads were the sixth and second lowest, respectively, since monitoring began in 2006. BCWD identified erosional head cuts in the drainage tributaries as the source of the excessive loading rates. Rock vanes and stabilization projects have since been implemented to reduce erosion and restore floodplain connectivity. Beginning in 2024 beavers also constructed a series of dams upstream of the site, further trapping sediment and phosphorus by reducing flow rate, allowing settling of sediments, and improving floodplain connectivity. The high total discharge and low nutrient loads provide evidence the restoration projects and natural processes resulting from beaver activity may be improving water quality conditions.

The calculation of MPCA metal standards is described in the Minnesota Administrative Rules Part 7050.0222 and are divided into three categories of toxicity; chronic, maximum, and final acute value (FAV). The chronic standard protects organisms from long-term exposure to a pollutant with minimal effects, the maximum standard from short-term exposure with no or little

mortality, and the FAV is the concentration at which mortality can be expected. In 2025 one sample result from the Brown's Creek Diversion Structure exceeded the chronic standard for lead and no other samples exceeded any metals standards. The number and severity of exceedances of metals standards were tied with two other years, 2022 and 2014, for the lowest number observed since metals analysis began at this site in 2007. Improvements made to reduce erosion and allow the natural settling of sediments that may have metals bound to them in beaver impoundments are the most likely drivers of this. In most cases, severe exceedances of metals are associated with extreme TSS concentrations.

Table 7. Brown's Creek Diversion Historic Annual Discharge and Loading- Latest Ten Years

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown's Creek Diversion Structure										
Discharge (cf)	70,780,581	39,625,672	45,453,990	112,468,888	68,165,935	46,792,341	41,610,620	35,622,586	72,832,083	60,305,225
Total pounds of Phosphorus exported	1,574	784	964	3,598	760	446	389	367	573	416
TP (lbs/ac/yr)	0.408	0.203	0.250	0.933	0.197	0.116	0.101	0.095	0.149	0.108
Total pounds of TSS exported	1,533,496	596,382	505,314	2,707,186	246,238	401,069	75,429	74,875	230,855	73,469
TSS (lbs/ac/yr)	397.79	154.70	131.08	702.25	63.87	104.01	19.57	19.42	59.88	19.06

Table 8. Brown's Creek Diversion 2025 Chemistry Results

Sample Type	Start	End	TSS (mg/L)	VSS (mg/L)	TKN (mg/L)	TP (mg/L)	Dissolved P (mg/L)	Copper (ug/L)	Nickel (ug/L)	Lead (ug/L)	Zinc (ug/L)	Cadmium (ug/L)	Chromium (ug/L)	Chloride (mg/L)	Nitrite + Nitrate N (mg/L)	Ammonia Nitrogen (mg/L)	Hardness (mg/L _CaCO3)
Storm Composite	5/20/2025 6:52	5/21/2025 0:40	94	24	1.64	0.280	0.061	3.640	2.910	1.570	10.100	0.130	<2.500	31.4	0.31	<0.06	121
Storm Composite	6/13/2025 0:52	6/13/2025 8:32	30	8	1.10	0.176	0.041	1.800	1.710	0.774	5.450	0.117	<2.500	39.8	0.28	<0.06	147
Storm Composite	6/25/2025 13:29	6/25/2025 22:20	70	24	1.47	0.281	0.076	2.820	2.300	1.130	7.840	0.117	<2.500	26.0	0.34	<0.06	94
Storm Composite	7/27/2025 20:46	7/28/2025 4:47	161	41	2.11	0.470	0.074	3.850	3.580	2.270	14.700	0.128	3.270	24.8	0.37	<0.06	92
Storm Composite	8/9/2025 5:30	8/9/2025 9:20	283	68	3.00	0.546	0.065	5.520	5.020	5.000	22.100	0.166	4.590	37.9	0.40	<0.06	132
Storm Composite	8/16/2025 7:29	8/17/2025 23:58	166	61	2.11	0.361	0.067	3.970	3.660	2.310	12.900	0.148	2.920	36.6	<0.20	<0.06	98
Base Grab	5/1/2025 14:09	5/1/2025 14:09	<3	<3	0.47	0.051	0.023	<1.000	0.715	<0.500	6.040	<0.100	<2.500	46.4	<0.20	<0.06	155
Base Grab	5/12/2025 14:28	5/12/2025 14:28	<3	<3	0.60	0.074	0.032	1.840	1.890	<0.500	<5.000	<0.100	<2.500	52.8	<0.20	0.06	210
Base Grab	6/10/2025 13:32	6/10/2025 13:32	10	5	0.65	0.128	0.059	<1.000	0.642	<0.500	<5.000	<0.100	<2.500	24.4	0.28	0.07	209
Base Grab	7/10/2025 10:03	7/10/2025 10:03	3	<3	0.53	0.084	0.054	<1.000	0.573	<0.500	<5.000	<0.100	<2.500	70.6	<0.20	0.08	107
Base Grab	8/4/2025 14:36	8/4/2025 14:36	<3	<3	0.58	0.064	0.040	<1.000	0.540	<0.500	<5.000	<0.100	<2.500	62.4	<0.20	0.06	108
Base Grab	9/4/2025 10:38	9/4/2025 10:38	3	<3	0.47	0.057	0.026	<1.000	0.505	<0.500	<5.000	<0.100	<2.500	47.8	0.24	<0.06	152
Base Grab	10/8/2025 9:33	10/8/2025 9:33	5	3	0.54	0.078	0.018	<1.000	0.708	<0.500	<5.000	<0.100	<2.500	48.2	0.31	<0.06	205

Exceeds Water Quality Standard
No Exceedance Determinable
Exceeds Chronic Standard
Exceeds Max Standard
Exceeds Final Acute Standard

MSCWMO: CONCLUSIONS AND RECOMMENDATIONS

A. LAKES

Lake monitoring in MSCWMO continues to provide valuable baseline water quality information. To determine the health of the lakes in MSCWMO, physical and chemical parameters are compared on a year-to-year basis and to other lakes in the region. Water quality in a lake depends on a number of different variables such as size of the contributing watershed, external nutrient sources, depth of the lake, and the current amount of nutrients available to be periodically released from the lake bottom. Low water quality ratings of MSCWMO lakes are most likely due to long-term contribution of urban runoff (Lily Lake) or due to the sensitivity of shallow lakes being prone to summertime mixing (McKusick Lake). Shallow lakes typically exist in a low algal production, clear-water state with abundant aquatic macrophytes or in a high-algal production, turbid water state. Shallow lakes may not completely stratify in the summer, and therefore have the capability to continually mix throughout the summer. That mixing causes phosphorus to be distributed throughout the water column, causing more frequent and heavy algal blooms. This is unlike deeper, stratified lakes where phosphorus below the thermocline is not available for primary production.

The MPCA previously listed both Lily and McKusick Lake on the 303(d) Impaired Waters list for nutrient/eutrophication impairment. McKusick Lake was delisted in 2012 and Lily Lake was delisted in 2022, because both lakes were meeting water quality standards due to restoration activities within their watersheds.

Summertime (June-September) TP, chlorophyll-α, and Secchi disk transparency averages have remained relatively consistent over the last thirty years in Lily Lake with the exceptions of 1995, 2001, 2009, 2013, and 2014 where overall water quality dramatically improved (Figure 2, Figure 3, and Figure 5). In 2001 phosphorus and chl-α levels dropped and the lake grade improved significantly. In 2006-2008, summer average TP, chl-α, and Secchi disk transparency deteriorated when compared to the averages seen from 2001 to 2005. In 2025 Lily Lake received a grade of an A, matching the grade from 2023-2024 and well above the long-term average lake grade of a C+.

The cause of these one-year increases (1995, 2001, 2009, 2013, and 2014) in water quality is presently unknown, and there may be several possible explanations, which could be investigated further in the future. Lily Lake has received herbicide and algaecide treatments from 1995-2011 and 2016-2018. In 2018-2021, the City of Stillwater and the Lily Lake Association did not request any large-scale herbicide and algaecide treatments but individual landowner treatments have occurred. In 2010, a native buffer planting was installed at the public access and the Lily Lake watershed underwent a subwatershed assessment. As a result, fifteen raingardens were constructed in the Lily Lake watershed from 2011-2012, six large raingardens were installed in 2014, a gully stabilization project installed at Lakeview Hospital discharging to Brick Pond in 2017, and a large gully stabilization and stormwater treatment system discharging to Brick Pond in 2018. Another raingarden was installed in 2019. Construction of a large infiltration basin in the Greeley storm sewer catchment subwatershed was completed in 2022 and the lake was treated with alum on May 24, 2022. The effects of these BMPs may have been seen from 2012 to 2025 monitoring seasons with the 2016-2025 seasons having a statistically significant ($p<0.05$) improving trend for total phosphorus. Continued monitoring is needed to show changes to long-term trends due to the implementation of these BMPs. In 2019, the Lily Lake Phosphorus Reductions for Delisting grant was secured. More information about the Lily Lake Impaired Waters Delisting Road Map can be found at http://www.mscwmo.org/subwatershed-assessments.

A subwatershed assessment was conducted on the McKusick Lake watershed in 2010. In 2011, six raingardens were constructed as a result of the subwatershed assessment. With renewed funding, seven additional raingardens were planned to be installed in the McKusick Lake watershed in 2013 but were not constructed due to issues with utilities; instead, six larger raingardens were installed in 2014. The impacts of previously installed raingardens may have been seen in 2017-2025 with statistically significant ($p<0.05$) improving trends for average TP and average Secchi disk transparency. For more information on the McKusick Lake subwatershed assessment refer to the McKusick Lake Stormwater Retrofit Assessment found at http://www.mscwmo.org/subwatershed-assessments.

B. STREAMS

Water quality sampling continued on Perro Creek at the Diversion Structure in 2025. The wet summer led to a similar total discharge and TP load, and an increase in TSS load, when compared to 2024. Stormflow periods accounted for only 7% of the monitored discharge to the St. Croix River but 36% of the TP load and 84% of the TSS load occurred during these periods in 2025. For comparison, stormflow periods accounted for a little less in 2024: 5% of the monitored discharge, 30% of the TP load, and 80% of the TSS load. Flow-weighted composite samples should continue to be collected to more accurately calculate TP and TSS loads during storm events. As in 2024, sediment and debris was present in the diversion structure channel for the majority of the monitoring season, which made the streambed within the structure artificially high. This may have affected the automated storm sampling because it allowed more stormwater to flow through the overflow pipe rather than the open channel stream, which is where the sampling equipment is located. The diversion structure should be kept clear of excessive sediment and debris to ensure this doesn't become a problem.

Perro Creek is listed as impaired for TSS on the MPCA's 303(d) Impaired Waters List and is assessed using an unbiased dataset. Flow-weighted composite samples are considered biased towards higher flow periods because more samples are collected during the higher flows, and these samples are therefore not used for TSS assessments. In 2025 there were no TSS results from grab samples collected April – September that exceeded the MPCA standard of 30 mg/L for class 2B waters. Water quality grab samples could be collected at Perro Creek during different levels of flow to provide an unbiased dataset for assessing the stream for TSS impairment.

Perro Creek is listed as impaired for *E. coli* bacteria on the MPCA's 303(d) Impaired Waters List. The 10-year geometric means in June – October exceed the MPCA standard, while the May geometric mean meets the standard. Samples collected in 2025 in July and August were the only samples higher than the monthly geometric means. In 2024, August and September samples were the only ones higher than the monthly geometric means. Monthly *E. coli* samples should continue to be collected from May through October at Perro Creek to expand the dataset for calculating monthly geometric means.

