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March 7, 2024

Commissioners **and**
Technical Advisory Committee Members
Shingle Creek and West Mississippi
Watershed Management Commissions
Hennepin County, Minnesota

*The agenda and meeting packets are available on
the Commission's web site.*
<http://www.shinglecreek.org/minutes--meeting-packets.html> **and**
<http://www.shinglecreek.org/tac-meetings.html>

Dear Commissioners and Members:

Regular meetings of the Shingle Creek and West Mississippi Watershed Management Commissions will be held Thursday, March 14, 2024, at Plymouth Community Center, 14800 34th Avenue North, Plymouth, MN. Lunch will be served at 12:00 noon and the meetings will convene concurrently at 12:45.

The Technical Advisory Committee (TAC) will meet at 11:00 a.m., prior to the regular meeting.

This month we will meet in CLASSROOM 2B, on the upper level, the same room where we met last month. The elevator and the stairway to the second level can be reached by taking the first left just past the reception desk in the lobby.

Please make your meal choice from the items below and email me at judie@jass.biz to confirm your attendance and your meal selection by **noon, Tuesday, March 12, 2024.**

Thank you.

Regards,

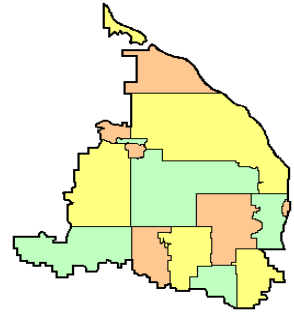
Judie A. Anderson
Administrator

cc: Alternate Commissioners Member Cites Troy Gilchrist TAC Members
Stantec Consulting Services BWSR MPCA HCEE

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Order your deli sandwich box lunch. Sandwiches come with lettuce, tomato and mayo. As an alternative you may specify your sandwich with **wheat bread or as an **unwich** (lettuce wrapped).**

- 1** Pepe – Ham and cheese
- 2** Big John – Roast beef
- 3** Totally Tuna – Tuna salad and cucumber
- 4** Turkey Tom – Turkey
- 5** Vito – salami, capocollo, cheese, onion, oil and vinegar, oregano-basil (no mayo)
- 6** The Veggie – double cheese, avocado spread, cucumber
- 14** Bootlegger Club – Roast beef and turkey



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A combined regular meeting of the Shingle Creek (SC) and West Mississippi (WM) Watershed Management Commissions will be convened Thursday, March 14, 2024, at 12:45 p.m. Agenda items are available at <http://www.shinglecreek.org/minutes--meeting-packets.html>. *Black typeface denotes SCWM items, blue denotes SC items, green denotes WM items.*

AGENDA
March 14, 2024

- 1. Call to Order.**
 - a. Roll Call.
 - b. Approve Agenda.*
 - c. Approve Minutes of Last Meeting.*
- | | | |
|---|------|--|
| ✓ | SCWM | |
| ✓ | SCWM | |
- 2. Reports.**
 - a. Treasurer’s Report and Claims** - voice votes.
- | | | |
|---|------|--|
| ✓ | SCWM | |
| ✓ | SCWM | |
- 3. Open Forum.**
 - a. William Kuster.
- 4. Project Reviews.**
- 5. Water Quality.**
 - a. Eagle/Pike Lake Management Plan.
 - 1) Approve Work Order.**
 - 2) Call for Public Hearing.
 - b. Maintenance Fund Policy.*
 - 1) 2024 Proposed Maintenance Fund Activities.*
 - 2) Bass Lake CLP, Carp Barrier Cleaning Agreement.*
- | | | |
|---|----|--|
| ✓ | SC | |
| ✓ | SC | |
| ✓ | SC | |
| ✓ | SC | |
| ✓ | SC | |
| ✓ | SC | |
- 6. Grant Opportunities.**
 - a. Approve MPCA Resilience Grant Agreement.**
 - 1) Colorado Avenue Feasibility Study Work Order.*
- | | | |
|---|----|--|
| ✓ | SC | |
| ✓ | | |
- 7. Education and Public Outreach.**
 - a. WMWA Update.**
 - 1) Chloride Consultations media kit.*
 - 2) Blue Thumb Spring Workshops.*
 - b. Next WMWA meeting – via zoom. 8:30 a.m., April 9, 2024.
- | | | |
|--|------|--|
| | SCWM | |
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- 8. Communications.**
 - a. Communications Log.*
- | | | |
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| | SCWM | |
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SCWM

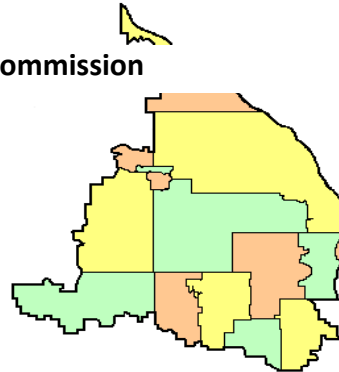
- b.** Staff Report.*
 - 1) WBIF Convene Group.
 - 2) FAIR School, Crystal.
 - 3) Metropolitan Council Metro Area Water Supply Plan.
 - a) NW Metro Subregional Water Supply Considerations.*
 - 4) Education and Outreach.
 - 5) Brookdale Park.
 - 6) Mississippi Riverbank Stabilization Feasibility Study.
 - 7) Eagle Lake Subwatershed Assessment.
 - 8) Grant project status.

9. Other Business.

SCWM

10. Adjournment.

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* In meeting packet or emailed ** Supplemental email / Available at meeting
Previously transmitted * Available on website √ Item requires action



REGULAR MEETING MINUTES

February 8, 2024

(Action by the SCWMC appears in blue, by the WMWMC in green and shared information in black.
*indicates items included in the meeting packet.)

I. A joint meeting of the Shingle Creek Watershed Management Commission and the West Mississippi Watershed Management Commission was called to order by Shingle Creek Chair Andy Polzin at 12:48 p.m. on Thursday, January 11, 2024, at Plymouth Community Center, 14800 34th Avenue North, Plymouth, MN.

Present for Shingle Creek: David Mulla, Brooklyn Center; Silas Harris, Brooklyn Park; Burt Orred, Jr., Crystal; Karen Jaeger, Maple Grove; Ray Schoch, Minneapolis; Bob Grant, New Hope; James Kelly, Osseo; Andy Polzin, Plymouth; and Wayne Sicora, Robbinsdale.

Present for West Mississippi: David Mulla, Brooklyn Center; Silas Harris, Brooklyn Park; Gerry Butcher, Champlin; Karen Jaeger, Maple Grove; and James Kelly, Osseo.

Also present were: Mitch Robinson, Brooklyn Park; Randy Bergstrom, Crystal; Derek Asche, Maple Grove; Nick Macklem, New Hope; Amy Riegel, Plymouth; Wendy Scherer, Richard McCoy, and Jenna Wolf, Robbinsdale; Todd Shoemaker and Katie Kemmitt, Stantec; Troy Gilchrist, Kennedy & Graven; Judie Anderson, JASS; and Mike Sorensen, Minneapolis Park and Recreation Board.

II. AGENDAS AND MINUTES.

Motion by Schoch, second by Grant to approve the **Shingle Creek agenda**.* *Motion carried unanimously.*

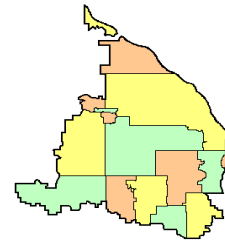
Motion by Butcher, second by Jaeger to approve the **West Mississippi agenda**.* *Motion carried unanimously.*

Motion by Schoch, second by Grant to approve the **minutes* of the January 11, 2024, regular meeting**. *Motion carried unanimously.*

Motion by Mulla, second by Butcher to approve the **minutes* of the January 11, 2024, regular meeting**. *Motion carried unanimously.*

III. FINANCES AND REPORTS.

A. Motion by Schoch, second by Jaeger to approve the Shingle Creek **February Treasurer's Report*and claims** totaling \$28,354.35. Voting aye: Mulla, Harris, Orred, Jaeger, Schoch, Grant, Kelly, Polzin, and Sicora; voting nay: none.



B. Motion by Butcher, second by Jaeger to approve the **West Mississippi February Treasurer's Report* and claims** totaling \$5,029.20. Voting aye: Mulla, Harris, Butcher, Jaeger, and Kelly; voting nay: none.

IV. ELECTION OF OFFICERS AND ANNUAL APPOINTMENTS.

A. Election of Officers. No additional nominations were received.

1. Shingle Creek. Motion by Schoch, second by Harris to elect the following officers: Andy Polzin, Chair; Wayne Sicora, Vice Chair; Karen Jaeger, Secretary; and Burt Orred, Treasurer. *Motion carried unanimously.*

2. West Mississippi. Motion by Butcher, second by Jaeger to elect the following officers: Gerry Butcher, Chair, David Mulla, Vice Chair; and Karen Jaeger, Secretary-Treasurer. *Motion carried unanimously.*

B. Annual Appointments.

1. Shingle Creek. Motion by Schoch, second by Harris to make the following appointments: Official Newspaper – Osseo-Maple Grove Press; Official Depositories – U.S. Bank and the 4M Fund; Deputy Treasurer – Judie Anderson; and Auditor – Johnson Company Ltd. *Motion carried unanimously.*

2. West Mississippi. Motion by Butcher, second by Jaeger to make the following appointments: Official Newspaper – Osseo-Maple Grove Press; Official Depositories – U.S. Bank and the 4M Fund; Deputy Treasurer – Judie Anderson; and Auditor – Johnson Company Ltd. *Motion carried unanimously.*

V. OPEN FORUM.

VI. OLD BUSINESS.

VII. PROJECT REVIEWS.

VIII. 2024 WORK PLANS.

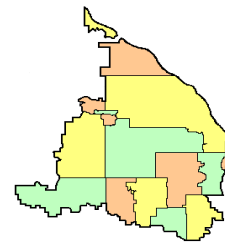
At the January meeting, Staff presented their January 5, 2024, memos listing suggested activities for the Commissions' 2024 Work Plans, organized by Goal Areas identified in the Fourth Generation Plan and as general Commission business. Both Commissions directed Staff to return the Work Plans to the February meeting for final approval. Staff's February 2, 2024, memos* are iterations of the January memos, with no revisions.

Motion by Schoch, second by Grant to approve the 2024 Shingle Creek Work Plan as presented. *Motion carried unanimously.*

Motion by Butcher, second by Mulla to approve the 2024 West Mississippi Work Plan as presented. *Motion carried unanimously.*

IX. WATER QUALITY.

A. Shingle Creek 2024 Monitoring Plan.* Staff's February 8, 2024, memo presents the proposed 2024 monitoring plan for the Shingle Creek watershed. The proposal is consistent with the joint Commissions' Fourth Generation Management Plan and includes routine monitoring tasks as well as specific monitoring efforts in support of Commission-administered grants and monitoring to evaluate pro-



gress toward various TMDLs. The 2024 budget for routine stream monitoring is \$36,000; for routine lake monitoring, \$30,000.

In 2024 the Commission will complete five-year Biotic and DO TMDL reviews for Shingle and Bass creeks and intensive lake monitoring of Eagle and Pike lakes. Intensive lake monitoring includes collecting water quality data, updating surveys of aquatic vegetation, and collecting and comparing phytoplankton and zooplankton samples.

In 2024 Staff will also undertake monitoring tasks as part of ongoing grant projects:

1. A fully curly-leaf pondweed (CLP) delineation will be done in the spring on **Bass Lake**.
2. A third season of CLP delineation and potential treatment, as well as two vegetation surveys and water quality sampling, will occur as part of the **Meadow Lake** grant project.
3. The **Crystal Lake** Management Plan grant has been extended to mid-2024. Activities will include a visual survey of CLP abundance and a CLP treatment if necessary. WSB has also been contracted to complete another summer of carp removals in 2024.