APPENDIX A – LILY LAKE AND MCKUSICK LAKE WATER QUALITY DATA

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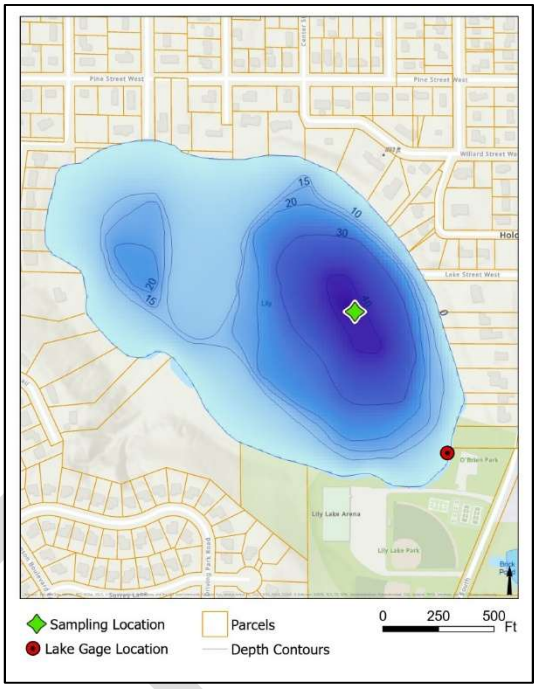
LILY LAKE

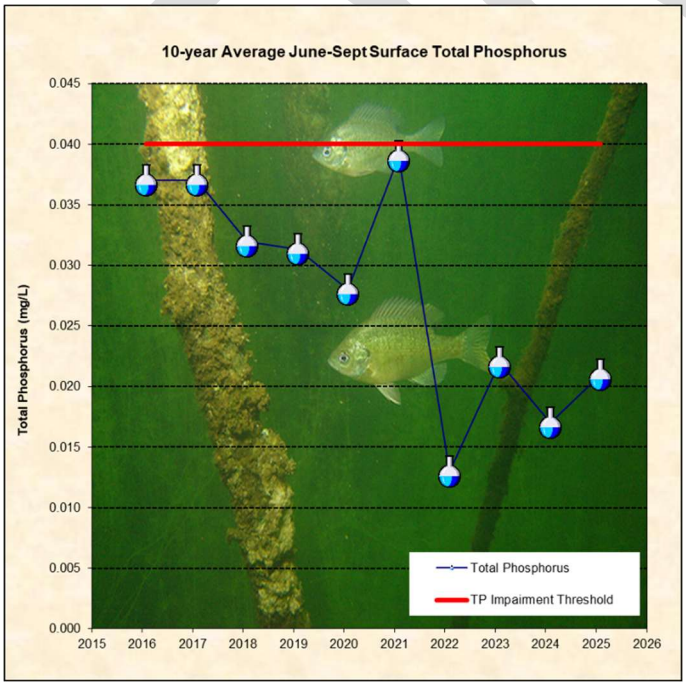
2025 Lake Grade: A

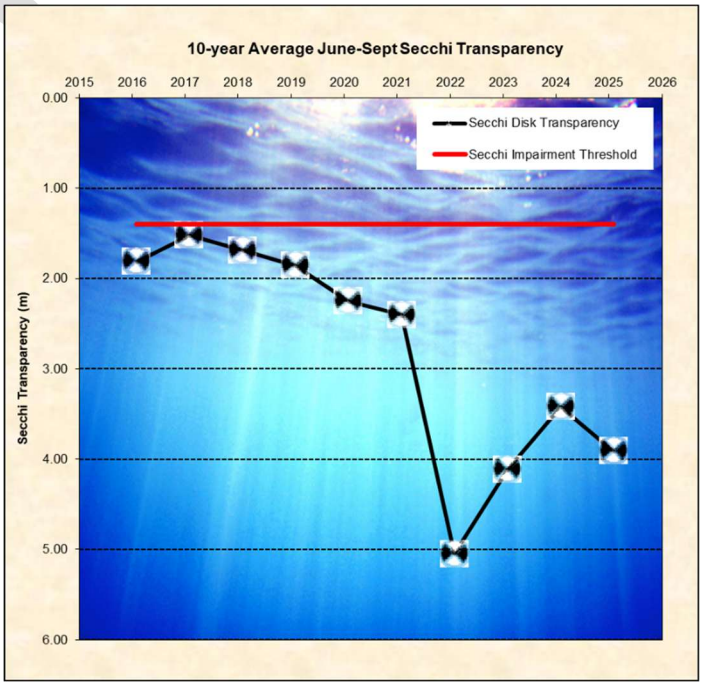
- DNR ID #: 820023
- Municipality: City of Stillwater
- Location: NE ¼ Section 32, T30N-R20W
- Lake Size: 35.90 Acres
- Maximum Depth (2025): 47 ft.
- Ordinary High Water Mark: 844.8 ft.
- 55%Littoral
  Note: Littoral area is the portion of the lake <15 ft. and dominated by aquatic vegetation.
- Publicly accessible



Summary Points

- Based on the chlorophyll-α results Lily Lake was considered mesotrophic in 2025, according to the Carlson Trophic State Index.
- Using a Kendall's Tau correlation test ($p<0.05$) there is a statistically significant **improving** trend for average total phosphorus, average Secchi transparency, and average chlorophyll-α.
- The major land use is urban/residential.
- The lake stratified in 2025 with the thermocline around 4-5 meters deep.
- The lake was treated with alum on May 24, 2022.
- Lily Lake was delisted in 2022 for its impairment for nutrients on the Minnesota Pollution Control Agency's Impaired Waters List.
- Lab methodology was changed for 2023 total phosphorus sample analysis, as such no results were reported <0.022 mg/L (April-mid September).





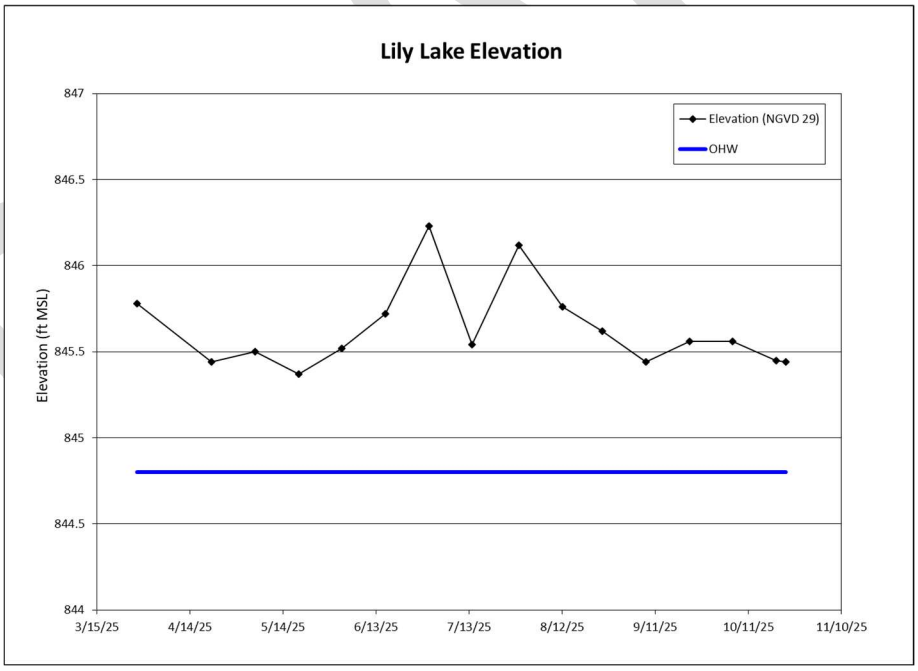
Date/Time	Total Phosphorus (mg/L)	Uncorrected Trichromatic Chlorophyll-*a* (ug/L)	Pheophytin-Corrected Chlorophyll-*a* (ug/L)	Total Kjeldahl Nitrogen (mg/L)	Secchi Disk Depth (m)	Surface Temperature (Celsius)	Surface Dissolved Oxygen (mg/L)	Chloride (mg/L)
4/21/2025 14:30	0.016	2.5	2.4	0.52	4.11	10.8	10.81	
5/5/2025 8:42	0.021	1.9	1.6	0.52	5.79	16.5	10.17	
5/19/2025 13:03	0.017	2.2	1.9	0.50	3.96	16.7	8.19	
6/2/2025 8:46	0.014	2.9	2.4	0.58	4.88	20.1	NA	
6/16/2025 8:42	0.028	2.7	1.3	0.72	3.96	19.7	7.82	
6/30/2025 8:52	0.021	4.7	3.5	0.50	3.66	24.1	8.29	
7/14/2025 8:47	0.020	4.7	3.7	0.53	3.66	26.4	7.62	
7/29/2025 8:04	0.017	2.8	2.4	0.51	3.66	27.0	6.46	96.0
8/12/2025 11:12	0.019	5.4	4.8	0.50	3.51	25.7	7.35	
8/25/2025 8:47	0.024	7.7	6.9	0.55	3.51	22.4	6.76	
9/8/2025 12:32	0.023	4.7	4.5	0.61	4.57	18.7	7.40	78.5
9/22/2025 8:41	0.019	5.9	5.1	0.56	3.81	22.1	8.10	
10/6/2025 11:23	0.017	6.5	6.1	0.50	3.66	20.1	7.12	
10/20/2025 8:53	0.016	5.9	5.1	0.50	4.11	14.4	7.46	
2025 Average	0.019	4.3	3.7	0.54	4.06	20.3	7.97	NA
2025 Summer Average	0.021	4.6	3.8	0.56	3.91	22.9	7.48	NA

Water quality thresholds are 0.04 mg/L TP, 14 µg/L CL-a, 1.4 m Secchi depth*

Shallow lake water quality thresholds are 0.06 mg/L TP, 20 µg/L CL-a, 1.0 m Secchi depth*

	High	High Date	Low	Low Date	Average
2025 Elevation (ft)	846.23	6/30/2025	845.37	5/19/2025	845.63

*Data requirements and determinations of use assessment according to the MPCA's Guidance Manual for Assessing the Quality of Minnesota Surface Waters: "Samples must be collected over a minimum of 2 years and data used for assessments must be collected from June to September. Typically, a minimum of 8 individual data points for TP, corrected chlorophyll-a (chl-a corrected for pheophytin), and Secchi are required. Data used for phosphorus and chlorophyll-a calculations are limited to those collected from the upper most 3 meters of the water column (surface). If more than one sample is collected in a lake per day, these values are averaged to yield a daily average value. Following this step, all June to September data for the 10-year assessment window are averaged to determine summer-mean values for TP, corrected chl-a, and Secchi depth. These values are then compared to the standards and the assessment is made."



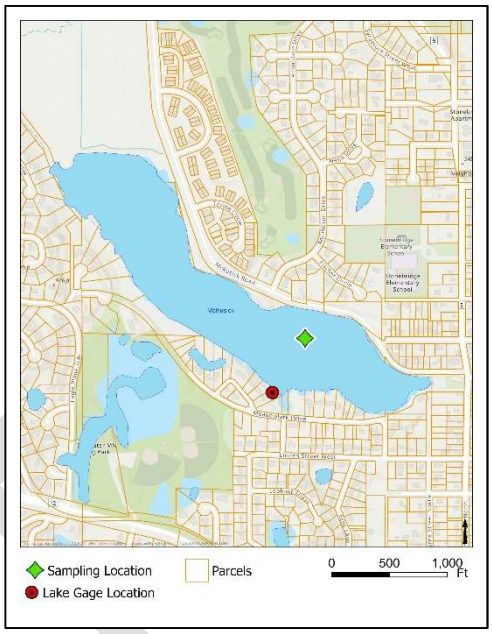
Lake Water Quality Summary										
	Summertime Lake Grades (May-Sept)									
	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
Total Phosphorus (mg/L)	A	A	A	A	C	B	B	B	C	C
Chlorophyll-*a* (ug/L)	A	A	A	A	C	B	B	B	B	C
Secchi depth (ft)	A	A	A	A	B	B	C	C	C	B
Overall	**A**	**A**	**A**	**A**	**C+**	**B**	**B-**	**B-**	**C+**	**C+**