Volunteer monitoring, under the guise of Metropolitan Council's Citizen Assisted Lake Monitoring Program (CAMP) and Hennepin County's macroinvertebrate stream monitoring program (RiverWatch), is also included in the 2024 budget. The CAMP budget is \$5,000 to monitor Cedar Island, Bass and Pomerleau lakes. The RiverWatch budget includes \$2,000 to monitor two sites.

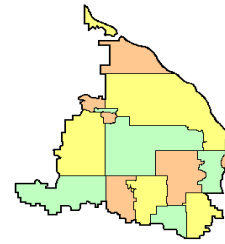
The foregoing program was recommended for approval by the Technical Advisory Committee at their meeting earlier today. Motion by Schoch, second by Harris to approve the 2024 Shingle Creek monitoring plan as recommended. *Motion carried unanimously.*

B. West Mississippi 2024 Monitoring Plan.* Staff's February 8, 2024 memo presents the proposed 2024 monitoring plan for the West Mississippi watershed. The Commissions' Third Generation Management Plan and subsequent budgets have incorporated routine monitoring that includes monitoring **stream flow and water quality** at two sites per year on a rotating basis. The Commission will continue that monitoring under the Fourth Generation Plan. In 2024 the Environmental Preserve site and the 65th Avenue stormwater pipe will be monitored for flow and water quality, with the Mississippi Watershed Management Organization (MWMO) contracted to perform the monitoring at the 65th Avenue site. The 2024 budget for routine stream monitoring is \$24,000.

Volunteer monitoring as part of Hennepin County's macroinvertebrate stream monitoring program(RiverWatch) is also included in the 2024 budget with \$1,000 to monitor the site at Mattson Brook.

Again, the foregoing was recommended for approval by the Technical Advisory Committee at their meeting earlier today. Motion by Mulla, second by Butcher to approve the 2024 West Mississippi monitoring plan as recommended. *Motion carried unanimously.*

Motion by Jaeger, second by Butcher to approve the **Professional Services Agreement** between the West Mississippi Watershed Management Commission and the Mississippi Watershed Management Organization to perform the stormwater monitoring services described above in an amount not to exceed \$11,201.80. *Motion carried unanimously.*



C. Metropolitan Council Draft 2050 Water Policy Plan. Met Council is in the initial stages of developing its 2050 Policy Plan to guide housing and development; parks; transportation; and water and wastewater planning in the seven county Metropolitan Area. The 2050 Plan will set forth the core vision, values, and goals for the region and guide both Met Council operations and the Comprehensive Plans of cities, which must be consistent with and implement actions toward achieving those goals. Staff’s February 1, 2024 memo* provides a high-level overview of the issues that the Met Council is considering and taking input on for the draft 2050 Water Policy Plan. The Council’s goal is to complete the Plan by March 2025.

While Met Council is an advisory body to watershed management organizations (WMOs) in the Metro Area and does not approve watershed plans, there is an expectation by the Board of Water and Soil Resources (BWSR), which does govern WMOs, that watershed plans be consistent with the Met Council Water Policy Plan. City Local Stormwater Management Plans, which are a required component of their Comprehensive Plans, must be consistent with both the relevant watershed plans and the Met Council Water Policy Plan.

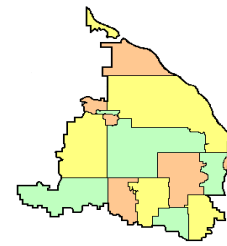
The Commissions just completed a 10-year update of their joint Watershed Management Plan in 2023. There is no requirement that the Commissions update the Fourth Generation Watershed Management Plan to reflect the 2050 Water Policy Plan when it is done. Watershed planning is on a different cycle than comprehensive planning. When the Commissions began the Fourth Generation Plan process, Met Council provided input on the policies and goals that would be considered in the 2050 Policy Plan. Many of those issues were considered by the Commissions in developing their Fourth Generation Plan.

Four of the six draft policy papers are relevant to the two Commissions: (1) Protecting Our Region’s Water Quality; (2) Exploring Water Reuse; (3) Protecting Source Water Areas; and (4) Water and Climate Change. The other two are (5) Wastewater Planning and (6) Protecting Rural Waters. Staff’s memo goes on to describe the individual concerns and the Commissions’ policies and actions focusing on those issues.

More information and the full draft policy papers, executive summaries, and feedback forms can be found at: [2050 Water Policy Plan Update - Metropolitan Council \(metro council.org\)](https://metro council.org/2050-Water-Policy-Plan-Update) and [Water Policy Plan Research - Metropolitan Council \(metro council.org\)](https://metro council.org/Water-Policy-Plan-Research).

D. France Avenue Carp Barrier Removal.* The Twin chain of lakes (Upper, Middle, and Lower Twin Lakes, and Ryan Lake) was designated by the Minnesota Pollution Control Agency (MPCA) as impaired for water quality in 2002. Ryan and Lower Twin Lake have since been removed from the impaired waters list. Management efforts now generally focus on reducing internal loading sources within the lakes. A significant contributor to internal loading is the common carp (*Cyprinus carpio*), which uproot and displace aquatic plants and reduce habitat structure, leading to increased turbidity, sediment phosphorus release, and poor water quality conditions.

1. The Shingle Creek Commission and its partners invested \$110,000, with matching funds from the Minnesota Dept. of Natural Resources (DNR), to study and remove carp within the Twin chain of lakes between 2016 and 2019. The carp study evaluated population, migration habits, control of reproduction and migration, and the effect of carp removal.



A 2017 study of migration habits showed the carp tend to stay in the deep waters of Middle and Upper Twin in the winter months and move to shallow areas for spawning in spring, including Ryan Lake via Ryan Creek. Tracking also indicated carp are freely moving in and out of the Twin Lakes system. Ryan Lake is connected via Ryan Creek and storm sewer to Shingle Creek, where there are additional spawning areas. This better understanding of carp movement resulted in the installation of two fish barriers in 2017, at Bass Lake Road and at France Avenue, to prevent the migration of carp. Seven carp removal events in 2018 and 2019 resulted in the removal of approximately 14,450 lbs. (44% of the goal) of carp from the lakes.

Since the barriers aid in carp removal by corralling the carp during the summer and are less effective during the winter when the carp move to deeper, warmer waters, Staff recently inspected the barrier to determine the feasibility of removing it during winter months. At the December TAC meeting, Staff offered options for the members to consider for recommendation to the Commission: The members recommended that the Commission investigate repairing or modifying the current barrier to facilitate winter removal and decrease the amount of regular maintenance.

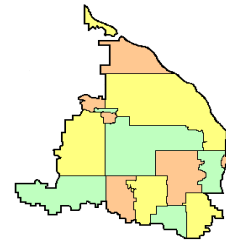
2. The fish barrier at France Avenue (outlet of Twin Lakes to Ryan Lake) frequently clogs, reducing flow capacity through the barrier, and resulting in flooding the backyards of adjacent properties. In their January 31, 2024 memo* Staff describes five options to reduce maintenance of the existing barrier:

- a. Dredge a channel** upstream of the barrier to reduce vegetation and debris movement downstream, capital cost \$100,000-\$150,000; timeline 1-4 years, questionable effectiveness because debris and dead vegetation will likely still reach the barrier, requiring dredging every ten years;
- b. Install low voltage fish barrier;** capital cost \$100,000-\$200,000; timeline 1-2 years, most effective at low stream velocity, which would be exceeded relatively frequently, allowing carp to pass;
- c. Install high voltage fish barrier;** capital cost \$500,000-\$1,000,000; timeline 2-4 years, most effective of the five options but likely too robust of a solution for this situation;
- d. Replace existing physical barrier,** capital cost \$50,000-\$100,000; timeline 1-2 years, debris accumulates but does not reduce flow, impedes fish passage in both directions, and allows for flow of small debris. Assume three maintenance visits/year.
- e. Modify existing physical barrier;** capital cost \$15,000-\$30,000; timeline 0.5-2 years, impedes fish passage in both directions and allows for flow of small debris. Assume three maintenance visits/year.

At the TAC meeting earlier today, the members recommended that the Commission update the estimate of the carp population within the Twin Lakes chain to quantify the effectiveness of past efforts and to use the information gathered to modify the existing fish barrier (option 5).

Motion by Sicora, second by Schock to concur with this recommendation. *Motion carried unanimously.*

X. GRANT OPPORTUNITITES.



A. Crystal Lake Management Plan.* The Crystal Lake Management Plan was initiated in 2020, funded by a federal 319 grant. Since then, two alum treatments have been applied to the lake and three years of carp management have taken place. In addition, water quality and sediment core sampling, zooplankton and phytoplankton collection, and sediment, fish, and vegetation surveys have been completed. Sediment phosphorus release has been significantly reduced after the two alum treatments.

The 319 grant was scheduled to expire in December 2023; however, the Commission had remaining match funds that needed to be spent in order to close out the grant. The Commission was awarded an extension to the grant through June 30, 2024, in order to spend the remaining match, approximately \$40,000.

Stantec recommends the Commission contract for a fourth year of carp management with WSB Engineering. The contract would include carp removals in early summer 2024 using box netting techniques. Included in the meeting packet is WSB’s proposed scope of work and contract* with a budget of \$19,964. Payment for the contract with WSB will come from match funds and contribute to the Commission’s total match required for the grant. Stantec’s assistance with 2024 carp baiting and removals, as well as additional project work (i.e., sediment coring and analysis) that occurred between October and December 2023 is expected to fulfill the remainder of the Commission’s match requirement.

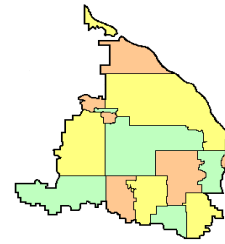
Motion by Schoch, second by Grant to accept WSB’s contract and proposal pending review by the Commission’s attorney. *Motion carried unanimously.*

B. 2024-2025 Watershed-Based Implementation Funding (WBIF).* The Board of Water and Soil Resources (BWSR) biennially appropriates funding for a program called Watershed-Based Implementation Funding (WBIF). WBIF is allocated to targeted watersheds, distributed according to guidelines agreed upon by the eligible entities in the allocation area (“the Partnership”). The BWSR Board has approved the allocations for fiscal year 2024-2025, including \$191,662 to the Shingle Creek allocation area and \$152,299 to the West Mississippi allocation area. Funds will become available July 1, 2024. A minimum 10% match is required.

The BWSR Funding Policy specifies that each Partnership will be comprised of one decision-making representative from each (1) watershed district/organization, (2) soil and water conservation district, and (3) county with a current groundwater plan, and (4) up to two decision-making representatives from municipalities within the allocation area. Other parties may participate in discussions regarding the use of the funding, but only the decision-making representatives may make the final recommendation to BWSR. The city and watershed representatives may be TAC members or Commissioners.

Today, Staff recommends that members discuss who will fill the roles of (1) and (4) above. The County will also be asked to designate a representative and BWSR will be formally represented as well. At that meeting the group will begin discussing options for the use of the funds. At the TAC meeting, James Soltis, Brooklyn Center; Mitchell Robinson, Brooklyn Park; and Nick Macklem, New Hope, volunteered to represent the watersheds. Katie Kemmitt will serve as moderator.

Schoch and Sicora volunteered to represent the cities in Shingle Creek. Mulla and Harris, volunteered to represent the cities in West Mississippi.



Activities eligible for funding must be focused on prioritized and targeted cost-effective actions with *measurable water quality results*. Funding is not limited to capital projects; anything in the Fourth Generation Plan’s Implementation Plan may be eligible as long as its end goal is the protection and improvement of water quality. The Implementation Plan included several broad areas that would be eligible:

1. Implementing an education and outreach program.
2. Implementing TMDL management actions.
3. Completing subwatershed assessments and follow-up implementation cost share.
4. Matching grants.
5. Capital improvement projects

Other projects to consider:

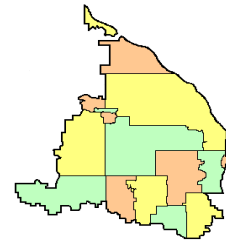
6. Fund the shared education and outreach coordinator.
7. Continue Hennepin County Chloride Initiative.
8. Feasibility studies for Oxbow Creek or Mattson Brook in West Mississippi.

The Partnerships may choose to award the funds to one high-priority project or make numerous awards for various objectives. Or they may decide to focus on one or two priority lakes and undertake a suite of activities focused on making a measurable improvement in water quality. They may also add one or more projects to the CIP by Minor Plan Amendment for eligibility for the WBIF funding if approved prior to submitting their WBIF work plan.

The secondary purpose of this discussion is to provide broad guidance and direction to the designees to consider during the Convene meeting. For example, the Commissions may want to make it known to the Partnerships that their preference is to fund capital projects.

At the March Convene meeting the Partnerships will complete procedural details and discuss desired objectives and outcomes from the use of the funding before determining how fundable activities will be solicited and selected. Recommended activities approved by BWSR may then be detailed in a work plan starting approximately June 2024. Funding will be available July 1, 2024, following submittal and approval of the work plan. Recommended Convene Meeting objectives:

1. Choose a decision-making process.
2. Decide how to select activities for funding. Note that partnerships may also want to choose funding targets for different categories (e.g., projects, studies, education).
3. Partnerships may select activities by:
 - a. Developing a list of potential activities from eligible plans,
 - b. Dividing funding among eligible entities in an equitable manner,
 - c. Selecting waterbodies (lake, streams) and/or groundwater areas to prioritize activities,
 - d. Using agreed upon criteria to select activities, or
 - e. Using a process approved by the BWSR Central Region Manager.



4. Select the highest priority, targeted, measurable, and eligible activities to be submitted to BWSR as a budget request.

5. Confirm which entity will serve as grantee and/or fiscal agent for each selected activity and decide on the source of the 10% required match.

XI. EDUCATION AND PUBLIC OUTREACH.

The **West Metro Water Alliance (WMWA)** will meet on February 13, 2024, at 8:30 a.m. via Zoom.

XII. COMMUNICATIONS.

A. February Communications Log.* No items required action.

B. February Staff Report.*

1. **Metropolitan Council Metro Area Water Supply Plan.** During development on the 2015 *Water Supply Plan*, the Met Council recognized a need for “subregional” plans rather than one plan for the entire Twin Cities metropolitan area. Staff attended a workshop on January 19 so Met Council staff could gather information to guide development of the next Metro Area Water Supply Plan for the Northwest subregion. To date, Met Council has engaged more than 135 participants representing more than fifty local governments, state agencies, and nonprofit partners across seven subregions.

At the workshop, Met Council staff noted the *Water Supply Plan* is not a regulatory effort but rather encouraging collaboration between communities to achieve a shared understanding of issues/barriers and goals/strategies for success. Participants offered the following thoughts on each:

a. Issues/barriers: chloride impacts; PFAS/emerging contaminants; ecosystem impacts (i.e., White Bear Lake); “cheap” water.

b. Goals/strategies: see decreasing trend for summer water demand; accepted water balance using collected data; improved education (brown lawns are okay); increased staffing, creating career pathways for operators; regional coordination with state agencies.

c. What does success look like? Well-understood water balance; strong, regional education program; proactive funding.

Next, Met Council will bring the local participants of the subregions together to hear from each other and make any final changes to their input before final drafting of the plan begins.

2. **Grant Reporting.** Staff completed year-end reporting for several grants, including:

a. [Crystal Lake Management Plan \(MPCA 319 Grant\)](#)

b. [Meadow Lake Drawdown \(FY21 \(WBIF\)\)](#)

c. [Bass Creek Restoration \(FY21 WBIF\)](#)

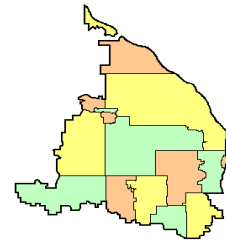
d. [Connections II Shingle Creek Restoration \(BWSR Clean Water Fund \(CWF\)\)](#)

e. [Meadow Lake Management Plan \(BWSR CWF\)](#)

f. [Palmer Creek Stream Stabilization \(BWSR CWF\)](#)

g. [Eagle Lake and Gaulke Pond Subwatershed Assessments \(FY23 WBIF\)](#)

h. [Mississippi River Streambank Stabilization \(FY23 WBIF\)](#)



3. An addendum to the Staff Report includes an update of the **financial status of the grant and cost-share projects** currently in progress.

XIII. OTHER BUSINESS.

There being no further business before the Commissions, the joint meeting was adjourned at 2:36 p.m.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Judie A. Anderson".

Judie A. Anderson
Recording Secretary
JAA:tim

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To: Shingle Creek Watershed Management Commission

From: Katie Kemmitt
Todd Shoemaker, PE

Date: March 7, 2024

Subject: Eagle and Pike Lakes Internal Load Project

Recommended Commission Action	Consider the attached work order from Stantec to implement the Eagle and Pike Lakes Internal Load project. Call for public hearing at the April 11, 2024 Commission meeting on project.
Proposed Budget	Stantec services –\$123,304; Contractor fees – \$352,000 (est) Total project cost – \$475,304
Funding	Authorize the project to be funded from the Commission’s closed projects account.

The Commission has previously discussed a potential Lake Management Plan for Eagle and Pike Lakes, similar to those recently completed on Bass, Pomerleau, Meadow, and Crystal Lakes. These plans typically have included alum treatments to reduce internal phosphorus load; aquatic vegetation and fish management; and intensive monitoring over three to four years to comprehensively and systematically improve lake water quality. Eagle and Pike Lakes are slated to begin this process in 2024. The purpose of this item is to initiate that Lake Management Plan process so that monitoring and project preparation can be completed this spring/summer and alum treatments can be applied as soon as this Fall.

Introduction

SCWMC has previously studied the Eagle Lake subwatershed through the Cedar Island, Pike, and Eagle Lakes Nutrient TMDL completed in 2010 and in the TMDL 5-year review. The TMDL concluded that internal load management, biological management, and reduction of nonpoint sources of phosphorus in the watershed by retrofitting Best Management Practices (BMPs) would have the most impact on reducing phosphorus load and improving water quality. The TMDL 5-Year review identified a 39% reduction in TP for Pike Lake, and a 29% TP reduction for Eagle Lake. Pike Lake Subwatershed Assessments were completed in 2017 and 2019. These past studies identified general practices to reduce the watershed load to the lake.

In 2023, the Commission authorized Stantec to complete the Eagle Lake Subwatershed Assessment that built on the previous studies to identify specific locations for BMPs in the Eagle Lake subwatershed and evaluate internal loading of Eagle and Pike Lakes. The Eagle Lake Subwatershed Assessment is still being finalized, but sediment core data collected in Summer 2023 and presented to the Commission in August indicated a need for internal load management in both Eagle and Pike. The Commission’s Fourth Generation Plan includes a 2024 project to complete Lake Management Plans for Eagle and Pike Lakes similar to those recently completed in Bass, Pomerleau, Crystal, and Meadow lakes. This would include targeted monitoring; alum treatments to control internal phosphorus load; aquatic vegetation monitoring and treatment; and if necessary rough fish management.

The Commission submitted a Clean Water Fund Projects & Practices grant to BWSR in August 2023 for \$527,500 (\$337,500 grant and \$190,000 match) to fund the Eagle and Pike Lakes internal load project;

however, the Commission did not receive an award. Based on the findings of the internal load assessment for the lakes and discussions with the City of Maple Grove and the Commission, we recommend proceeding in 2024 with the Lake Management Plan for these lakes using Commission funding.

Recommended Actions

Similar to previous projects, we recommend that the Commission consider ordering the overall project, which would proceed in two actions at the March 14 meeting. The first action is authorizing a work order for Stantec to perform the professional services associated with the project. The second action is to call for a public hearing on April 11, 2024 to order the capital project and authorize entering into a cooperative agreement with Maple Grove to serve as the contracting agent for the alum treatments. Future aquatic vegetation management would be completed under separate contract with a specialized contractor.

Funding

This project is listed on the Shingle Creek Capital Improvement Program for 2024, and typically the Commission would consider levying for it in Fall 2024. However, as you know the Commission maintains the Closed Projects account in which to deposit levy funds that are “left over” when CIP projects are completed for less than the amount levied. The Commission has designated that those funds are to be used for limited purposes: to cover overages when CIP projects exceed the budget; to fund additional projects; or to complete special studies such as feasibility studies to help define and scope future CIP projects and to prepare them for grant applications. The Commission currently holds a large balance in the Closed Projects Account (estimated at around \$850,000) after several past projects came in well under budget. Based on the Commission's desire to not hold a large balance in their closed projects account, we recommend this project be funded through the Closed Projects Account rather than being levied for in 2024.

Statement of Project Purpose(s)

The primary objective of the project is to reduce internal load and therefore improve water quality in Eagle and Pike Lakes in Maple Grove, MN. This project will take a holistic lake management approach and incorporate aluminum sulfate (alum) treatments for water phosphorus (P) reduction, lake vegetation surveying and management, and water quality and sediment monitoring. Alum treatments and lake vegetation management contract fees shown herein are subject to change based on actual applicator rates and the public bidding process and are estimated in this scope using the best available information (previous applications, material estimates from applicators, etc.).

Professional Services Scope of Work

Task 1 – Engineering Support for Alum Treatments

- **Brief description of activities involved:** This task will include alum contracting support to the City of Maple Grove, coordination and scheduling of alum treatments in partnership with the City, and Stantec oversight of alum applications on the lakes. The City of Maple Grove will act as the contracting agent for the alum treatments. Stantec will support by drafting the Request for Quote/Bid documents, reviewing quotes/bids received, and providing a recommendation to the City for contracting. Stantec will work with the City to schedule alum treatments and help identify any barriers to application, as well as providing oversight throughout the application process to ensure lake pH levels are stable and applicators are applying appropriately.
- **Proposed Timeframe:** Fall 2024 – Fall 2026
- **Name and Title of person(s) responsible:** Dendy Lofton, Senior Associate

Estimated cost to complete task: \$11,424

Task 2 – Phosphorus Monitoring

- **Brief description of activities involved:** A key component of lake management is monitoring to assess the lake's response to management and inform what actions are taken next. Under the Commission's Fourth Generation Management Plan, Eagle and Pike Lakes are considered Tier 1 lakes and are scheduled for Commission monitoring twice from 2023-2032. This task includes additional monitoring outside of what is regularly scheduled:
 - **Collection of sediment cores following alum treatments.** Sediment cores will be used to assess the success of the alum applications. Sediment cores will be collected from the lake by Stantec staff and then be sent to the University of Wisconsin-Stout for phosphorus analysis. Cores will be analysed for aluminium-bound phosphorus and phosphorus release rates.
 - **Water quality monitoring.** Water quality samples will be collected to assess the impact of the alum treatments on water quality. We expect a noticeable reduction in bottom and surface total phosphorus concentrations following alum treatments, an increase in water clarity, and a decrease in total suspended solids in the lake water. Outside of the Commission's regular lake monitoring schedule and the City's monitoring program, Stantec will provide two additional years of water quality monitoring, including surface and deep-water samples, depth profiles, and Secchi depth readings. Water samples will be analysed for the following parameters:

- Total phosphorus
- Ortho-phosphorus
- Total suspended solids
- Chlorophyll content

Water quality results will be presented annually in the Commission's Annual Monitoring Report.