MCKUSICK LAKE

2025 Lake Grade: C+

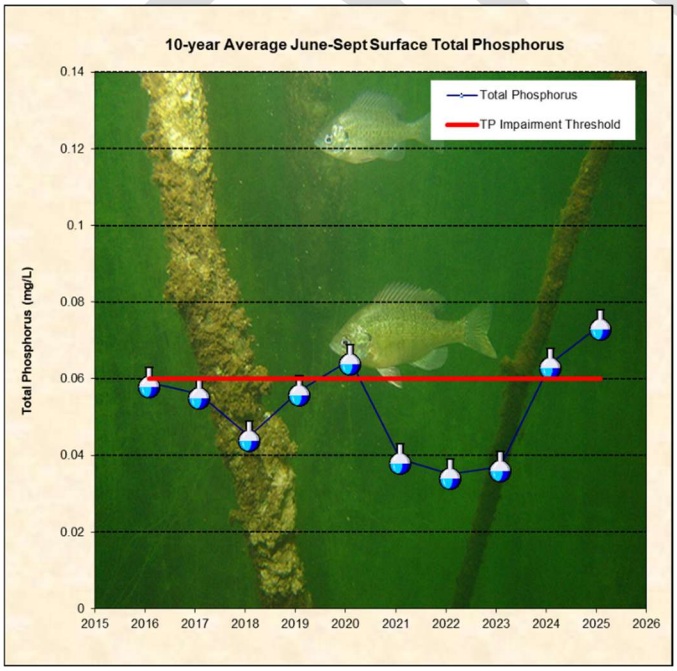
DNR ID #: 820020

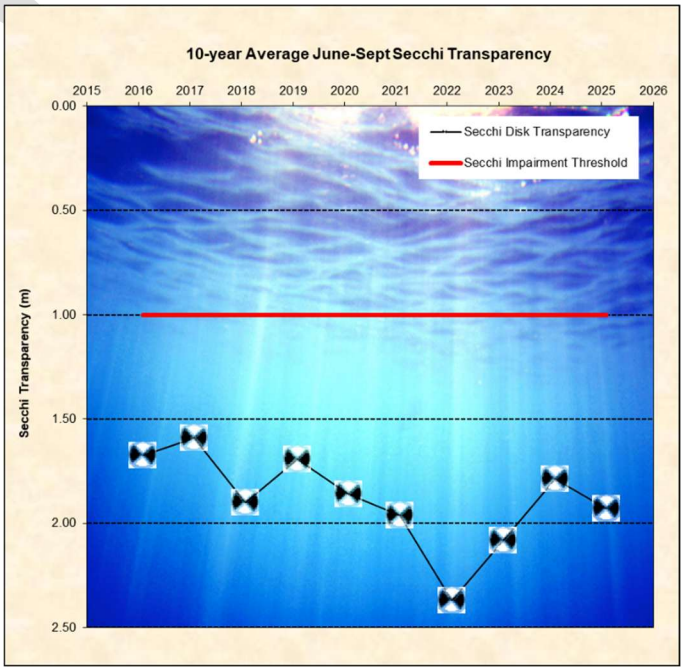
- Municipality: City of Stillwater
- Location: NE ¼ Section 29, T30N-R20W
- Lake Size: 46 Acres
- Maximum Depth (2025): 14 ft.
- Ordinary High Water Mark: 851.7 ft.
- 100% Littoral
  Note: Littoral area is the portion of the lake <15 ft. and dominated by aquatic vegetation.



Summary Points

- Based on the chlorophyll-α results McKusick Lake was considered eutrophic in 2025, according to the Carlson Trophic State Index.
- Using a Kendall's Tau correlation test ($p<0.05$) there is a statistically significant **improving** trend for average Secchi transparency, average total phosphorus, and no trend for the average chlorophyll-α.
- The major land use is urban/residential.
- Temperature and dissolved oxygen profiles were not collected in 2025 so stratification cannot be determined.
- McKusick Lake was delisted in 2012 for its impairment for nutrients on the Minnesota Pollution Control Agency's Impaired Waters List.

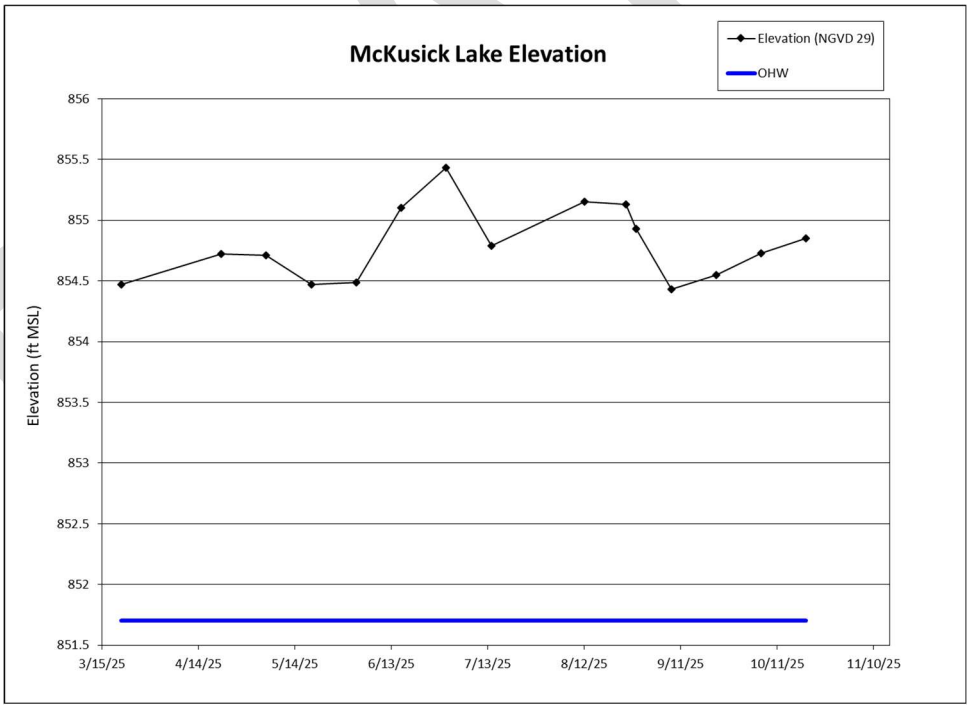




Date/Time	Total Phosphorus (mg/L)	Uncorrected Trichromatic Chlorophyll-*a* (ug/L)	Pheophytin-Corrected Chlorophyll-*a* (ug/L)	Total Kjeldahl Nitrogen (mg/L)	Secchi Disk Depth (m)	Surface Temperature (Celsius)	Surface Dissolved Oxygen (mg/L)	Chloride (mg/L)
4/21/2025 15:13	0.052	6.2	5.6	0.64	1.98	11.8	10.03	
5/5/2025 9:21	0.032	5.0	4.5	0.60	2.59	17.8	10.08	
5/19/2025 13:39	0.033	5.8	4.8	0.59	2.44	15.7	9.37	
6/2/2025 9:22	0.032	4.3	3.7	0.64	2.74	20.6	11.38	
6/16/2025 9:33	0.031	3.7	2.7	0.60	2.59	20.0	8.83	
6/30/2025 9:34	0.044	5.8	4.5	0.65	2.13	23.6	8.24	
7/14/2025 9:27	0.169	28.0	24.0	0.97	1.52	25.9	5.41	
7/29/2025 8:48	0.101	19.0	17.0	0.88	1.52	24.8	2.99	63.7
8/12/2025 12:26	0.110	21.0	18.0	0.91	1.68	24.8	3.72	
8/25/2025 9:36	0.067	14.0	12.0	0.76	1.52	20.1	1.15	
9/8/2025 13:12	0.066	8.4	7.7	0.72	2.13	17.2	5.03	54.3
9/22/2025 9:23	0.042	8.1	7.5	0.73	1.52	21.1	6.25	
10/6/2025 12:44	0.050	5.7	4.3	0.81	2.07	19.7	5.74	
10/20/2025 9:32	0.041	4.2	3.7	0.64	1.98	12.8	7.21	
2025 Average	0.062	9.9	8.6	0.72	2.03	19.7	6.82	NA
2025 Summer Average	0.074	12.5	10.8	0.76	1.93	22.0	5.89	NA
Water quality thresholds are 0.04 mg/L TP, 14 µg/L CL-a, 1.4 m Secchi depth*								
Shallow lake water quality thresholds are 0.06 mg/L TP, 20 µg/L CL-a, 1.0 m Secchi depth*								

	High	High Date	Low	Low Date	Average
2025 Elevation (ft)	855.43	6/30/2025	854.43	9/8/2025	854.80

*Data requirements and determinations of use assessment according to the MPCA's Guidance Manual for Assessing the Quality of Minnesota Surface Waters: "Samples must be collected over a minimum of 2 years and data used for assessments must be collected from June to September. Typically, a minimum of 8 individual data points for TP, corrected chlorophyll-a (chl-a corrected for pheophytin), and Secchi are required. Data used for phosphorus and chlorophyll-a calculations are limited to those collected from the upper most 3 meters of the water column (surface). If more than one sample is collected in a lake per day, these values are averaged to yield a daily average value. Following this step, all June to September data for the 10-year assessment window are averaged to determine summer-mean values for TP, corrected chl-a, and Secchi depth. These values are then compared to the standards and the assessment is made."



Lake Water Quality Summary										
	Summertime Lake Grades (May-Sept)									
	2025	2024	2023	2022	2021	2020	2019	2018	2017	2016
Total Phosphorus (mg/L)	C	C	C	C	C	C	C	C	C	C
Chlorophyll-*a* (ug/L)	B	B	A	A	A	A	A	B	B	B
Secchi depth (ft)	C	C	C	B	C	C	C	C	C	C
Overall	**C+**	**C+**	**B-**	**B**	**B-**	**B-**	**B-**	**C+**	**C+**	**C+**

MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION

MEMORANDUM

TO: Matt Oldenburg-Downing, Administrator
FROM: Rebecca Nestingen, PE
DATE: April 2, 2026
RE: **9a) Plan Reviews/Submittals**

The following is a summary of recent activity on projects submittals which qualify for plan review under the MSCWMO 2025 Watershed Management Plan (WMP):

- **CenterPoint Natural Gas.** Submittal items were received on February 12th, 2026 the proposed CenterPoint natural gas utility project at St. Mary's Dr & Redwing Ave S in St. Mary's Point. The proposed project does not trigger stormwater management requirements and only requires review for erosion and sediment control. ***MSCWMO staff recommends board approval.***
- **Grand Central House.** Submittal items were received on March 18th for the new home construction at 218 3rd St in Stillwater but were deemed incomplete. The project triggers MSCWMO review because of a variance request to impervious surface coverage. MSCWMO staff have requested that applicant *revise and resubmit* but have not received additional or updated submittal materials.
- **Daycare Development.** Submital items were received on March 19th, 2026 for a proposed daycare development at 1365 Curve Crest Blvd in Stillwater. The proposed project triggers a review because it creates more than 6,000 square feet of impervious surface and involves earthwork of more than 100 cubic yards. Revised submittal materials were received on March 27th. ***MSCWMO staff recommends board approval with four conditions.***

MIDDLE ST. CROIX
WATERSHED MANAGEMENT ORGANIZATION

455 Hayward Ave N
Oakdale, MN 55128
651-796-2227
www.mscwmo.org

April 2, 2026

Cindie Reiter
City of St. Mary's Point
16491 St. Mary's Drive
St. Mary's Point, MN 55043

Dear Ms. Reiter,

The Middle St. Croix Watershed Management Organization (MSCWMO) received revised submittal items on February 12th, 2026 the proposed CenterPoint natural gas utility project at St. Mary's Dr & Redwing Ave S within the MSCWMO boundaries and the City of St. Mary's Point. The proposed project qualifies for full review under the MSCWMO 2025 Watershed Management Plan (WMP) since it involves disturbance within 40 feet of the bluffline and within the floodplain. The proposed project as reviewed complies with the MSCWMO performance standards.

MSCWMO review process information can be downloaded from www.mscwmo.org.Please contact me at 651-796-2227 or moldenburg-downing@mnwcd.org if you have any questions or comments regarding this correspondence.

Sincerely,

Matt Oldenburg-Downing | Administrator
Middle St. Croix Watershed Management Organization

MIDDLE ST. CROIX
WATERSHED MANAGEMENT ORGANIZATION

PROJECT REVIEW CHECKLIST

MSCWMO Review ID: 26-001

Project Name: CenterPoint Energy Project (WO#120589546)

Applicant: Melissa Lieder

Review Date: 4/2/2026

Location: St. Mary's Dr & Redwing Ave

Purpose: natural gas pipeline

Recommendation: Proposed project meets the standards of MSCWMO

Review Trigger:

☒ Any project involve movement of 100 cubic yards of earth or removal of vegetation on greater than 10,000 square feet of land

☐ Any project that creates or fully reconstructs 6,000 square feet or more of impervious surface.

☐ Any project within the St. Croix Riverway that adds or reconstruct 500 square feet or more of impervious surface.

☒ Any project with wetland impacts, grading within public waters, grading within shoreline buffers or within 40-feet of the bluff line.

☐ All major subdivisions or minor subdivisions that are part of a common plan of development

☐ Development projects that impact 2 or more of the member communities

☐ Any project requiring a variance from the current local impervious surface coverage limit, shoreline, floodplain, or bluffline setback requirements

Submittal Items:

☒ A completed project review application form

☒ The required project review application fee

☒ Grading Plan/Mapping Exhibits:

NA Property lines and delineation of lands under ownership of the applicant.

NA Summary of all existing and proposed impervious surfaces.

NA Existing and proposed site contour elevations related to NAVD 1988 datum (preferred) or NGVD, 1929. Datum must be noted on exhibits.

- ☒ Delineation of existing on-site wetlands, shoreland, bluffline and/or floodplain areas, including any buffers or setbacks with dimensions.
- ☒ Ordinary High Water (OHW) elevations and datum, as determined by the Minnesota DNR if applicable.
- NA Lowest floor elevation (including basement) of all existing and proposed structures and the regional flood elevation and datum of the 100-year recurrence interval (base flood elevation as determined in a flood insurance study) if applicable.
- NA Drainage easements covering land adjacent to ponding areas, stormwater facilities and wetlands up to their 100-year flood levels and covering all ditches and storm sewers. Access easements to these drainage easements and to stormwater management facilities shall also be shown.
- ☒ Delineation of the subwatersheds contributing runoff from off-site, proposed and existing on-site subwatersheds, and flow directions/patterns.
- NA Location and detailed cross sections with elevations of proposed and existing stormwater facilities including outlet control structures and emergency overflows.
- NA Existing and proposed normal water elevations and the high water level produced from the 100-year 24-hour storms of all stormwater facilities.

☒ Erosion and Sediment Control Plan including the following:

- ☒ Perimeter controls (silt fence, sediment control logs filter berms, or other methods), construction accesses and notation on plans for installation to occur before land disturbing activity begins.
- ☒ Temporary and permanent soil stabilization cover type (erosion control blanket/mulch, seed, sod, or other methods) and notation on plans for required stabilization timeframe.
- ☒ Work exclusion areas for shoreland and buffer preservation, bluffline setbacks and stormwater volume control facilities.
- NA Scour protection and energy dissipation in areas of concentrated flows.
- ☒ Contact information including email and a phone number of the person responsible for inspection and compliance with erosion and sediment control.
- ☒ Identification of all surface waters (lakes, streams, rivers, and wetlands) within one mile that receive drainage from the project site, and methods to protect surface waters.
- NA For projects disturbing more than one acre, or major or minor subdivisions that are part of a common plan of development, a copy of the Stormwater

Pollution Prevention Plan (SWPPP), prepared by a qualified individual, which conforms to the MPCA Construction Stormwater General Permit requirements. The SWPPP must conform to the special requirements for "Special Waters" (St. Croix River) and impaired waters, when applicable.

NA Permanent Stormwater Management System including the following:

- NA Construction plans for all proposed stormwater management facilities including grading contours, bottom area, top area, outlet elevation and proposed vegetation if applicable.
- NA Construction notes for proposed volume control facilities to prevent soil compaction
- NA Location(s) of past, current or future onsite well and septic systems if applicable.
- NA Locations of existing and proposed downspouts and conveyances routing runoff to proposed stormwater management facilities.
- NA A completed stormwater volume control checklist.
- NA Narrative addressing incorporation of stormwater BMPs, including individual BMP storage volumes and pretreatment method(s) used.
- NA All hydrologic and hydraulic computations completed to design the proposed stormwater management facilities. The summaries shall include a map that corresponds to the subwatershed areas in the model.
- NA A table (or tables) must be submitted showing the following:
  - NA A listing of all points where runoff leaves the site and the existing and proposed peak runoff rates for the 2-, 10-, and 100-year 24-hour storms.
  - NA A listing of the existing and proposed subwatershed hydrologic parameters including the impervious and pervious areas, runoff curve number of pervious areas, and time of concentration.
- NA For proposed infiltration facilities with drainage areas of more than 2 acres or 0.7 acres or more of impervious surfaces, a soil boring report for onsite soil borings within the footprint of the proposed stormwater BMPs done in accordance with the Minnesota Stormwater Manual
- NA A proposed maintenance agreement, which may be in the format of Appendix Q, or other form approved by the MSCWMO.

NA A plan for post-construction management of chloride use on the site.

NA Other exhibits required to show conformance with MSCWMO performance standards such as documentation of coverage under the Construction Stormwater General Permit for applicable projects.

Stormwater Rate and Flood Control:

NA The peak rate of stormwater runoff from the 2-, 10-, and 100-year 24-hour storms from newly developed or redeveloped sites does not exceed the existing runoff rates for all points where stormwater discharges leave the site

- NA Existing conditions assume good hydrologic conditions. When existing land cover is cropland, a CN of 56, 70, 79, and 83 is used for HSG A, B, C, and D, respectively.
- NA Runoff for impervious and pervious portions of each subwatershed are calculated separately
- NA Time of concentration is computed using TR-55 methodology
- NA Modeling analyses include secondary overflows to route flows for events exceeding the storm sewer systems level-of-service and computational routing methods are "tailwater-aware" (e.g. dynamic-storage-indication or simultaneous pond routing)

NA In sub-areas of a landlocked watershed, development shall not increase the existing volume or rate of discharge from the sub-area for the 10-year return period event

NA Low floor elevations of structures built adjacent to stormwater management features and other water bodies are a minimum of two feet above the 100-year high water level and the natural overflow of landlocked basins.

NA Low floor elevations of structures built adjacent to designated floodplain areas are a minimum of two feet above the base flood elevation plus any stage increase due to the designation of flood fringe areas or encroachments on the floodplain

Stormwater Volume Control and Treatment:

NA The required stormwater runoff volume captured and retained on site is equivalent to 1.1 inches of runoff from the new and/or fully reconstructed impervious surfaces, unless the project is linear.

NA For linear projects, required stormwater runoff volume captured and retained on site is equivalent to the larger of:

- NA 1.1 inches of runoff from the net increase in impervious, or
- NA 0.55 inches or runoff from new and/or fully reconstructed impervious

NA As determined and agreed upon by the community and MSCWMO the project site has restrictions where infiltration is not feasible or advised, such as karst topography, very fast or slow infiltration soils, shallow bedrock or groundwater, DWSMA or potential stormwater hotspots.

NA Options considered for volume retention have examined the merits of:

NA Completing a higher level of engineering review for an ERA where the DWSMA is classified as moderate, or outside an ERA where the DWSMA is classified as high or very high

NA Relocating project elements to address varying soil conditions and other constraints across the site to achieve infiltration

NA Utilizing green roofs, rainwater harvesting, and/or stormwater reuse

NA If full volume retention cannot be achieved, FTO #1 is satisfied by achieving volume retention of 0.55 inches of runoff from impervious surfaces and 75% annual total phosphorus removal

NA If FTO#1 cannot be achieved, FTO #2 is satisfied by achieving volume retention to the maximum extent practicable and 60% annual total phosphorus removal

NA If FTO#2 cannot be achieved, FTO #3 is satisfied by through off-site mitigation, credit banking, or cash-in-lieu of treatment

NA Volume retention and pollutant removal credits are calculated in accordance with the Minnesota Stormwater Manual and MIDS calculator. Volume retention credits are based on the assumption that an instantaneous volume is captured by the BMP, not the volume infiltrating during the event hydrograph. Ponds, stormwater wetlands and manufactured treatment device removals are based upon the pollutant removal credits in the Minnesota Stormwater Manual.

Stormwater BMP Design:

NA Surface flows to stormwater management facilities are pre-treated to remove solids and maintain long-term performance of the system

NA Infiltration and filtration facilities drawdown within 48 hours per the following:

NA For “off-line” systems, the drawdown time is determined from the maximum water depth below the surface discharge elevation and the infiltration rate.

NA For "in-line" systems, the drawdown time includes the bounce within the system and the drawdown time is determined from the hydrograph time between the peak 100-yr HWL and soil surface/filter-media elevation

NA Bioretention (biofiltration, bioinfiltration, etc.) facilities above ground with vegetation have a maximum water depth below the surface discharge elevation of 1.5 feet.

NA Field measured infiltration rates are divided by 2 as a safety factor for design.

NA In the absence of field-tested infiltration rates, the following design infiltration rates shall be used:

NA For proposed infiltration facilities with a drainage area less than 2 acres and receiving less the 0.7 acres of impervious surface runoff, the HSG is used to

estimate infiltration rates consistent with the recommend rates from the Minnesota Stormwater Manual.

NA For proposed infiltration facilities with a drainage area equal to or greater than 2 acres or having 0.7 acres or more of impervious surface runoff, infiltration suitability shall be verified with soil pits or borings per the Unified Soil Classification in accordance with the Minnesota Stormwater Manual.

NA The design infiltration rates for underground infiltration facilities shall not exceed half of the above rates

NA The following location and minimum setback requirements for proposed infiltration facilities are met:

NA A minimum 3-foot vertical distance between the bottom of an infiltration facility to the seasonally saturated soils or bedrock.

NA A minimum of 1,000 feet up gradient or 100 feet down gradient of active karst terrain

NA A minimum 100-foot horizontal separation between any infiltration facility and sensitive public water supply well

NA A minimum 50-foot horizontal separation between any infiltration facility and all other public water supply well

NA A minimum 35-foot horizontal separation between any infiltration facility and septic system.

NA Infiltration facilities are not located within bluffline setbacks.

NA To prevent soil compaction of infiltration and filtration facilities, the following construction guidance must be provided in the plans and followed during construction:

NA Proposed facilities shall be staked off and marked during construction to prevent heavy equipment and traffic from traveling over it.

NA Proposed facilities may not be excavated within 2.0 feet of final grade until the contributing drainage area has been constructed and fully stabilized.

NA If facilities are in-place during construction activities, all sediment and runoff must be diverted away from the facility, using practices such as pipe capping or diversions. Robust erosion and sediment controls shall be utilized to protect facilities during construction.

NA Installation of facilities shall occur in dry soil conditions. Excavation, soil placement and rapid stabilization of perimeter slopes must be accomplished prior to the next precipitation event.

NA Excavation shall be performed by an excavator with a toothed bucket. Use excavator bucket to place materials. Construction equipment shall not be allowed into the basin.

NA Prior to the release of any remaining fee or security, the permit holder must provide documentation that constructed stormwater facilities perform as designed. All projects shall provide as-builts of permanent stormwater facilities and infiltration tests demonstrating an acceptable infiltration rate or maximum 48-hour drawdown of the full volume if applicable.

Erosion and Sediment Control:

☐ Erosion Prevention

☒ Stabilize all exposed soil areas (including stockpiles) with temporary erosion control (seed and mulch, blanket, or other methods) within 14 days (or 7 days for St. Croix River or impaired water) if construction activities in the area have temporarily or permanently ceased.

NA During MNDNR "work in water restrictions" periods all exposed soils (including stockpiles) within 200 feet of the water's edge must be stabilized within 24 hours of temporarily or permanently pausing construction activities

☒ Stabilize all exposed soils within the normal wetted perimeter of a temporary or permanent drainage ditch or swale within 200 feet of the point of discharge or property edge within 24 hours of allowing water to flow through the system. Mulch, hydromulch, tackifier, or similar practices may not be used in swales with slopes greater than two percent.

NA Stabilize pipe outlets with energy dissipation within 24 hours of connection to a drainage way or permanent stormwater treatment system.

☒ Location, type and quantity of temporary erosion prevention practices are identified.

☒ Sediment Control

☒ Sediment control practices (silt fence, sediment control logs, filter berms, storm sewer inlet protection, or other methods) will be placed down gradient before land disturbing activities begin.

☒ If sediment controls are overloaded based on frequent failure, additional upgradient, redundant, or more robust controls must be implemented.

NA Flotation silt curtain placed in water shall not be used as a primary sediment control practice except when working below the waterline or at the land-water interface. Sediment controls must otherwise be located on land. If used, flotation silt curtain shall be decontaminated of aquatic invasive species per MNDNR guidelines before transporting from the site.