- **Proposed Timeframe:** Summer 2025 and 2027
- **Name and Title of person(s) responsible:** Katie Kemmitt, Environmental Scientist

Estimated cost to complete task: \$31,850

Task 3 – SAV Monitoring

- **Brief description of activities involved:** This task includes submersed aquatic vegetation (SAV) point-intercept surveys. An early (May/June) and late summer (August) SAV survey will be conducted on each lake for 2 years (2025 and 2027) following alum treatments to assess the response of the aquatic plant community following water quality improvements. Results, including data summaries and species diversity maps, invasive species abundance maps, and biovolume maps from each survey will be presented annually in the Commission's Annual Monitoring Report.
- **Proposed Timeframe:** Summer 2025 and 2027
- **Name and Title of person(s) responsible:** Katie Kemmitt, Environmental Scientist

Estimated cost to complete task: \$32,140

Task 4 – AIS Delineations & Permitting

- **Brief description of activities involved:** This task includes aquatic invasive species (AIS) delineations and permitting required for AIS management, including herbicide treatment and hand-pulling. Curly-leaf pondweed (CLP) and Eurasian watermilfoil (EWM) are both present in Eagle and Pike and may exhibit a growth response with increased water clarity from alum treatments. Stantec will complete AIS delineations in early spring/summer as necessary to delineate areas of management for up to 5 years following alum treatments. CLP and EWM delineations must be done separately due to differences in peak growth and optimal treatment times. Stantec will work with the Minnesota Department of Natural Resources to permit herbicide treatments or hand-pulling as necessary.
- **Proposed Timeframe:** Spring/Summer 2025-2030
- **Name and Title of person(s) responsible:** Katie Kemmitt, Environmental Scientist

Estimated cost to complete task: \$47,890

Assumptions

- Project timeline is subject to contractor schedules and availability.

- Laboratory expenses are subject to change from year to year.

Fee Estimate

The table below includes a summary of the proposed tasks and associated Stantec fees and expenses.

No.	Description	HRS	LABOR	EXPENSES	STANTEC FEE
1	Engineering Support for Alum Treatments	80	\$11,424	-	\$11,424
2	Phosphorus Monitoring	151	\$20,730	\$11,120	\$31,850
3	SAV Monitoring	184	\$25,500	\$6,640	\$32,140
4	AIS Delineations & Permitting	345	\$47,890	-	\$47,890
TOTALS			\$105,544	\$17,760	\$123,304

Contractor Fee Estimates

A component of the Eagle and Pike Lakes Management Plan will be working with contractors for alum treatments and vegetation management (i.e., herbicide application and/or hand-pulling). These components will require publishing Request for Bids/Quotes and the associated costs change from year to year. Stantec has provided an estimate of costs based on current unit prices for alum and herbicide.

Task 1 – Alum Application

This task will include the alum applicator contract fees and will be reimbursable to the City of Maple Grove by the Commission. The planned alum dose for each lake was presented to the Commission as part of the Eagle Lake Subwatershed Assessment as follows:

Table 1. Recommended alum treatment scenario for Pike Lake with estimated load reduction and treatment volumes.

Scenario	Depth Contour	Treatment Area (ac)	P Load by Treatment Area (lbs/yr)	P Load Reduction from Alum (lbs/yr)*	Alum (gal)	Cost for Material + Applicator	Cost per pound P removed	Aluminum Dose	
								mg/L	g Al/m ²
1	10 – 22 ft	23	54	46	34,754	\$127,896	\$2,802	27.3	81.8

*Assumes 85% reduction in sediment loading from alum treatment.

Table 2. Recommended alum treatment scenario for Eagle Lake with estimated load reduction and treatment volumes.

Scenario	Depth Contour	Treatment Area (ac)	P Load by Treatment Area (lbs/yr)	P Load Reduction from Alum (lbs/yr)	Alum (gal)	Cost for Material + Applicator	Cost per pound P removed	Aluminum Dose	
								mg/L	g Al/m ²
2	20 – 35 ft	47	73	62	65,769	\$211,775	\$3,436	34.5	76.4

The Draft Eagle Lake Subwatershed Assessment recommend a split application where half of the alum is applied in year 1 (i.e., 2024) and then the remaining half dose is applied two years later (i.e., 2026). Alum estimates are based on best available information for 2023 costs per unit volume and area scaled according to treatment area, volume of alum and volumetric alum dose. The cost per unit fluctuates with volume of alum ordered such that higher volumes typically corresponds to lower per unit costs. Unit costs for alum used in our analyses ranged from \$2.66/gal to \$3.43/gal.

Estimated cost to complete task: \$340,000

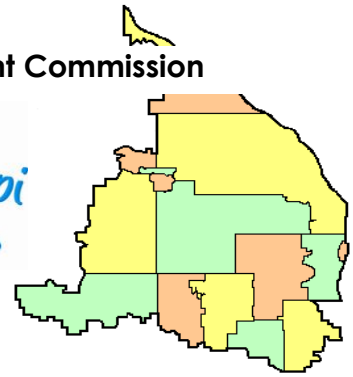
Task 2 – AIS Treatment

This task includes contracts for AIS herbicide treatments (CLP, EWM) or hand-pulling (EWM) for up to 5 years on Eagle and Pike following alum treatments. Delineations done under Task 4 above will inform whether or not treatment/removal is necessary each year. The cost to complete this task assumes a similar area of treatment with diquat herbicide from year to year. If hand-pulling of EWM is recommended by the DNR, Stantec will work with contractors get fee estimates.

Estimated cost to complete task: \$12,000

Contractor Fee Estimate

No.	Description	ESTIMATED CONTRACTOR FEES
1	Alum Application	\$340,000
2	AIS Treatment	\$12,000
TOTALS		\$352,000



**Shingle Creek and West Mississippi
Watershed Management Commissions
Maintenance Funding Guidelines**

The Shingle Creek and West Mississippi Watershed Management Commissions undertake projects that aim to improve water resources in the watersheds. Projects are taken on by the Commissions directly or by member cities, with cost-share provided through the Capital Improvements Program (CIP) or the small BMP Cost-Share Program. Maintenance, repair, or replacement of Commission-led projects is often ongoing and necessary to continue providing water quality benefits in the watershed. The Commissions will allocate up to \$50,000 per year to complete maintenance activities not already taken on by member cities that fall under the classifications described below.

Projects that will be considered for Commission funding under the Maintenance Funding policy fall into two categories as follows:

1. Actions to maintain water quality benefits following Commission-led projects such as but not limited to:
 - Annual rough fish maintenance management
 - Rough fish barrier cleaning, repair, and maintenance
 - Whole-lake invasive aquatic vegetation management treatments performed for water quality, excluding those for recreation, aesthetics, or navigation and with DNR concurrence
 - Alum treatment touch-up
 - In-lake vegetation transplanting efforts
 - Research BMP maintenance (e.g., biochar and iron-enhanced sand filters constructed under Watershed projects)
2. Other actions that do not fall within the above category, evaluated on a case-by-case basis by the TAC and recommended to the Commissions.

Actions that will not be considered include any city actions for meeting National Pollutant Discharge Elimination System (NPDES) permit requirements; other activities that are clearly city responsibilities including pond dredging, street sweeping, and removing terrestrial invasive vegetation; and project-related operations and maintenance to which the city previously agreed such as debris removal and bank stabilizations related to stream restoration projects.

All candidate actions will be reviewed by the TAC and recommended to the Commissions for approval. Unallocated funds will carry over from year to year and be maintained in a designated fund account.

Adopted: February 10, 2022

To: Shingle Creek/West Mississippi Watershed Management Commission

From: Katie Kemmitt
Todd Shoemaker, PE

Date: March 7, 2024

Subject: 2024 Proposed Maintenance Fund Activities

Recommended Commission Action	Review and approve 2024 maintenance fund activities.
Proposed Budget	\$15,865
Funding	Authorize the maintenance activities to be funded from the Commission’s Maintenance Fund.

In 2022 the Commissions approved a new Maintenance Fund intended to maintain, repair, or replace Commission-led projects to continue providing water quality benefits. Projects considered for Commission funding under the Maintenance Fund are described in the policy (attached) and are evaluated by the TAC and recommended to the Commission for approval. The proposed activity and its costs are described below.

Task 1 – Bass Lake Curly-leaf Pondweed Management

Bass Lake has been treated with diquat herbicide for four consecutive years for a curly-leaf pondweed (CLP) infestation. CLP is persistent and often requires up to 7 years of treatment per DNR recommendation. Bass Lake requires additional CLP management in 2024. This additional year of Bass Lake CLP management includes:

- Curly-leaf pondweed delineation and mapping
- Herbicide treatment permitting and coordination
- Contract with herbicide applicator and application oversight.

The cost of the herbicide treatment will depend on the applicator, the delineated area of CLP growth, and the unit price of diquat herbicide, which is market dependent. The expected cost of the herbicide application including applicator fees and materials is \$4,000. Stantec will coordinate a request for quote following the delineation. This applicator cost estimate of \$4,000 is our best estimate based on last year’s treatment and estimated 2024 herbicide unit prices. The window between when the delineation area is approved by the DNR and when the optimal treatment window occurs is narrow, thus Stantec recommends the Commissions provide authorization for application to proceed immediately after obtaining the quote. The contract will be reviewed by the Commissions’ attorney before application and will be brought to the following meeting for ratification. If the applicator fees are substantially more than estimated, Stantec will contact the Chair and get his decision and approval to proceed.

Task 2 – Ryan Creek Carp Barrier Maintenance

The Ryan Creek carp barrier installed on Ryan Creek off of France Avenue functions as the first step in carp population control in the Twin Lakes chain. The fish barrier at France Avenue (outlet of Twin Lakes to Ryan Lake) frequently clogs, which reduces flow capacity through the barrier and floods backyards of

adjacent properties. Stantec and City staff must routinely clean off the barrier when it get clogged, particularly in the spring with snowmelt. Staff recommends budgeting \$X from the Maintenance Fund for carp barrier cleaning and maintenance in 2024. Site visits involve 2 staff entering Ryan Creek with equipment and yard waste bags for removing debris. Site visits typically last 1-2 hours. Stantec will complete up to 6 site visits in 2024 under the proposed budget.

Fee Estimate

The table below includes a summary of the proposed tasks and associated Stantec fees and expenses.

No.	Description	HRS	LABOR	EXPENSES	STANTEC FEE	Estimated Contractor FEE
1	Bass Lake CLP Management	36	\$4,932	\$268.04	\$5,200.04	\$4,000
2	Ryan Creek Carp Barrier Maintenance	48	\$6,552	\$112.56	\$6,664.56	
TOTALS					\$11,864.60	\$4,000

SERVICES AGREEMENT

THIS SERVICES AGREEMENT (“Agreement”) is made and entered into by and between the Shingle Creek Watershed Management Commission, a Minnesota joint powers organization (“Commission”), and _____ (“Contractor”).