- ☒ Preserve a 50-foot buffer of natural vegetation (100 feet along the St. Croix River or impaired waters) around all surface waters, blufflines, and existing permanent stormwater treatment facilities. If infeasible and disturbance must occur within the buffer, redundant perimeter controls must be used.
- ☒ Stabilized construction accesses (rock pads, rumble strips, access mats) must be utilized to minimize tracking out of sediment from the construction site. Paved surfaces must be cleaned daily if tracking practices are not adequate to prevent sediment from being tracked onto the paved surfaces.
- ☒ Location, type and quantity of sediment control practices are identified.

NA Dewatering

- NA Dewatering turbid or sediment-laden water to surface waters, stormwater conveyances, and existing permanent stormwater treatment facilities is prohibited.
- NA Dewatering discharges shall be directed to temporary sediment basins, filter bags, well-vegetated areas within the site, treatment dumpsters, weeper systems, or other methods. Water leaving the site shall not be turbid, and dewatering discharge points shall be protected from scour and erosion.
- NA Dewatering discharges must be regularly checked for visual clarity at least once every four hours, and records must be kept with the erosion control plan. Unattended dewatering activities are prohibited. If turbid water is discharged, dewatering activities shall cease immediately and additional filtration methods implemented.

☒ Inspections and Maintenance

- ☒ Applicant must inspect all erosion prevention and sediment control practices and adjacent surface waters, stormwater conveyances, and paved surfaces weekly and within 24 hours of a half-inch or more rain event to ensure integrity and effectiveness.
- ☒ Records of inspections must include the date, time, name of inspector, rainfall amount, findings of the inspection, photographs collected of damaged practices or sediment discharges, and corrective actions taken as a result of the inspection.
- ☒ Damaged, non-functional, or missing erosion and sediment control practices shall be replaced by the end of the next business day. Sediment control devices must be maintained when sediment reaches half the height or half the volume of the device by the end of the next business day.
- ☒ If a sediment or discharge of material other than clean stormwater is found, the applicant must immediately notify the permit authority, and report the

discharge to the state duty officer with a description of the type and amount of material discharged, and affected resources.

☒ Plans shall include contact information including email and a phone number of the person responsible for inspection and compliance with erosion and sediment control.

☒ Pollution Prevention

☒ Solid waste, including materials from spill clean ups, must be stored, collected and disposed of in accordance with state law.

☒ Provide effective containment for all liquid and solid wastes generated by washout operations (concrete, stucco, paint, form release oils, curing compounds) such that wastes do not come in contact with soil or stormwater.

☒ Hazardous materials that have potential to leach pollutants such as oil, fuels, hydraulic fluid, paints, solvents, curing compounds, or other materials must be stored in sealed containers and under cover to minimize contact with stormwater.

☒ Immediately contain and prevent further discharge of spilled materials using spill containment kits. Document and report spills as required by state law.

☒ Final Stabilization

NA For residential subdivisions only, individual lots are considered final stabilized if the structures are finished and temporary erosion protection and down gradient sediment control has been completed.

☒ Projects are considered stabilized when all construction activity is complete and all soils disturbed as a result of the project are covered with perennial vegetation of at least 70 percent of the final expected growth. When sod is used, a project is considered stabilized after sod has been laid and maintained alive for at least 30 days.

NA Grading and landscape plans shall include soil tillage and soil bed preparation methods that are employed prior to landscape installation to a minimum depth of 8” and incorporate amendments to meet Minnesota State Stormwater Manual predevelopment soil type bulk densities.

NA Construction is prohibited on steep Slopes within the St. Croix. Steep slopes are defined as lands having average slopes 12% or greater over horizontal distances of fifty feet (50) or more.

NA Land disturbing activities are prohibited within 40 feet of the top of blufflines. Blufflines are defined as a line along the top of a slope connecting points at which the slope, proceeding away from the waterbody or adjoining watershed channel, becomes less than twelve percent (12%).

Wetland Protection:

NA Direct discharge of stormwater to wetlands and all other water bodies without water quality treatment is prohibited. Exemptions for bridges/culverts on linear projects and disconnected impervious with adequate vegetated buffers may be considered.

NA Permits shall be obtained from appropriate regulatory authorities before beginning any work that impacts a wetland or its required buffer.

NA Any potential changes to the hydrology of the wetland (i.e. changes to the outlet elevation or contributing drainage area) must be reviewed to evaluate the impact of both the existing and proposed wetland conditions and approved by the MSCWMO.

NA Land-altering activities shall not increase the bounce in water level or duration of inundation from a 2.0-inch 24-hour storm for any downstream wetland beyond the limit specified in Table 7.2 of the WMP for the individual wetland susceptibility class.

Buffer Protection:

NA Buffers of unmowed natural vegetation shall be maintained or created upslope of wetlands, lakes and streams.

NA Buffer widths conform to provisions in Table 7.1 of the WMP.

NA All buildings (principle and accessory) must be set back at least 20 feet from the upslope edge of the buffer.

Chloride Management:

NA A post-construction chloride management plan for chloride use on the site designates an individual authorized to implement the chloride-use plan and a MPCA smart salting-certified applicator engaged in the implementation of the chloride-use plan for the site.

MIDDLE ST. CROIX
WATERSHED MANAGEMENT ORGANIZATION

455 Hayward Ave N
Oakdale, MN 55128
651-796-2227
www.mscwmo.org

April 2, 2026

Shawn Sanders
City of Stillwater
216 N Fourth Street
Stillwater, MN 55082

Dear Mr. Sanders,

The Middle St. Croix Watershed Management Organization (MSCWMO) received initial submittal materials on March 19th, 2026 for the proposed daycare development at 1365 Curve Crest Blvd W within the MSCWMO boundaries and the City of Stillwater. Revised submittals were received March 27th, 2026. The proposed project qualifies for full review under the MSCWMO 2015 Watershed Management Plan (WMP) since it creates more than 6,000 square feet of impervious surface and involves earthwork of more than 100 cubic yards. The MSCWMO staff have reviewed the project and found the plans as submitted are meeting MSCWMO standards contingent upon the following four (4) items:

1. A revised civil plan sheet for the ADS system layout is provided that is consistent with the updated modeling in the Stormwater Report dated March 27th, 2026.
2. Drainage easements covering land adjacent to ponding areas, stormwater facilities and wetlands up to their 100-year flood levels and covering all ditches and storm sewers. Access easements to these drainage easements and to stormwater management facilities shall also be shown.
3. A proposed maintenance agreement, which may be in the format of the MSCWMO Watershed Management Plan Appendix Q, or other form approved by the MSCWMO.
4. Prior to the release of any remaining fee or security, the permit holder must provide documentation that constructed stormwater facilities perform as designed. All projects shall provide as-builts of permanent stormwater facilities and infiltration tests demonstrating an acceptable infiltration rate or maximum 48-hour drawdown of the full volume if applicable.

MSCWMO review process information can be downloaded from www.mscwmo.org. Please contact me at 651-796-2227 or moldenburg-downing@mnwcd.org if you have any questions or comments regarding this correspondence.

Sincerely,

Matt Oldenburg-Downing | Administrator
Middle St. Croix Watershed Management Organization

MIDDLE ST. CROIX
WATERSHED MANAGEMENT ORGANIZATION

PROJECT REVIEW CHECKLIST

MSCWMO Review ID: 26-003

Review Date: 3/23/2026

Project Name: Kindercare Childcare

Location: 1365 Curve Crest Blvd

Applicant: Sean Graham

Purpose: Construction of a childcare center

Recommendation: Proposed project meets the standards of MSCWMO contingent upon the following:

1. A revised civil plan sheet for the ADS system layout is provided that is consistent with the updated modeling in the Stormwater Report dated March 27th, 2026.
2. Drainage easements covering land adjacent to ponding areas, stormwater facilities and wetlands up to their 100-year flood levels and covering all ditches and storm sewers. Access easements to these drainage easements and to stormwater management facilities shall also be shown.
3. A proposed maintenance agreement, which may be in the format of the MSCWMO Watershed Management Plan Appendix Q, or other form approved by the MSCWMO.
4. Prior to the release of any remaining fee or security, the permit holder must provide documentation that constructed stormwater facilities perform as designed. All projects shall provide as-builts of permanent stormwater facilities and infiltration tests demonstrating an acceptable infiltration rate or maximum 48-hour drawdown of the full volume if applicable.

Review Trigger:

☒ Any project involve movement of 100 cubic yards of earth or removal of vegetation on greater than 10,000 square feet of land

☒ Any project that creates or fully reconstructs 6,000 square feet or more of impervious surface.

☐ Any project within the St. Croix Riverway that adds or reconstruct 500 square feet or more of impervious surface.

☐ Any project with wetland impacts, grading within public waters, grading within shoreline buffers or within 40-feet of the bluff line.

☐ All major subdivisions or minor subdivisions that are part of a common plan of development

☐ Development projects that impact 2 or more of the member communities

☐ Any project requiring a variance from the current local impervious surface coverage limit, shoreline, floodplain, or bluffline setback requirements

Submittal Items:

☒ A completed project review application form

☒ The required project review application fee

☒ Grading Plan/Mapping Exhibits:

- ☒ Property lines and delineation of lands under ownership of the applicant.
- ☒ Summary of all existing and proposed impervious surfaces.
- ☒ Existing and proposed site contour elevations related to NAVD 1988 datum (preferred) or NGVD, 1929. Datum must be noted on exhibits.
- NA Delineation of existing on-site wetlands, shoreland, bluffline and/or floodplain areas, including any buffers or setbacks with dimensions.
- NA Ordinary High Water (OHW) elevations and datum, as determined by the Minnesota DNR if applicable.
- NA Lowest floor elevation (including basement) of all existing and proposed structures and the regional flood elevation and datum of the 100-year recurrence interval (base flood elevation as determined in a flood insurance study) if applicable.
- ☐ Drainage easements covering land adjacent to ponding areas, stormwater facilities and wetlands up to their 100-year flood levels and covering all ditches and storm sewers. Access easements to these drainage easements and to stormwater management facilities shall also be shown.
- ☒ Delineation of the subwatersheds contributing runoff from off-site, proposed and existing on-site subwatersheds, and flow directions/patterns.
- ☒ Location and detailed cross sections with elevations of proposed and existing stormwater facilities including outlet control structures and emergency overflows.
- ☒ Existing and proposed normal water elevations and the high water level produced from the 100-year 24-hour storms of all stormwater facilities.

☒ Erosion and Sediment Control Plan including the following:

- ☒ Perimeter controls (silt fence, sediment control logs filter berms, or other methods), construction accesses and notation on plans for installation to occur before land disturbing activity begins.

☒ Temporary and permanent soil stabilization cover type (erosion control blanket/mulch, seed, sod, or other methods) and notation on plans for required stabilization timeframe.

NA Work exclusion areas for shoreland and buffer preservation, bluffline setbacks and stormwater volume control facilities.

NA Scour protection and energy dissipation in areas of concentrated flows.

☒ Contact information including email and a phone number of the person responsible for inspection and compliance with erosion and sediment control.

☒ Identification of all surface waters (lakes, streams, rivers, and wetlands) within one mile that receive drainage from the project site, and methods to protect surface waters.

☒ For projects disturbing more than one acre, or major or minor subdivisions that are part of a common plan of development, a copy of the Stormwater Pollution Prevention Plan (SWPPP), prepared by a qualified individual, which conforms to the MPCA Construction Stormwater General Permit requirements. The SWPPP must conform to the special requirements for "Special Waters" (St. Croix River) and impaired waters, when applicable.

☐ Permanent Stormwater Management System including the following:

☐ Construction plans for all proposed stormwater management facilities including grading contours, bottom area, top area, outlet elevation and proposed vegetation if applicable.

☒ Construction notes for proposed volume control facilities to prevent soil compaction

☒ Location(s) of past, current or future onsite well and septic systems if applicable.

☒ Locations of existing and proposed downspouts and conveyances routing runoff to proposed stormwater management facilities.

~~☐ A completed stormwater volume control checklist.~~

☒ Narrative addressing incorporation of stormwater BMPs, including individual BMP storage volumes and pretreatment method(s) used.

☒ All hydrologic and hydraulic computations completed to design the proposed stormwater management facilities. The summaries shall include a map that corresponds to the subwatershed areas in the model.

☒ A table (or tables) must be submitted showing the following:

- ☒ A listing of all points where runoff leaves the site and the existing and proposed peak runoff rates for the 2-, 10-, and 100-year 24-hour storms.
- ☒ A listing of the existing and proposed subwatershed hydrologic parameters including the impervious and pervious areas, runoff curve number of pervious areas, and time of concentration.