1. **Services.** The Contractor will provide for the removal, by ~~netting~~ herbicide treatment, of ~~common ear curly-leaf pondweed~~ on ~~the Twin Lake chain of Lakes Bass Lake in Crystal/Robbinsdale Plymouth~~, Minnesota (“Services”). The Services shall be provided ~~while the lakes are frozen after ice-off in early spring~~ and shall be completed by no later than _____, 2024~~18~~. The Contractor is responsible for ~~obtaining~~ following, at its own cost, ~~all permits~~ permit obligations and permissions that may be required to provide the Services and shall be responsible for providing all necessary personnel and equipment. The Contractor shall be responsible for maintaining, during the entire term of this Agreement, commercial general liability insurance with limits of not less than \$300,000.
2. **Compensation.** The total compensation the Commission will pay the Contractor for providing the Services is comprised of two parts, as follows:
 - (a) **Seine Haul Herbicide application.** The Commission will pay the Contractor \$_____ for ~~each seine haul attempt~~ the herbicide application. The Commission’s engineer, ~~Wenek Associates Stantec Consulting Services, Inc.~~ (“Engineer”), will determine the ~~number of seine haul attempts~~ area of treatment.
 - (b) **Bounty.** In addition to the seine haul attempt payment, the Commission will pay the Contractor an amount (referred to herein as a “bounty”) based on the total pounds of common carp and other undesirable fish removed as part of the Services. The payment of a bounty depends on the market price of common carp at the time of collection as set out below. The parties also recognize that the seine hauls intended to collect common carp also result in the collection of other undesirable fish (such as bullheads) that should not be returned to the lake. Because there is no practical market for such undesirable fish, the Commission desires to compensate the Contractor for removal and proper disposal of such other undesirable fish through the payment of a bounty as provided below.
 - (1) **Common Carp.** The common carp per pound bounty payment is based on a rate of \$0.____ per pound of carp, reduced by the actual amount the Contractor receives per pound in the market. For example, if the Contractor receives \$0.____ per pound when selling the carp in the market, the Commission will pay the Contractor a bounty of \$0.____ per pound (market price plus bounty equals \$0.____). If the Contractor receives \$0.____ per pound or more in the market, the Commission shall not be required to pay the Contractor any bounty for common carp.
 - (2) **Other Undesirable Fish.** The Commission will pay the Contractor \$0.____ per pound of other undesirable fish collected during seine hauls conducted to collect common carp. The purpose of the bounty is to pay the Contractor to provide for the removal and proper

Commented [KK1]: Reword because Stantec will submit the permit application

Commented [KK2]: Delete section? Not applicable to herbicide applications.

disposal of such undesirable fish. The Engineer will determine the types of collected fish that constitute undesirable fish and for which the bounty will be paid.

(3) Cap on Bounty. The total combined bounty paid to the Contractor for the removal of common carp and other undesirable fish shall not exceed \$_____.

3. Payment. The Contractor shall provide a single invoice for the Services provided under this Agreement that identifies the ~~number of seining attempts~~ quantity of herbicide applied, as verified by the Engineer, ~~and, if a bounty payment is owed, the market value per pound for common carp at the time the Services were provided and the total number of pounds of common carp removed as part of providing the Services~~. The Commission will issue payment on the invoice within 45 days of receipt thereof.
4. Term and Termination. This Agreement shall be effective as of the date of the last party to execute it and it shall continue in effect until the Services are complete and payment for the Services has been made. The Commission may terminate this Agreement before the Services are provided by notifying the Contractor in writing of such termination.
5. Independent Contractor. The Contractor and its employees are not employees of the Commission. The Contractor shall provide the Services as an independent contractor and acquires no rights to tenure, workers' compensation benefits, unemployment compensation benefits, medical and hospital benefits, sick and vacation leave, severance pay, pension benefits or other rights or benefits from the Commission. The Contractor shall not be considered an employee of the Commission for any purpose including, but not limited to: income tax withholding; workers' compensation; unemployment compensation; FICA taxes; liability for torts; and eligibility for benefits.
6. Compliance. The Contractor shall be responsible for ensuring compliance with all applicable federal, state, and local laws, regulations or ordinances in providing the Services.
7. Indemnification. The Contractor shall defend, indemnify, and hold harmless the Commission and its officers, the member cities and their elected officials, officers, employees, agents, and representatives, from and against any and all claims, costs, losses, expenses, demands, actions or causes of action, including reasonable attorneys' fees and other costs and expenses of litigation that may arise out of the Contractors performance of the Services under this Agreement. This indemnification obligation shall survive the expiration of this Agreement.
8. Miscellaneous Provisions.
 - (a) Amendments. This document constitutes the entire Agreement between the parties and no modifications of its terms shall be valid unless reduced to writing and signed by both parties.
 - (b) Substitution and Assignment. No substitution or assignment of this Agreement is allowed by any party, except upon written approval of the other party.

(c) Audit. The books, records, documents, and accounting procedures of Contractor relevant to the Services are subject to examination by the Commission and either the legislative auditor or the state auditor, as appropriate, for a minimum of six years.

(d) Third Party Rights. The parties to this Agreement do not intend to confer on any third party any rights under this Agreement.

(e) Applicable Law. This Agreement shall be governed by the laws of the State of Minnesota and the appropriate venue and jurisdiction for any litigation that may arise under this Agreement will be in and under those courts located within the County of Hennepin, State of Minnesota, regardless of the place of business, residence, or incorporation of Contractor.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the date of the last party to execute it.

CONTRACTOR

COMMISSION

By: _____

Chairperson

Its: _____

Secretary

Date: _____

Date

To: Shingle Creek Watershed Management Commission
From: Todd Shoemaker PE
Date: March 7, 2024
Subject: Colorado Avenue Infiltration Trench Feasibility Study

Recommended Commission Action	For review and approval.
Proposed Budget	\$20,140
Funding	\$18,309 from MPCA Community Resiliency Grant and \$1,831 matching funds from Closed Project Fund

Introduction

The Shingle Creek Watershed Management Commission (SCWMC) completed the Gaulke Pond Subwatershed Assessment in 2023. That study identified the Colorado Avenue infiltration trench as the highest ranked practice to reduce flooding and improve water quality within the Gaulke Pond Watershed. The study also recommended the SCWMC study the trench location and design in more detail before final design because of its potential proximity to the adjacent drinking water reservoir. The SCWMC subsequently applied for and received a grant from the MPCA to study the trench feasibility. This work order details the tasks and costs to complete the feasibility study.

Background

The purpose of this project is to refine and design the most effective and feasible Best Management Practice (BMP) to alleviate current and prevent future flooding in a large, fully developed mixed use subwatershed in Crystal, Minnesota. The SCWMC recently completed a subwatershed assessment in this area and preliminarily identified an infiltration trench upstream of Gaulke Pond as being the optimal BMP, but it is located adjacent to an underground drinking reservoir, which warrants further investigation to ensure feasibility and constructability.

The 890 acres of urban landscape in question drains into the regional Gaulke Pond, which is land locked. During wet periods, the pond is pumped to Twin Lake to increase pond storage and mitigate upstream flooding. The City of Crystal has studied the pond and its watershed extensively to identify and prioritize efforts to reduce flooding within Gaulke Pond and other connected ponds just upstream. The Cities of Robbinsdale and Crystal and the SCWMC collaborated in 2021 to more extensively study and establish an emergency pumping plan for Gaulke Pond. The City implemented the Central Core Stormwater project in 2022 to provide additional flood storage within the chain of ponds. In 2023, the Cities of New Hope and Crystal and SCWMC further collaborated to conduct an assessment of the Gaulke Pond subwatershed. The Gaulke Pond Subwatershed Analysis identified eleven potential practices to reduce runoff volume within the watershed. The SCWMC further evaluated the eleven opportunities and ranked them according to runoff reduction volume, watershed area, construction cost, lifetime cost, and cost per acre-foot

infiltrated. The Colorado Avenue infiltration trench was the most effective in terms of cost per acre-foot infiltrated.

Scope of Work

The scope of work focuses on a geotechnical evaluation to guide design of an infiltration trench adjacent to an underground drinking water reservoir.

Task 1 – Site Survey & Assessment

- **Brief description of activities involved:** The Colorado Avenue project area will be surveyed for topography, utility locations, and site boundaries. Soil borings have already been collected at the site location by the City of Crystal and will be analyzed as part of the site survey task. Record drawings of the nearby reservoir and pump station will also be reviewed as part of this task.
- **Timeframe:** April 2024

Task 2 – Geotechnical Evaluation

- **Brief description of activities involved:** Staff will evaluate existing information to determine the presence of potential contamination, proximity of the proposed infiltration trench to the underground drinking water reservoir, key design features, and the potential slope stability concerns during construction excavation of the infiltration trench. It involves assessing the groundwater regime, soil stratigraphy, and hydraulic conductivity of the soil as it affects the functioning of the infiltration facility. Additionally, it involves an evaluation of the geotechnical stability of the facility, such as slope stability, the effect of seepage forces or soil piping at adjacent structures and slopes, and design of fills that control the retention, diversion, or discharge of the collected stormwater.
- **Timeframe:** May – August 2024

Task 3 – Reporting

- **Brief description of activities involved:** A feasibility study report will be completed that includes results/recommendations from the geotechnical evaluation. The report will also feature an update to the Shingle Creek PC-SWMM model that includes the infiltration trench and the water quantity benefit, and an updated conceptual design based on the geotechnical evaluation and design infiltration rate.

We will submit a final grant project report using the MPCA template approximately one month prior to the end of the grant agreement on June 30, 2025, or at completion of the project, whichever occurs first. We will respond promptly to any requests by the MPCA authorized representative for additional information and/or corrections to the report and will provide electronic files of all project deliverables to the MPCA authorized representative.

- **Timeframe:** September-February 2025

Assumptions:

- Soil boring results to be provided by the City of Crystal.
- Property access for the site survey to be coordinated by the City of Crystal.
- Other than the site survey, all other geotechnical testing and data collection is excluded from this scope of work.

Fee Estimate

Stantec will execute the scope of work described above for the fee outlined below on a time and materials basis and according to the Master Services Agreement with Stantec. We will not exceed the amount indicated without prior authorization from the Shingle Creek Watershed Management Commission.

No.	Description	HRS	TASK TOTALS		FEE
			LABOR	EXPENSES	
1	Site Survey	32	\$5,200	\$184	\$5,384
2	Geotechnical Evaluation	54	\$9,074	\$0	\$9,074
3	Feasibility Study Report	34	\$5,682	\$0	\$5,682
TOTALS		120	\$19,956	\$184	\$20,140



Chloride consultations media kit

About chloride consultations for faith-based facilities

The goal of the chloride reduction campaign is to decrease the amount of chloride pollution entering Hennepin County (specifically WMWA+RBWMO territory) bodies of water. To accomplish this, public perception must change, and awareness of proper salting practices must increase.

The first major part of this campaign will include engaging faith-based facilities in a one-on-one consultation process to address salt use and improve snow and ice management by providing technical assistance (free of charge).

This campaign is an implementation of the Low Salt, No Salt Minnesota Toolbox. Research done as part of developing this Toolbox indicated that the biggest driver of over-salting is client demand due to fear of slip and fall lawsuits. Education about chloride pollution by itself is often not enough to change winter salting routines. People need to know how to address concerns about safety or liability on their particular property. Additionally, by focusing on facilities that have large populations of stakeholders (e.g. worshippers) the reach of the campaign can be extended and begin to address the overall need to change broad public perception and awareness of winter snow and ice management strategies that are friendly to water resources.

Resources to promote chloride consultations

Ways to educate the public about chloride consultations:

- Use the sample newsletter article to share on your organization's website or in your newsletters. These are editable so you can customize the length or message.
- Use the sample social media posts to share through your social media channels. These are editable so you can customize the message and website.
- Share this [FAQ](#) when applicable.
- Share this [flyer](#) when applicable.
- Follow and reshare messages posted on the Hennepin County Environment and Energy social media channels: [Hennepin Environment on Facebook](#), [Hennepin Environment on Instagram](#), and [@hennepinenviro on Twitter](#).
- [Share the information and resources available on WMWA's chloride page.](#)

Hennepin County Environment and Energy
701 Fourth Avenue South, Suite 700, Minneapolis MN 55406
612-348-3777 | environment@hennepin.us | hennepin.us/environment
Updated March 2024



Contact

For more information about chloride consultations, contact:

Grace Barcelow, Conservation Specialist, grace.barcelow@hennepin.us.