☒ For proposed infiltration facilities with drainage areas of more than 2 acres or 0.7 acres or more of impervious surfaces, a soil boring report for onsite soil borings within the footprint of the proposed stormwater BMPs done in accordance with the Minnesota Stormwater Manual

☐ A proposed maintenance agreement, which may be in the format of Appendix Q, or other form approved by the MSCWMO.

~~☐ A plan for post-construction management of chloride use on the site.~~

☒ Other exhibits required to show conformance with MSCWMO performance standards such as documentation of coverage under the Construction Stormwater General Permit for applicable projects.

Stormwater Rate and Flood Control:

☒ The peak rate of stormwater runoff from the 2-, 10-, and 100-year 24-hour storms from newly developed or redeveloped sites does not exceed the existing runoff rates for all points where stormwater discharges leave the site

- ☒ Existing conditions assume good hydrologic conditions. When existing land cover is cropland, a CN of 56, 70, 79, and 83 is used for HSG A, B, C, and D, respectively.
- ☒ Runoff for impervious and pervious portions of each subwatershed are calculated separately
- ☒ Time of concentration is computed using TR-55 methodology
- ☒ Modeling analyses include secondary overflows to route flows for events exceeding the storm sewer systems level-of-service and computational routing methods are "tailwater-aware" (e.g. dynamic-storage-indication or simultaneous pond routing)

NA In sub-areas of a landlocked watershed, development shall not increase the existing volume or rate of discharge from the sub-area for the 10-year return period event

☒ Low floor elevations of structures built adjacent to stormwater management features and other water bodies are a minimum of two feet above the 100-year high water level and the natural overflow of landlocked basins.

NA Low floor elevations of structures built adjacent to designated floodplain areas are a minimum of two feet above the base flood elevation plus any stage increase due to the designation of flood fringe areas or encroachments on the floodplain

Stormwater Volume Control and Treatment:

☒ The required stormwater runoff volume captured and retained on site is equivalent to 1.1 inches of runoff from the new and/or fully reconstructed impervious surfaces, unless the project is linear.

☒ For linear projects, required stormwater runoff volume captured and retained on site is equivalent to the larger of:

- ☒ 1.1 inches of runoff from the net increase in impervious, or
- ☐ 0.55 inches or runoff from new and/or fully reconstructed impervious

NA As determined and agreed upon by the community and MSCWMO the project site has restrictions where infiltration is not feasible or advised, such as karst topography, very fast or slow infiltration soils, shallow bedrock or groundwater, DWSMA or potential stormwater hotspots.

NA Options considered for volume retention have examined the merits of:

- NA Completing a higher level of engineering review for an ERA where the DWSMA is classified as moderate, or outside an ERA where the DWSMA is classified as high or very high
- NA Relocating project elements to address varying soil conditions and other constraints across the site to achieve infiltration
- NA Utilizing green roofs, rainwater harvesting, and/or stormwater reuse

NA If full volume retention cannot be achieved, FTO #1 is satisfied by achieving volume retention of 0.55 inches of runoff from impervious surfaces and 75% annual total phosphorus removal

NA If FTO#1 cannot be achieved, FTO #2 is satisfied by achieving volume retention to the maximum extent practicable and 60% annual total phosphorus removal

NA If FTO#2 cannot be achieved, FTO #3 is satisfied by through off-site mitigation, credit banking, or cash-in-lieu of treatment

NA Volume retention and pollutant removal credits are calculated in accordance with the Minnesota Stormwater Manual and MIDS calculator. Volume retention credits are based on the assumption that an instantaneous volume is captured by the BMP, not the volume infiltrating during the event hydrograph. Ponds, stormwater wetlands and manufactured treatment device removals are based upon the pollutant removal credits in the Minnesota Stormwater Manual.

Stormwater BMP Design:

☒ Surface flows to stormwater management facilities are pre-treated to remove solids and maintain long-term performance of the system

☒ Infiltration and filtration facilities drawdown within 48 hours per the following:

- ☐ For “off-line” systems, the drawdown time is determined from the maximum water depth below the surface discharge elevation and the infiltration rate.
- ☐ For "in-line" systems, the drawdown time includes the bounce within the system and the drawdown time is determined from the hydrograph time between the peak 100-yr HWL and soil surface/filter-media elevation

NA Bioretention (biofiltration, bioinfiltration, etc.) facilities above ground with vegetation have a maximum water depth below the surface discharge elevation of 1.5 feet.

~~☐ Field measured infiltration rates are divided by 2 as a safety factor for design.~~

☒ In the absence of field-tested infiltration rates, the following design infiltration rates shall be used:

- ☒ For proposed infiltration facilities with a drainage area less than 2 acres and receiving less the 0.7 acres of impervious surface runoff, the HSG is used to estimate infiltration rates consistent with the recommend rates from the Minnesota Stormwater Manual.
- NA For proposed infiltration facilities with a drainage area equal to or greater than 2 acres or having 0.7 acres or more of impervious surface runoff, infiltration suitability shall be verified with soil pits or borings per the Unified Soil Classification in accordance with the Minnesota Stormwater Manual.
- ☐ ~~The design infiltration rates for underground infiltration facilities shall not exceed half of the above rates~~

☐ The following location and minimum setback requirements for proposed infiltration facilities are met:

- ☐ A minimum 3-foot vertical distance between the bottom of an infiltration facility to the seasonally saturated soils or bedrock.
- ☐ A minimum of 1,000 feet up gradient or 100 feet down gradient of active karst terrain
- ☐ A minimum 100-foot horizontal separation between any infiltration facility and sensitive public water supply well
- ☐ A minimum 50-foot horizontal separation between any infiltration facility and all other public water supply well

☐ A minimum 35-foot horizontal separation between any infiltration facility and septic system.

☐ Infiltration facilities are not located within bluffline setbacks.

NA To prevent soil compaction of infiltration and filtration facilities, the following construction guidance must be provided in the plans and followed during construction:

NA Proposed facilities shall be staked off and marked during construction to prevent heavy equipment and traffic from traveling over it.

NA Proposed facilities may not be excavated within 2.0 feet of final grade until the contributing drainage area has been constructed and fully stabilized.

NA If facilities are in-place during construction activities, all sediment and runoff must be diverted away from the facility, using practices such as pipe capping or diversions. Robust erosion and sediment controls shall be utilized to protect facilities during construction.

NA Installation of facilities shall occur in dry soil conditions. Excavation, soil placement and rapid stabilization of perimeter slopes must be accomplished prior to the next precipitation event.

NA Excavation shall be performed by an excavator with a toothed bucket. Use excavator bucket to place materials. Construction equipment shall not be allowed into the basin.

☐ Prior to the release of any remaining fee or security, the permit holder must provide documentation that constructed stormwater facilities perform as designed. All projects shall provide as-builts of permanent stormwater facilities and infiltration tests demonstrating an acceptable infiltration rate or maximum 48-hour drawdown of the full volume if applicable.

Erosion and Sediment Control:

☒ Erosion Prevention

☒ Stabilize all exposed soil areas (including stockpiles) with temporary erosion control (seed and mulch, blanket, or other methods) within 14 days (or 7 days for St. Croix River or impaired water) if construction activities in the area have temporarily or permanently ceased.

NA During MNDNR “work in water restrictions” periods all exposed soils (including stockpiles) within 200 feet of the water’s edge must be stabilized within 24 hours of temporarily or permanently pausing construction activities

☒ Stabilize all exposed soils within the normal wetted perimeter of a temporary or permanent drainage ditch or swale within 200 feet of the point of discharge or property edge within 24 hours of allowing water to flow through

the system. Mulch, hydromulch, tackifier, or similar practices may not be used in swales with slopes greater than two percent.

☒ Stabilize pipe outlets with energy dissipation within 24 hours of connection to a drainage way or permanent stormwater treatment system.

☒ Location, type and quantity of temporary erosion prevention practices are identified.

☒ Sediment Control

☒ Sediment control practices (silt fence, sediment control logs, filter berms, storm sewer inlet protection, or other methods) will be placed down gradient before land disturbing activities begin.

☒ If sediment controls are overloaded based on frequent failure, additional upgradient, redundant, or more robust controls must be implemented.

NA Flotation silt curtain placed in water shall not be used as a primary sediment control practice except when working below the waterline or at the land-water interface. Sediment controls must otherwise be located on land. If used, flotation silt curtain shall be decontaminated of aquatic invasive species per MNDNR guidelines before transporting from the site.

☒ Preserve a 50-foot buffer of natural vegetation (100 feet along the St. Croix River or impaired waters) around all surface waters, blufflines, and existing permanent stormwater treatment facilities. If infeasible and disturbance must occur within the buffer, redundant perimeter controls must be used.

☒ Stabilized construction accesses (rock pads, rumble strips, access mats) must be utilized to minimize tracking out of sediment from the construction site. Paved surfaces must be cleaned daily if tracking practices are not adequate to prevent sediment from being tracked onto the paved surfaces.

☒ Location, type and quantity of sediment control practices are identified.

NA Dewatering

NA Dewatering turbid or sediment-laden water to surface waters, stormwater conveyances, and existing permanent stormwater treatment facilities is prohibited.

NA Dewatering discharges shall be directed to temporary sediment basins, filter bags, well-vegetated areas within the site, treatment dumpsters, weeper systems, or other methods. Water leaving the site shall not be turbid, and dewatering discharge points shall be protected from scour and erosion.

NA Dewatering discharges must be regularly checked for visual clarity at least once every four hours, and records must be kept with the erosion control plan. Unattended dewatering activities are prohibited. If turbid water is discharged,

dewatering activities shall cease immediately and additional filtration methods implemented.

☒ Inspections and Maintenance

- ☒ Applicant must inspect all erosion prevention and sediment control practices and adjacent surface waters, stormwater conveyances, and paved surfaces weekly and within 24 hours of a half-inch or more rain event to ensure integrity and effectiveness.
- ☒ Records of inspections must include the date, time, name of inspector, rainfall amount, findings of the inspection, photographs collected of damaged practices or sediment discharges, and corrective actions taken as a result of the inspection.
- ☒ Damaged, non-functional, or missing erosion and sediment control practices shall be replaced by the end of the next business day. Sediment control devices must be maintained when sediment reaches half the height or half the volume of the device by the end of the next business day.
- ☒ If a sediment or discharge of material other than clean stormwater is found, the applicant must immediately notify the permit authority, and report the discharge to the state duty officer with a description of the type and amount of material discharged, and affected resources.
- ☒ Plans shall include contact information including email and a phone number of the person responsible for inspection and compliance with erosion and sediment control.

☒ Pollution Prevention

- ☒ Solid waste, including materials from spill clean ups, must be stored, collected and disposed of in accordance with state law.
- ☒ Provide effective containment for all liquid and solid wastes generated by washout operations (concrete, stucco, paint, form release oils, curing compounds) such that wastes do not come in contact with soil or stormwater.
- ☒ Hazardous materials that have potential to leach pollutants such as oil, fuels, hydraulic fluid, paints, solvents, curing compounds, or other materials must be stored in sealed containers and under cover to minimize contact with stormwater.
- ☒ Immediately contain and prevent further discharge of spilled materials using spill containment kits. Document and report spills as required by state law.

☒ Final Stabilization

NA For residential subdivisions only, individual lots are considered final stabilized if the structures are finished and temporary erosion protection and down gradient sediment control has been completed.

☒ Projects are considered stabilized when all construction activity is complete and all soils disturbed as a result of the project are covered with perennial vegetation of at least 70 percent of the final expected growth. When sod is used, a project is considered stabilized after sod has been laid and maintained alive for at least 30 days.

☐ ~~Grading and landscape plans shall include soil tillage and soil bed preparation methods that are employed prior to landscape installation to a minimum depth of 8" and incorporate amendments to meet Minnesota State Stormwater Manual predevelopment soil type bulk densities.~~

NA Construction is prohibited on steep Slopes within the St. Croix. Steep slopes are defined as lands having average slopes 12% or greater over horizontal distances of fifty feet (50) or more.

NA Land disturbing activities are prohibited within 40 feet of the top of blufflines. Blufflines are defined as a line along the top of a slope connecting points at which the slope, proceeding away from the waterbody or adjoining watershed channel, becomes less than twelve percent (12%).