Sample newsletter article – Chloride Consultations

Be a good environmental steward: Reduce salt use at your place of worship

Did you know that one teaspoon of salt pollutes five gallons of water FOREVER? Minnesota's warm winter has not changed the fact that waterways are being harmed from one of the most worrisome pollutants. When de-icing salt (a.k.a. [chloride](#)) enters bodies of water, there is no easy way to remove it. West Metro Water Alliance (WMWA) is a group of city and watersheds in Hennepin County that are working together to improve water quality in partnership with Hennepin County.

One of the biggest threats we face to healthy water systems is pollution from winter de-icing salts when snow and ice melt, and water is washed into storm drains or filtered into groundwater. There is nothing to filter out the salt, and it ends up staying in our world's water systems... some all the way down the Mississippi to the ocean!

We all want to prioritize safety, but it is critical to understand that more salt does not always mean less ice or safer conditions. Too much salt can lead to costly damages and environmental consequences. Chloride harms plants and animals, contaminates drinking water, damages buildings, and corrodes vehicles, roads, and bridges.

To reduce chloride pollution, here are some simple actions you can take when managing snow and ice this winter:

1. Shovel as soon as possible after a snowstorm to prevent ice buildup.
2. Add an ice scraper to your toolbox. These are often more effective than salt when ice has built up on sidewalks and driveways.
3. Read the label on your deicer to make sure it will properly work in the current weather conditions. At temperatures colder than 15 degrees Fahrenheit, regular road salt will not melt ice.
4. Use sand or grit for traction when temperatures are too cold for salt to work.
5. Use salt sparingly. Generally, aim to have salt grains dispersed three inches apart.

Additionally, WMWA is offering one-on-one consultations to faith-based facilities in parts of Hennepin County to address salt use and improve snow and ice management, all while keeping communities safe, increasing environmental well-being, and decreasing winter maintenance and infrastructure costs.

If you work with or are a member of a faith-based facility, within the WMWA territory (all or parts of Champlin, Corcoran, Dayton, Maple Grove, Medina, Plymouth, Rogers, Brooklyn Center, Brooklyn Park, Crystal, northern Minneapolis, New Hope, Osseo, Robbinsdale, Golden Valley, Medicine Lake, Minnetonka, St. Louis Park, Richfield, and Bloomington) or are interested in what kind of support you can receive in

another watershed, contact Grace Barcelow at grace.barcelow@hennepin.us or 612-543-9295. To see if your property is within WMWA territory search for your property address on the [natural resources map \(gis.hennepin.us/naturalresources\)](https://gis.hennepin.us/naturalresources).

Social media posts

Suggested hashtags: #EnvironmentalConservation #Winter #Salt #LowSaltNoSalt #ChloridePollution #CleanWater #Water #WaterQuality

To use images and graphics: right click on image and select Save as Picture

Chloride Pollution

Facebook: Did you know that one teaspoon of salt pollutes 5 gallons of water FOREVER? When de-icing salt (a.k.a. [chloride](#)) enters bodies of water, there is no easy way to remove it. Chloride harms plants and animals, contaminates drinking water, damages buildings, and corrodes vehicles, roads, and bridges. To reduce chloride pollution, West Metro Water Alliance (WMWA) is offering one-on-one consultations to faith-based facilities to address salt use and improve snow and ice management, all while keeping communities safe, increasing environmental well-being, and decreasing winter maintenance and infrastructure costs. Learn more at westmetrowateralliance.org/chloride-pollution.

Instagram: Did you know that one teaspoon of salt pollutes 5 gallons of water FOREVER? When de-icing salt (a.k.a. [chloride](#)) enters bodies of water, there is no easy way to remove it. Chloride harms plants and animals, contaminates drinking water, damages buildings, and corrodes vehicles, roads, and bridges. To reduce chloride pollution, West Metro Water Alliance (WMWA) is offering one-on-one consultations to faith-based facilities to address salt use and improve snow and ice management, all while keeping communities safe, increasing environmental well-being, and decreasing winter maintenance and infrastructure costs. Learn more at westmetrowateralliance.org/chloride-pollution. #LowSaltNoSalt #EnvironmentalConservation

Twitter: 1 teaspoon of salt pollutes 5 gallons of water FOREVER! Salt harms plants, animals, drinking water, and infrastructure. Request a consultation to learn how your place of worship can reduce salt use and save money at westmetrowateralliance.org/chloride-pollution #LowSaltNoSalt

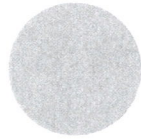
Image:



Photo credit: Clean Water MN. Oversalting on sidewalk, next to building.

Judie Anderson

From: Megan Reich (Watershed Partners) <megan.watershedpartners@members.mobilize.io>
Sent: Friday, February 23, 2024 9:37 AM
To: Judie Anderson
Cc: Watershed Partners
Subject: Blue Thumb Spring Workshops Open!



Megan Reich

Marketing + Communications Specialist - Metro Blooms

Blue Thumb Spring Workshops Open!

Registration for Blue Thumb Spring Workshops is open!

Blue Thumb workshops walk through the steps to create rain gardens, native plantings, pollinator habitat, and more. Beautify your landscape while planting for clean water and pollinators. Use our free online learning series, register for a live virtual or in-person workshop, or do both!

You are welcome to share about Blue Thumb's spring workshops with your community via your email newsletter or social media channels. Download graphics and sample promotional copy via [this folder](#). Thank you for spreading the word!

Register for workshops here:

<https://bluethumb.org/events/>





SHINGLE CREEK / WEST MISSISSIPPI WATERSHED MANAGEMENT COMMISSION
MONTHLY COMMUNICATION LOG
March 2024

Date	From	To	SC	WM	Description
2/6/24	Katie Kemmitt	Max Hurd, Twin Lake Homeowners Association	X		Transmit 2023 vegetation survey data to Max.
2/7/24	Kayla Westerlund, Trust for Public Land	Todd Shoemaker	X		Discuss grant opportunities to improve stormwater management and landscaping at Brooklyn Center Elementary Community Schoolyard project and FAIR School (Crystal).
2/13/24	Jordan Wein, WSB	Katie Kemmitt and Diane Spector, Stantec; Jenna Wolf, City of Robbinsdale	X		Meeting with WSB staff to discuss project hand-off of Crystal Lake carp management.
2/15/24	Ann Wessel, BWSR	Diane Spector, Katie Kemmitt	X		Transmit draft of Bass/Pomerleau write-up for BWSR article.
2/20/24	Julianne LaClair, MPCA	Judie Anderson	X		Notification of MPCA Planning Grant for Colorado Ave Infiltration Trench Feasibility Study
2/21/24	Liz Wiese, MPCA	Judie Anderson	X		Requested approval of revised workplan and budget review for MPCA Planning Grant
2/21/24	Katie Kemmitt, Diane Spector	Maple Grove Lake Quality Commission	X		Attended Maple Grove Lake Quality Commission monthly meeting, presented Eagle/Pike internal load management project and Metro Blooms workshops to the Commission.
2/23/24	George Schneider, Maple Grove Lake Quality Commission	Katie Kemmitt	X		Request for more information regarding the Bass Lake Vegetation Transplanting project. Interest in doing something similar in Rice Lake (Elm Creek WMO).
2/23/24	Mike Sorenson, MPRB	Todd Shoemaker	X		Schedule a date/time to discuss MPRB's plans for the Shingle Creek corridor and identify potential opportunities for collaboration.
2/24/24	Al Johnson & Heather Proehl, Eagle Lake Preservation Assn (ELPA)	Katie Kemmitt, Diane Spector	X		Transmit information for annual ELPA meeting on April 2, 2024. Stantec will attend and provide information on the Eagle/Pike internal load management project.
2/26/24	Todd Rexine & Becca Tucker, Great River Greening (GRG)	Judie Anderson	X	X	Request for partnerships with GRG on projects to be funded under the Outdoor Heritage Fund. Projects should include invasive species management, habitat restoration or establishment, prairie maintenance, tree canopy development, prescribed fire, or plant resiliency.
3/1/24	Brad Wozney, BWSR	Diane Spector, Judie Anderson	X	X	Introduction of new BWSR Board Conservationist, Jen Dullum.
3/4/24	Carli Wagner (DNR)	Amy Juntunen, Katie Kemmitt	X		Email notifying watershed of Restoration Evaluation Program. Bass Lake was selected for review. DNR may be requesting some lake biological data in near future.
3/4/24	Todd Shoemaker	Kris Guentzel, Hennepin County	X		Discuss Highland Gables grant progress
3/5/24	Ryan Kronzer, Metro Transit	Todd Shoemaker	X	X	Transmittal of Blue Line LRT Extension 30% level design plans.

To: Shingle Creek/West Mississippi WMO Commissioners
From: Todd Shoemaker, PE, CFM
Katie Kemmitt
Date: March 7, 2024
Subject: March 2024 Staff Report

**Recommended
Commission Action**

For discussion and information.

General Updates

Watershed Based Implementation Funding (WBIF) Convene Group

The WBIF convene group identified at the Commissions’ February meeting held their first convene meeting for the FY2025 funding round on Wednesday March 6th, 2024. Funding requests can be made as soon as July 1, 2024. During the meeting, the group generated a list of ideas for funding, which included:

- Continuing and expanding the Hennepin County Shared Education & Outreach Coordinator position
- Continuing and expanding the Hennepin County Chloride Initiative work, including potentially incorporating a chloride lesson into WMWA programming
- A stream assessment of Oxbow Creek in West Mississippi
- Purchasing of new ice/snow removal equipment for City of New Hope

Stantec staff will work with BWSR, County staff, and other adjacent watersheds to scope out project milestones and costs associated with some of the generated ideas. The next convene meeting will be held in mid- to late April.

FAIR School, Crystal, MN

Staff met with Kayla Westerlund from the Trust for Public Land (TPL) on February 27, 2024. TPL is working with Brooklyn Center Elementary and the FAIR School in Crystal to improve play space, landscaping, and stormwater management. TPL goals generally align with the Shingle Creek Partnership Cost Share program, so applications for each project may be forthcoming.

Additionally, TPL staff will be conducting environmental education at the FAIR School from March through May. At TPL’s request, Shingle Creek staff will be assisting with the water unit on March 15th. Staff will discuss “green careers” related to watershed management and use the nearby and recent Gaulke Pond subwatershed study as an example exercise.

Metropolitan Council Metro Area Water Supply Plan

During development on the 2015 *Water Supply Plan*, the Met Council recognized a need for “subregional” plans rather than one plan for the entire Twin Cities metropolitan area. Staff attended

workshops on January 19 and February 29, so Met Council staff could gather information to guide development of the next Metro Area Water Supply Plan for the Northwest subregion. The purpose of the Water Policy Plan is to guide the region towards a future where water is clean and abundant, the benefits of water services are maximized, risks and negative outcomes are minimized, and uses are sustainable, ensuring the needs of future generations can be met. The Metro Area Water Supply Plan will be a section within the Water Policy Plan.

Met Council prepared the draft Northwest Subregional chapter (attached) prior to the February 29 workshop. A revised draft is being prepared as a result of that workshop, which allowed participants to review issues and action steps from other regions as a way to refine their own subregional plan.

Education and Outreach

Staff met with the Maple Grove Lake Quality Commission to discuss upcoming potential improvements on Eagle and Pike Lake and to gain input on a WMWA proposal to provide targeted shoreline restoration/resilient yard workshops and technical/financial assistance through the WBIF grant funds. Staff will attend the April 2, 2024 Eagle Lake Association Annual Meeting to discuss upcoming improvements.

Project Updates

Brookdale Park, Shingle Creek

Stantec is currently developing preliminary (30%) design plans for stabilization and remainder of the creek within this project area. City of Brooklyn Park will review the draft plans mid-March and we anticipate presenting the plans at the April Commission meeting.

Mississippi Riverbank Stabilization Feasibility Study

In the fall of 2023, City, County and Stantec staff attempted to reach property owners (approximately 55) that were previously interested in stabilizing their Mississippi River shoreline. To date, we have only received responses from approximately eight property owners. City, County, and Stantec staff will be meeting in the next 1-2 weeks to discuss alternative engagement strategies and next steps.

Eagle Lake Subwatershed Assessment

Watershed staff continues to coordinate with City staff on which prioritized BMP should proceed to 30% design. The highest ranked BMP is no longer viable because it is within a city park and would likely require tree removals and permanent occupation of existing green space.

Watershed and city staff will discuss the next steps during the week of March 11. We will likely proceed with the second-highest ranked option because the space is already dedicated to stormwater management and there is easy access for construction and maintenance.

Items in Bold Italic have changed since the last report

Grant Projects

Project	Grant Source	Expiration	Status
<i>Shingle Creek</i>			
Shingle Cr Connections II	CWF	12/31/23	Complete, submitted to BWSR for final grant payment
Bass Creek Restoration	WBIF	12/31/23	Complete, submitted to BWSR for final grant payment
Meadow Lake Mgmt Plan: Drawdown	WBIF	12/31/23	Complete, submitted to BWSR for final grant payment
Crystal Lake Mgmt Plan	MPCA 319	05/30/24	Final sediment core results & spring carp removals
Wetland 639W SRP Channel Extension	HCES	12/31/23	Closed
Meadow Lake Mgmt Plan	CWF	12/31/24	Grant has been extended for possible 2024 BMPs
Palmer Creek Estates Stream Resto: Plymouth	CWF	12/31/24	Work mostly complete, punch list items & veg
Bass Lake Vegetation Mgmt	DNR CPL	06/30/25	In progress
Eagle Lake SWA	WBIF	12/31/25	Complete except for final report
Gaulke Pond Area SWA	WBIF	12/31/25	Complete except for final report
<i>West Mississippi</i>			
Miss Riverbank Stabilization	WBIF	12/31/25	In progress

Cost Share Projects

Project	Partner	Amount	Status
<i>Shingle Creek</i>			
Shingle Creek Rain Gardens	City-Mpls	\$50,000	In progress
Highland Gables	Partner-Metro Blooms	\$49,993	In progress (\$35,903.81 pd to date)
<i>West Mississippi</i>			
Miss Gateway Shoreline Stabil	Partner-3 Rivers	\$75,000	Awarded, not yet started

Encumbered Balances as of 12/31/23 (Amounts are approximate)

Watershed	City Cost Share	Partnership	Closed Projects	Assigned	Unrestricted
Shingle Creek	\$292,639	\$106,000	\$106,000 \$850,000	\$23,000	\$69,000
West Mississippi	\$460,000	\$130,000	\$151,000	\$154,000*	\$120,000

*About \$89,000 assigned to "Grant Match account"

NORTHWEST METRO SUBREGIONAL WATER SUPPLY PLANNING CONSIDERATIONS

A CHAPTER OF THE METRO AREA WATER SUPPLY PLAN

FIRST DRAFT – FEBRUARY 2024

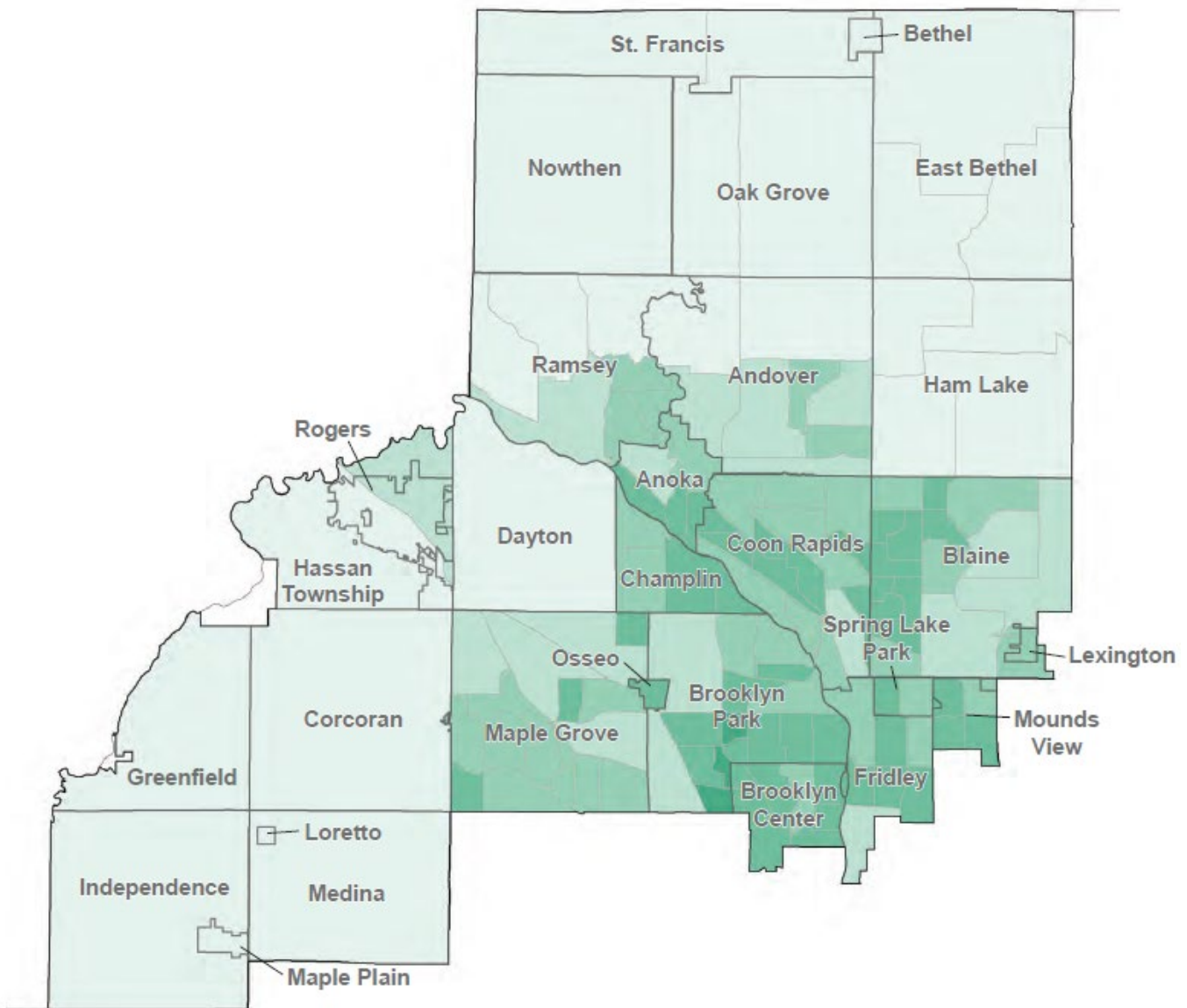


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Water supply planning context and current conditions

Everything that happens on land impacts water, and water is all connected.

With the region as a whole expected to grow by more than 650,000 people between 2020 and 2050, the Northwest Metro will see growth. Preliminary estimates, which are being evaluated with community input through spring of 2024, suggest that approximately 110,000 more people, 52,000 more households, and 79,000 new jobs will be added to the Northwest Metro by 2050 compared to 2020.

Population growth, as well as corresponding growth in employment and employment centers, will increase water demand in an area that is predominantly served by groundwater. At the same time, climate change serves as a risk multiplier, amplifying the impacts that drought and flooding can have on water supply. As growth occurs, and climate continues to change, it is important to plan and collaborate to ensure there is sufficient, reliable, and safe water supply for people, the economy, and the function of local ecosystems.

The [Northwest Metro chapter of the Water Supply Planning Atlas](#) contains more details in the description of current challenges.

Definition of success for water supply planning in the Northwest Metro Subregion

In defining what it would tangibly mean if the Northwest Metro were to achieve the outcome of a sufficient, reliable, and safe water supply, participants identified the following vision concepts as central to their consideration:

- Adequate supply, and efficient use of that supply
 - Extraction does not exceed recharge or compromise surface water resources
 - Basic needs are met with clean, affordable drinking water for all
 - Infiltration is maximized in new development, and conservation is a norm
 - Diversity of supply available—other sources, including reuse
- Improved source water quality and reductions in contaminants of emerging concern (PFAS, chloride, microplastics)
- Increase in climate resilience
- Increased understanding
 - Connections between groundwater, surface water, and stormwater management
 - Individual awareness and ownership of the need to reduce impacts
- Sufficient, sustainable funding for infrastructure, staff, adapting to new treatment needs, etc.
- Enhanced coordination around aligned goals—between city departments, between cities, between and with agencies, within agencies

Issues and opportunities

Achieving the identified success will require addressing barriers as well as advancing opportunities. In considering the full water supply picture, participants offered their thoughts for what barriers would need to be addressed or opportunities could be pursued to achieve the identified success. Those comments were merged with issues, goals, and actions offered at the March 15, 2023 Subregional Workshop also hosted by Met Council. These were then summarized into the following focus areas, listed here in alphabetical order.

Asset management

Asset management is important to take care of and extend the life and usability of existing infrastructure. To do so, though, requires sufficient funding, planning (inclusive of conservation planning to reduce needs), and trained staff to do upkeep and maintenance of water systems.

Climate change

Climate change is occurring. This leads to concern about impacts from drought and flooding, as well as uncertainty about future conditions.

Changing behaviors and social norms

Education and outreach to the general public is needed to increase understanding of groundwater management and the process of how water gets to the tap and all that entails. While the audiences may differ (ages, languages, public vs. private well user, decision-makers), there is a need for increasing the consistency of educational materials and messaging across the region to encourage personal action, shifting of social norms, and a view of groundwater conversation as a non-political need to protect the finite resource for future generations. A coordinated education effort or programs (such as a K-6 outreach program, workshops for residents, private well user outreach, etc.) is needed to support this aim.

Funding

The current funding structure isn't working. Water is cheap, but the work needed to ensure safe and sufficient water supply is not. As new requirements come out, they often do without a funding source to support compliance. Adjusting the rate structure to reflect the true cost of water and encourage conservation could support a more sustainable funding model, as would an increase in dedicated funding from the state to support compliance and system maintenance for all.

Governmental collaboration

Local governments experience different expectations and conflicting requirements from different entities (MDH, DNR, MPCA, Met Council, City Councils, etc.), and differences across jurisdictional boundaries compound this to make regional water supply planning and plan implementation challenging.

Agencies

It would be helpful to see agencies align under shared goals, with roles and expectations clearly defined. As a part of this, reviewing and seeking adjustments where rules conflict with each other, sharing data, streamlining roles, and otherwise improving coordination within and across agencies would each make a difference for local communities. Additionally, there is desire to see increased collaboration between agencies and cities.

Integrated water management

Silos within water resource management can be broken down to pursuing multiple water-related benefits at once, rather than treating them as conflicting priorities or creating unintended consequences. Data to support a more integrated approach are needed, such as how to identify or monitor for ecosystem impacts.

Collaboration into action

Increased collaboration alone is not the goal. Rather, intentional collaboration--whether it is within cities, city to city, between cities and agencies, within agencies, or across agencies--can produce enhanced outcomes and action.

Growth and planning

As development occurs, it is important that it happens alongside a comprehensive understanding of groundwater management so that economic development goals are in line with groundwater and ecosystem protection. This could include more compact development or preserving space for parks and recreation infrastructure. Guidance for long term population forecasting is also needed to support planning for appropriately-sized growth.