Wetland Protection:

NA Direct discharge of stormwater to wetlands and all other water bodies without water quality treatment is prohibited. Exemptions for bridges/culverts on linear projects and disconnected impervious with adequate vegetated buffers may be considered.

NA Permits shall be obtained from appropriate regulatory authorities before beginning any work that impacts a wetland or its required buffer.

NA Any potential changes to the hydrology of the wetland (i.e. changes to the outlet elevation or contributing drainage area) must be reviewed to evaluate the impact of both the existing and proposed wetland conditions and approved by the MSCWMO.

NA Land-altering activities shall not increase the bounce in water level or duration of inundation from a 2.0-inch 24-hour storm for any downstream wetland beyond the limit specified in Table 7.2 of the WMP for the individual wetland susceptibility class.

Buffer Protection:

NA Buffers of unmowed natural vegetation shall be maintained or created upslope of wetlands, lakes and streams.

NA Buffer widths conform to provisions in Table 7.1 of the WMP.

NA All buildings (principle and accessory) must be set back at least 20 feet from the upslope edge of the buffer.

~~**Chloride Management:**~~

☐ ~~A post-construction chloride management plan for chloride use on the site designates an individual authorized to implement the chloride-use plan and a MPCA smart salting certified applicator engaged in the implementation of the chloride-use plan for the site.~~

MIDDLE ST. CROIX WATERSHED MANAGEMENT ORGANIZATION
455 Hayward Avenue, Oakdale, MN 55128
Phone 651.330.8220 x22 fax 651.330.7747
www.mscwmo.org

Erosion & Sediment Control Compliance Summary & Corrective Action Notice

Inspector Name: Aaron DeRusha **Inspection Date:** 03/11/2026

Project Name: Cheep Storage Lakeland Expansion(CSLXP) **Project Address:** 228 Saint Croix Trl N

Site is within one mile of and discharges to an impaired or special water?

☑ Yes ☐ No

Inspection Type: ☐ Pre-construction ☑ Routine ☐ Rainfall ☐ Post-construction

Overall Site Grade:

☐ A	The site is **in full compliance**. All practices are in place and the site is well maintained.
☑ B	The site is **in compliance**, but normal maintenance activities are required.
☐ C	The site is **not in compliance**. Maintenance or supplemental practices are required.
☐ D	The site is **not in compliance**. Erosion and sediment control practices are in poor condition and controllable water resources or off-site impacts are likely.
☐ F	The site is in **severe non-compliance**. Controllable water quality or off-site impacts have occurred. Enforcement proceedings will be initiated unless immediate corrective actions are taken.

Corrective Action(s) Required:

1. Inactive stockpiles must be stabilized within 7 days if not actively utilized
2. Stabilize exposed soils within 7 days of temporarily pausing work in those areas.
3. Repair and/or replace damaged perimeter control
4. Do not excavate stormwater facilities to within 2 feet of final grade until contributing drainage areas are built and stabilized.
5. Protect infiltration/filtration systems from compaction and sediment

General Comments or Potential Areas of Future Concern:

See items in plan set for restrictions on excavating infiltration basins before contributing areas are built.

Erosion & Sediment Control Compliance Summary & Corrective Action Notice

Were any discharges observed during this inpection? ☑ No ☐ Yes

Erosion & Sediment Control Compliance Summary & Corrective Action Notice

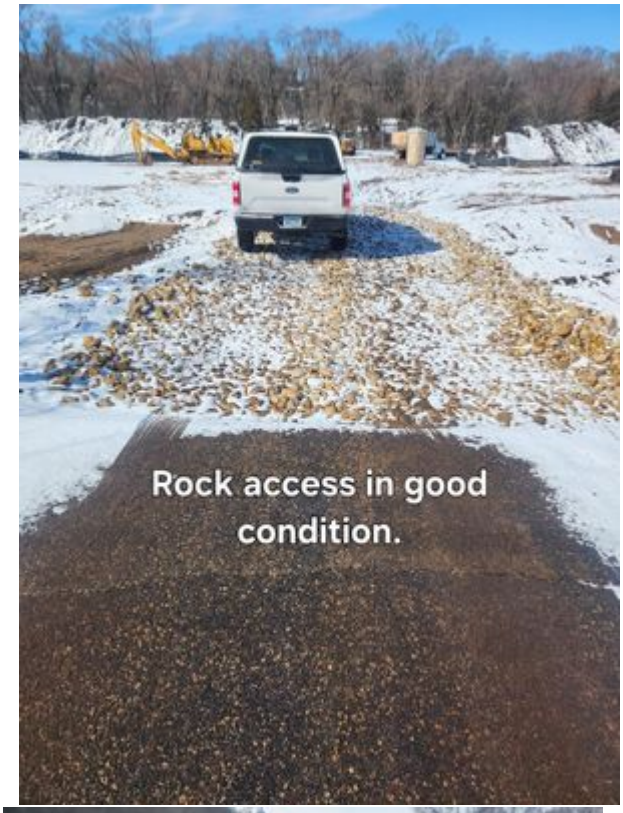
	Compliant	Non-compliant	Under Review	Not Inspected
Erosion Prevention Requirements:				
Soils are stabilized where no construction activity has occurred for 14 days (including stockpiles)	☐	☑	☐	☐
Disturbance of steep slopes has been minimized or stabilization practices designed for steep slopes are used	☐	☐		☑
Ditches/swales are stabilized 200’ back from point of discharge	☐	☐	☐	☑
Pipe outlets have energy dissipation (within 24 hours of connection)	☐	☐	☐	☑
Construction phasing in accordance with the approved plan is being followed	☐	☐	☑	☐
Areas not to be disturbed are marked off (flags, signs, ect.)	☐	☐		☑
Sediment Control Requirements:				
Perimeter sediment controls are installed properly on all down gradient perimeters	☑	☐		☐
Appropriate BMPs are installed protecting inlets, catch basins, and culvert inlets	☑	☐		☐
Erodible stockpiles have perimeter control in place	☑	☐		☐
Temporary sediment basin is built as shown on approved construction plans	☐	☐		☑
Soil compaction is minimized where applicable	☑	☐		☐
Maintenance and Inspection Requirements:				
Previously stabilized areas are maintaining ground cover	☐	☐		☑
Perimeter controls are maintained and functioning properly	☐	☑		☐
Inlet protection devices are maintained and adequately protecting inlets	☐	☐		☑
Temporary sediment basins are being maintained and properly functioning	☐	☐		☑
Vehicle tracking BMPs are in place at site exits and are maintained/functioning properly	☑	☐		☐
Tracked sediment is being removed within 24 hours	☑	☐	☐	☐
Surface waters, ditches, conveyances, and discharge points have been inspected	☐	☐		☑
Other Requirements:				

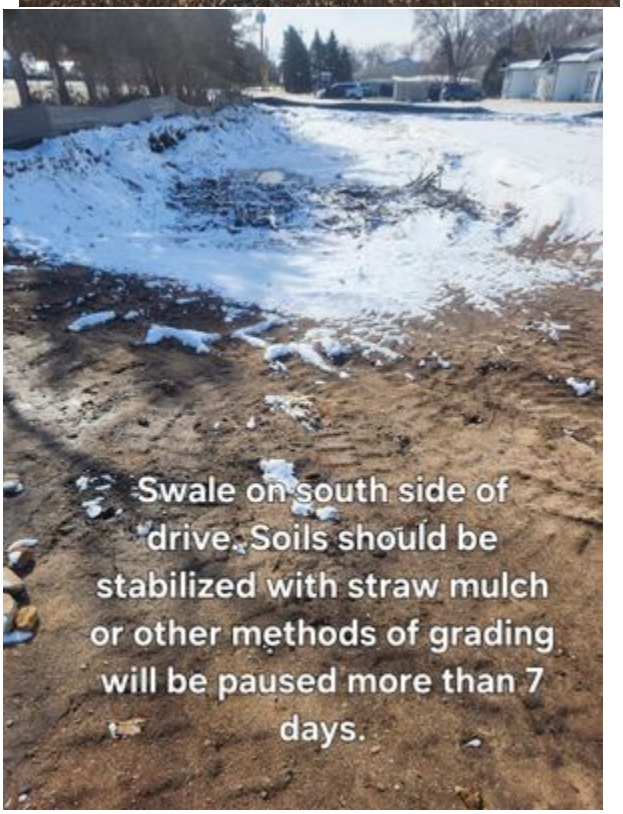
Erosion & Sediment Control Compliance Summary & Corrective Action Notice

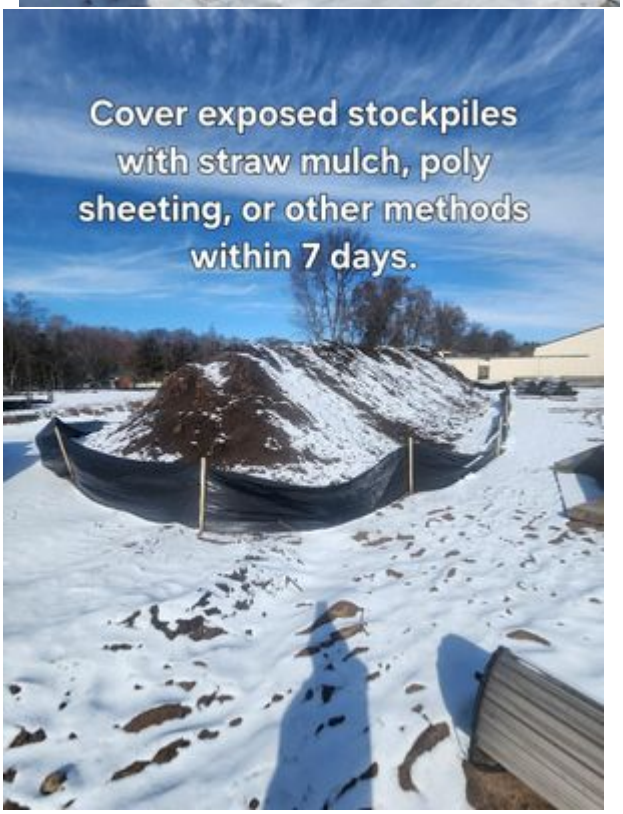
Pollution prevention management measures for solid waste, hazardous materials, concrete and truck washing are in place	☐	☐		☑
If dewatering is occurring, BMPs are being used to ensure clean water is leaving the site and discharge is not causing erosion	☐	☐		☑
If being utilized, infiltration/filtration systems are marked and protected from compaction and sediment	☐	☑		☐
If required buffers are preserved around all streams, rivers, lakes, and wetlands during construction	☐	☐		☑
If required, buffer monumentation has been installed	☐	☐		☑

Erosion & Sediment Control Compliance Summary & Corrective Action Notice

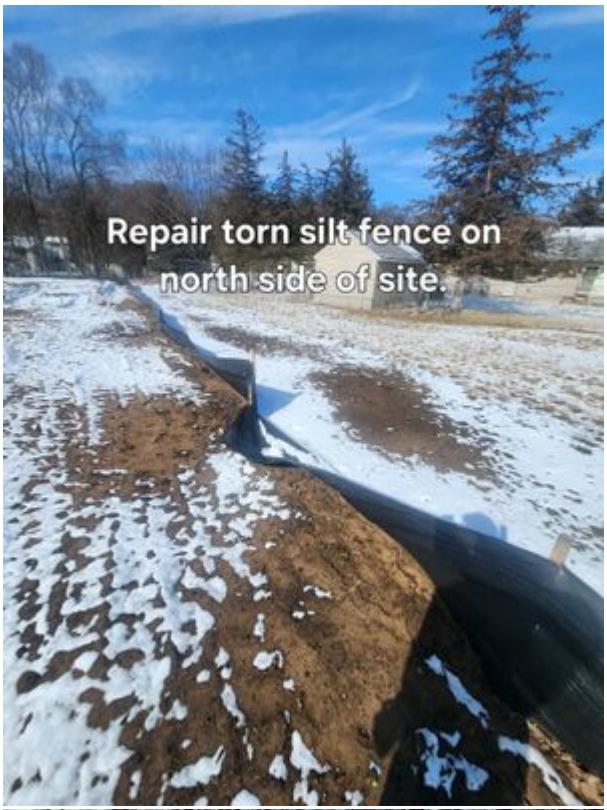
Images of non-compliant items, concerns, or general conditions:

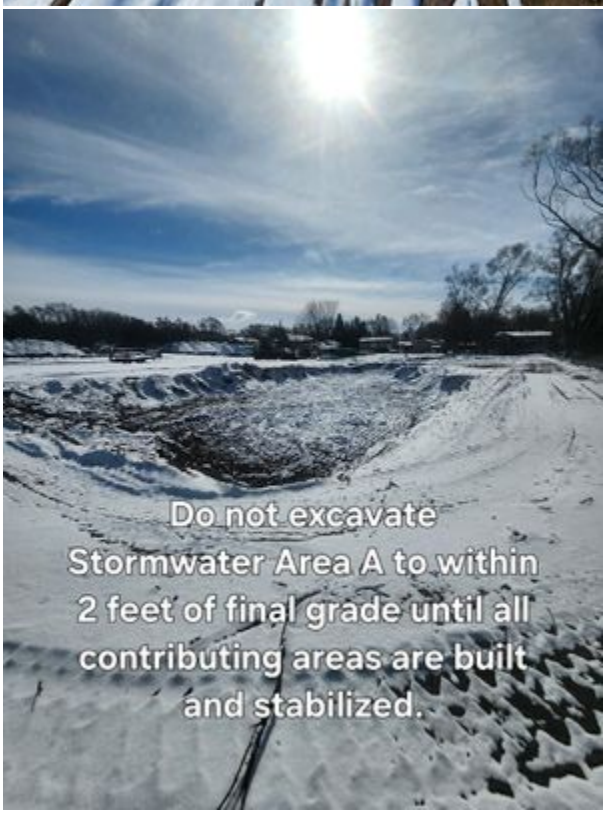






Erosion & Sediment Control Compliance Summary & Corrective Action Notice





Erosion & Sediment Control Compliance Summary & Corrective Action Notice

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455 Hayward Avenue, Oakdale, MN 55128
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Erosion & Sediment Control Compliance Summary & Corrective Action Notice

Inspector Name: Aaron DeRusha **Inspection Date:** 03/11/2026

Project Name: Lakeland Shores Properties, LLC. **Project Address:** 16530 ? 1st St S

Site is within one mile of and discharges to an impaired or special water?

☐ Yes ☑ No

Inspection Type: ☐ Pre-construction ☑ Routine ☐ Rainfall ☐ Post-construction

Overall Site Grade:

☐ A	The site is **in full compliance**. All practices are in place and the site is well maintained.
☑ B	The site is **in compliance**, but normal maintenance activities are required.
☐ C	The site is **not in compliance**. Maintenance or supplemental practices are required.
☐ D	The site is **not in compliance**. Erosion and sediment control practices are in poor condition and controllable water resources or off-site impacts are likely.
☐ F	The site is in **severe non-compliance**. Controllable water quality or off-site impacts have occurred. Enforcement proceedings will be initiated unless immediate corrective actions are taken.

Corrective Action(s) Required:

1. Exposed soils must be stabilized within 7 days of temporarily pausing construction activity in those areas.
2. Repair and/or replace damaged perimeter control

General Comments or Potential Areas of Future Concern:

Discussed excavating infiltration basin. Basin cannot be excavated within 2 feet of the bottom elevation until all contributing drainage areas (parking area and outlying areas) are built and stabilized. Roof is constructed and will cause significant runoff- recommend partial excavation of infiltration basin following plan restrictions to provide storage and prevent off-site discharges. Discussed substituting wood mulch in place of vegetation in areas surrounding the

parking areas. Follow plan set- plan states these areas will be seeded with MNDOT seed mix Mesic Inslope, and the infiltration basin will be seeded with seed mix Wet Ditch.

Were any discharges observed during this inpection? ☑ No ☐ Yes

Erosion & Sediment Control Compliance Summary & Corrective Action Notice

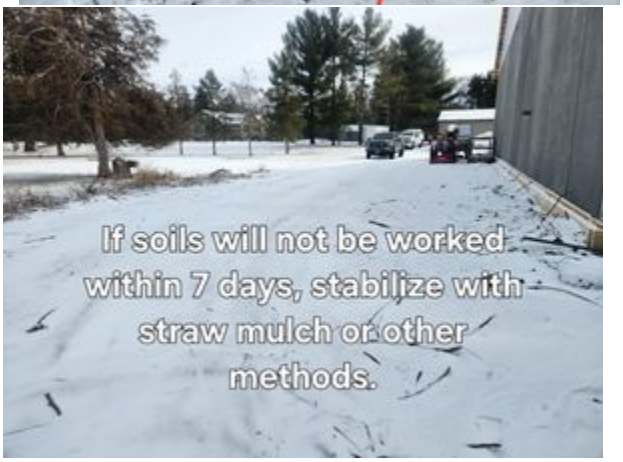
	Compliant	Non-compliant	Under Review	Not Inspected
Erosion Prevention Requirements:				
Soils are stabilized where no construction activity has occurred for 14 days (including stockpiles)	☐	☑	☐	☐
Disturbance of steep slopes has been minimized or stabilization practices designed for steep slopes are used	☐	☐		☑
Ditches/swales are stabilized 200’ back from point of discharge	☐	☐	☐	☑
Pipe outlets have energy dissipation (within 24 hours of connection)	☐	☐	☐	☑
Construction phasing in accordance with the approved plan is being followed	☐	☐	☐	☑
Areas not to be disturbed are marked off (flags, signs, ect.)	☐	☐		☑
Sediment Control Requirements:				
Perimeter sediment controls are installed properly on all down gradient perimeters	☑	☐		☐
Appropriate BMPs are installed protecting inlets, catch basins, and culvert inlets	☐	☐		☑
Erodible stockpiles have perimeter control in place	☐	☐		☑
Temporary sediment basin is built as shown on approved construction plans	☐	☐		☑
Soil compaction is minimized where applicable	☑	☐		☐
Maintenance and Inspection Requirements:				
Previously stabilized areas are maintaining ground cover	☐	☐		☑
Perimeter controls are maintained and functioning properly	☐	☑		☐
Inlet protection devices are maintained and adequately protecting inlets	☐	☑		☐
Temporary sediment basins are being maintained and properly functioning	☐	☐		☑
Vehicle tracking BMPs are in place at site exits and are maintained/functioning properly	☑	☐		☐
Tracked sediment is being removed within 24 hours	☑	☐	☐	☐
Surface waters, ditches, conveyances, and discharge points have been inspected	☐	☐		☑
Other Requirements:				

Erosion & Sediment Control Compliance Summary & Corrective Action Notice

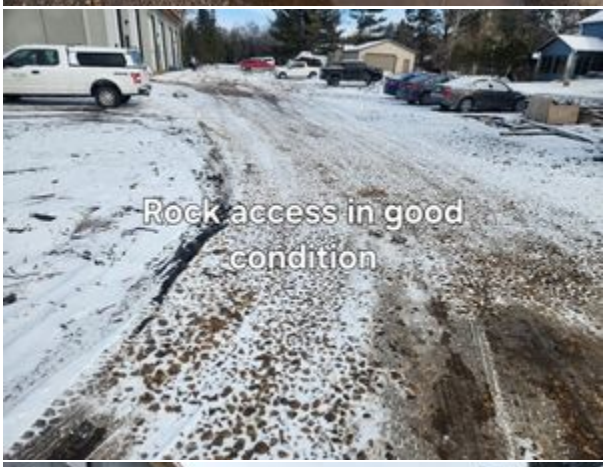
Pollution prevention management measures for solid waste, hazardous materials, concrete and truck washing are in place	☐	☐		☑
If dewatering is occurring, BMPs are being used to ensure clean water is leaving the site and discharge is not causing erosion	☐	☐		☑
If being utilized, infiltration/filtration systems are marked and protected from compaction and sediment	☑	☐		☐
If required buffers are preserved around all streams, rivers, lakes, and wetlands during construction	☐	☐		☑
If required, buffer monumentation has been installed	☐	☐		☑

Erosion & Sediment Control Compliance Summary & Corrective Action Notice

Images of non-compliant items, concerns, or general conditions:



Erosion & Sediment Control Compliance Summary & Corrective Action Notice



MIDDLE ST. CROIX
WATERSHED MANAGEMENT ORGANIZATION

Staff Report- March 2026

Administration

- Prepared April meeting materials
- Participated in Lower St. Croix Partnership meetings
- Permit review coordination with communities
- Coordination with partners
- Coordinated leave coverage

Project Reviews

- See Plan review memo

10-Year Management Plan Update

Description: The Board of Water and Soil Resources (BWSR) requires watersheds to have a management plan and MSCWMO's current management plan expires in 2025, as such a management plan update is underway. This plan will meet BWSR's various requirements and is on track to be completed by the end of 2025.

Activities This Month: Task 1 - stakeholder engagement portion of the plan is complete. Task – 2 Implementation, Prioritization, and Actions is complete. An inventory and assessment of existing BMPs and mapping of MSCWMO's features has been completed and the report is an appendix of the plan. A detailed inspection protocol has been developed. Updates to the cost share program and performance standards have been made and reviewed by the Board. Task 3 – Plan Composition is complete. The Board of Soil and Water Resources approved the plan at its regular meeting held on December 18, 2025. MSCWMO has now adopted and will be implementing the Plan, in accordance with MN Statute 103B.231, Subd. 10.

Staff: Rebecca Oldenburg-Downing, WCD

Water Monitoring Program

Description: The MSCWMO water monitoring program includes the monitoring of flow at two sites. These sites have equipment that serves to collect data on the total volume of water flowing through Perro Creek at the Diversion Structure, as well as the Perro Creek Diversion Structure Overflow. Water quality samples are collected at the Perro Creek Diversion Structure on a monthly basis and during storm events.

Additionally, the MSCWMO monitors two lakes, Lily and McKusick for several parameters from April-October. Data is collected on both lakes on a biweekly basis and includes: water level, clarity, pH, temperature and dissolved oxygen profiles, an aesthetics and user profile, and field conditions. Additionally, water quality samples are collected from the surface of the lakes and analyzed for total phosphorus, total Kjeldahl nitrogen, and chlorophyll.

Activities This Month: Monitoring equipment has been partially installed at Perro Creek Diversion and Perro Creek Diversion Overflow monitoring sites. Equipment preparation continues for lake sampling, which will resume in early April. Lake elevation gages have been installed and surveyed on Lily Lake, McKusick Lake, and Brick Pond. A citizen volunteer will continue to collect elevations at Brick Pond.

Staff: Aaron DeRusha, WCD

Erosion and Sediment Control Inspections

Description: The MSCWMO has contracted with the WCD to conduct erosion and sediment control inspections for construction projects that have been reviewed and recommended for permit approval by partner communities. The WCD also maintains an ArcGIS Online based database for project plan review tracking, erosion control inspection, and BMP implementation and maintenance activities.

Activities This Month: Inspections were conducted at the Cheep Storage Expansion site in Lakeland and the Lakeland Shores Properties, LLC. site in Lakeland Shores. The Cheep Storage project had minor maintenance items noted to correct damaged silt fence and stabilize exposed stockpiles. The site was beginning excavation of the infiltration basin footprints. Follow up with the site contacts confirmed they are aware they cannot excavate the infiltration basins to within 2 feet of final grade until all contributing drainage areas are constructed and fully stabilized. Maintenance of silt fence and inlet protection devices was needed on the Lakeland Shores Properties site. An on-site meeting was conducted and we discussed not excavating the infiltration basin to within 2 feet of final grade until the contributing drainage areas are built and stabilized. Discussion also included roof downspout discharge management to prevent erosion and possible sediment discharges. Improvements and updates were also made to the erosion control inspection template to provide clearer timelines for corrective actions, provide educational links to resources for site compliance within the inspection report, and to update the report style. These updates will be seen in future inspection reports.

Staff: Aaron DeRusha, WCD

BMP Maintenance

Description: The MSCWMO has a maintenance obligation for its Capital Improvement Projects and projects funded by Clean Water Fund grants. The MSCWMO partners with the Washington Conservation District to fulfill this maintenance requirement.

Activities this month: Seasonal crew and inlet cleanout likely to start at the end of the month.

Staff: Brett Stolpestad, Cameron Blake, WCD

Meetings:

- Multiple meetings