Private well users

Education and water testing for private well users is needed to protect public health and equip people with information to help them make informed decisions. Free private well testing should be expanded for low-income private well users.

Water quality

Whether it is managing chloride (including legacy chloride in soil), addressing PFAS issues, keeping up with other emerging contaminants like microplastics, removing lead from the system, or engaging in research and education, groundwater contamination creates challenges for water supply. Sustained and increased funding is needed in order to keep water safe.

Groundwater Quantity/Water Balance

Groundwater is a finite resource, and in order to provide a good foundation for growth and to meet future needs, action must be taken now.

Conservation

A decreasing trend for peak summer demand can help to reduce infrastructure needs, but will require more widespread adoption of conservation measures (and an increase in funding for these activities). For residents and businesses, this would include things like less lawn irrigation and a shift away from green turf grass as a norm. For higher water volume users, this may mean appropriation permits are more strictly reviewed. Construction dewatering is also more strictly reviewed, with incorporation of injection wells to retain shallow groundwater.

Reuse

Stormwater reuse for practices like irrigation can reduce groundwater demand for non-potable uses. Provision for grey water reuse in new buildings and developments could further reduce demand, though would require a change in plumbing codes.

Modeling

Dynamic modeling of groundwater is needed to understand movement, quantity, demand, impacts of high volume users, and what a sustainable water balance would look like. This kind of data would support informed decision making for growth as well as degree of action required to meet water supply needs.

Surface water sourcing

As constraints on groundwater increase, investigating an expansion of surface water supply is warranted.

Workforce

With recent and upcoming retirements of water operators and other experienced staff, there is a large hole in institutional knowledge that is only expected to increase in the coming years. There is a need for shared workforce planning and strategy to meet workforce needs, including mentorship programs, outreach to schools for recruitment, and introduction of water careers as options. Additionally, there is a need to fund existing and future staffing levels.

Prioritized focus areas and action plan

In a survey following the first workshop, participants were asked to share which of the focus areas they believed should have the most focused attention from the Northwest Metro subregion and Met Council in the next ten years, as well as why. The survey outcomes were shared for discussion at the second workshop, and based on that discussion, participants agreed to the following as the priority focus areas for the Northwest Metro (again, recorded here in alphabetical order so as to not reflect further prioritization among them). Statements for what success looks like in 10 years, as identified by participants, are also included for each.

Asset Management

- An understanding of quantity and quality of assets
- An ability to forecast replacement and upgrade costs

Governmental Collaboration

- Required information into one location and government agencies are able to split out what it is that they need, or at least a reduction of duplicative work
- Full overarching model to see inputs and outputs is necessary for regional coordination to understand where conservation action or other action would be useful
- Within government, planners and engineers understand each other and can anticipate results of each other's actions

Groundwater quantity and water balance (inclusive of growth and planning)

- Understanding quality and quantity of supply (distinct aquifers)
- Communicate where recharge areas exist. Recharge areas will be outside MCES authority so would need to address how/who would set policies in the recharge area.
- Define educational work plan—conservation and awareness of issues

Water Quality (inclusive of private well users)

- Improved sampling methodologies (standards and locations)—individual well (raw water) vs. distributed
- Increased/required testing of private wells—make it available and affordable
- Adapting to whatever new standards and requirements there are

Workforce

- Robust asset management/GIS system to capture institutional knowledge
- Consistent pipeline of staff entering the field of water supply, distribution, treatment, and storage
- High schools, technical colleges, and universities actively promoting public works
- Succession planning for those retiring
- Get kids excited about water

It should be noted that, as a part of the discussion, the following focus areas were identified as “implementation considerations”, in that they would be needed (either as a strategy or something to manage for) in order to support success for any of the other focus areas. As such, these were requested to be incorporated as action plans to address priority focus areas were developed:

- Changing behaviors and social norms
- Climate change
- Funding

- Sustainability
- Short term (grants)

The following pages reflect the action plan developed by participants at and following the second subregional workshop in order to address the priority focus areas. It is possible and expected that actions not reflected here may emerge as important steps needed to be taken in subsequent years. This list, therefore, is a reflection of what was being considered in late 2023. They have been organized according to the Metro Area Water Supply Advisory Committee’s 2022 proposed framework to achieve progress on regional goals.

Figure 1. The framework for action to achieve MAWSAC goals includes four general steps. Northwest metro focus areas generally fall across the framework steps.



Actions to support success

Table 1. The following pages reflect the action plan developed by participants at and following the second subregional workshop in order to address the priority focus areas. It is possible and expected that actions not reflected here may emerge as important steps needed to be taken in subsequent years. This list, therefore, is a reflection of what was being considered in late 2023. They have been organized according to the Metro Area Water Supply Advisory Committee's 2022 proposed framework to achieve progress on regional goals.

ACTIONS	RELATED FOCUS AREAS	10-YEAR PLAN		25-YEAR PLAN			PROPOSED ROLES (DRAFT)			
		2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	POSSIBLE LEAD	MET COUNCIL	SUBREGION	LOCAL
COLLABORATION AND CAPACITY BUILDING										
Convene regional meetings of cities with appropriate agency staff for meetings to specifically collaborate between public works and city planners	Collaboration	x					Regional planners (health), LGU planners, LGU public works, DNR Area Hydros, Met Council			
Foster a collaborative (rather than competitive) mindset and practice between cities for development for the benefit of all communities.	Collaboration						Locals			
Create more mechanisms for proactive financing rather than reactive funding	Collaboration, Asset Management	x	x				MDH, MPCA, Legislature, LGUs			
Increase understanding of the importance of a sustainable water supply among school aged children, pursue an educational standard	Water Quantity, Workforce	x	x				Cities, Agencies, School District Administrators			
Partner with organizations actively participating in STEM events	Workforce	x	x				Met Council			
SYSTEM ASSESSMENT										
Model future needs for supply and distribution	Asset Management									
Conduct an inventory of existing assets	Asset Management									
Establish a workgroup involving agencies and local government reps and Met Council to identify and recommend changes or removals to statutes/rules	Collaboration	x					Met Council, Agencies			
Define how current data is being used, and share for modeling purposes	Water Quantity	x					DNR, Met Council, Cities (pumping data)			
Develop a comprehensive, dynamic model	Water Quantity						Met Council			
Increase access to accurate testing--particularly for PFAS	Water Quality	x	x				MDH			
MITIGATION MEASURE EVALUATION										
Forecast challenges for water supply systems and asses implications, infrastructure needs	Asset Management	x	x	x	x	x	Cities, Agencies			
Improve treatment technologies to address contamination discovered, with appropriate policy backing	Water Quality		x				Private enterprise			
Engage in ambient monitoring for early detection and monitoring of new contaminants	Water Quality						MDH			
PLANNING AND IMPLEMENTATION										
Seek funding for and implement changes to improve asset management and the quality/usefulness of existing assets	Asset Management	x	x	x	x	x	Cities, agencies			
Support a bill for groundwater modeling funding to create a regional dynamic model for shared use	Collaboration	x	x							
Continue work between agencies to streamline plans	Collaboration	x	x	x	x	x				
Continue to improve in best practices that support effective virtual engagement	Collaboration	x	x	x	x	x	Agencies			

Standardize water conservation best practices across the region and state	Water Quantity		x						
Explore feasibility and needs for injection wells for deeper aquifers	Water Quantity								
Explore options to maintain shallow groundwater levels during construction dewatering through nearby injection of pumped water	Water Quantity								
Seek funding for solutions to combat contaminants	Water Quality						State/federal		
Support peer to peer outreach like master gardeners for private well and septic system users	Water Quality	x	x				UMN extension, Met Council, Nonprofits, private well owners		
Continue education to realtors on private wells and septic systems	Water Quality	x	x				UMN extension, MDH, MPCA, or a nonprofit		
Enlist communications and behavior change professionals to support effective education and outreach campaigns, especially for private well users.	Water Quality	x					Schools, cities, watersheds, media		
Engage in an education campaign on local water infrastructure importance, challenges, and needs for learning institutions, the general public, and elected officials	Workforce						Operators, public works staff		

Appendix A: Subregional engagement process

Scoping and gaging local support

MAWSAC, in the 2022 report to the Council and MN Legislature, recommended updating the 2050 regional development guide and related policy and system plans (which connect to the master water supply plan) to support MAWSAC goals, customized for subregional and local conditions. The committee also recommended taking a new subregional approach that leverages subregional water supply working groups to inform regional and local policy and plan updates.

On July 19th and September 8th, 2022, the Metro Area Water Supply Advisory (MAWSAC) and their Technical Advisory Committee (TAC) discussed an approach to subregional engagement and potential content for subregional chapters in the updated Metro Area Water Supply Plan. Meeting materials document those discussions and are available on the Council's website:

- July 19, 2022 MAWSAC meeting ([agenda](#), [presentation](#), [handout](#), [minutes](#))
- September 8, 2022 TAC meeting ([agenda](#), [presentation](#), [handout](#), [minutes](#))

On March 15, 2023, Metropolitan Council hosted a workshop for all the metro region's subregional work group participants. Four people from the northwest metro attended. The proposed approach for subregional engagement was presented, and workshop participants expressed support for it and shared some water supply priorities in their areas. A summary about the workshop was shared with MAWSAC at their May 9, 2023 meeting and is available on the Council's website ([presentation](#), [summary](#)).

Core team of local stakeholders to customize engagement for the Northwest subregion

On August 17, 2023, a kick-off meeting was held with core team members to scope an engagement approach in the northwest metro.

Core team members included:

- Brett Angell – City of Rogers
- Chris Lord – Anoka Conservation District
- Heather Nelson – City of Champlin

Outcomes that the core team sought from the engagement process:

- A shared vision for water supply in the subregion for 2050
- A shared understanding of the water supplies available in the northwest metro
- A list of all issues, with top issues identified (and inclusive of key opportunities)
- Action plans to address priority items
- An understanding of what the Metro Area Water Supply Plan is and how it benefits them

Subregional engagement: Workshops

On January 19, 2024, the first workshop for the northwest metro was held to introduce the project and the approach to updating the Metro Area Water Supply Plan, share subregional water supply information in the newly developed Water Supply Planning Atlas, and get input about what successful water supply planning should look like, what is already working well, what challenges exist, and what high-level goals do people have for the next ten years.

Attendees who signed in:

- Michael Weber, Brooklyn Center
- Jack Gleason, DNR
- Abby Shea, MDH
- Brian Noma, MDH
- Rick Luckow, Brooklyn Park
- Heather Nelson, Champlin
- Don Peterson, Mounds View
- Pete Klingenberg, Anoka
- Tim Himmer, Coon Rapids
- Mark Anderson, Anoka
- Eric Bye, Coon Creek Watershed
- Brett Angell, Rogers
- Todd Shoemaker, Shingle/West Mississippi WMO
- Kent Torve, Corcoran/Stantec
- Claudia Hochstein, DNR
- Nick Tomczik, RCWD
- Michael Wagner, Anoka County
- David Berkowitz, Andover
- Steve S., Medina
- Dusty Finke, Medina

Draft focus areas that emerged from the first workshop were merged with issues, goals, and actions offered at an earlier March 15, 2023 Subregional Workshop also hosted by Met Council. These were then shared with participants in a survey to identify priorities to work on at the second workshop.

On February 8, 2024, a second workshop for the northwest metro was held to focus on drafting action plans for priority focus areas identified at Workshop 1 and through the survey. In small groups, participants filled out action plan worksheets for the focus areas identified at the first workshop. Groups rotated through three topics each, revising and adding to the ideas of the group who discussed the topic before them.

Workshop photos

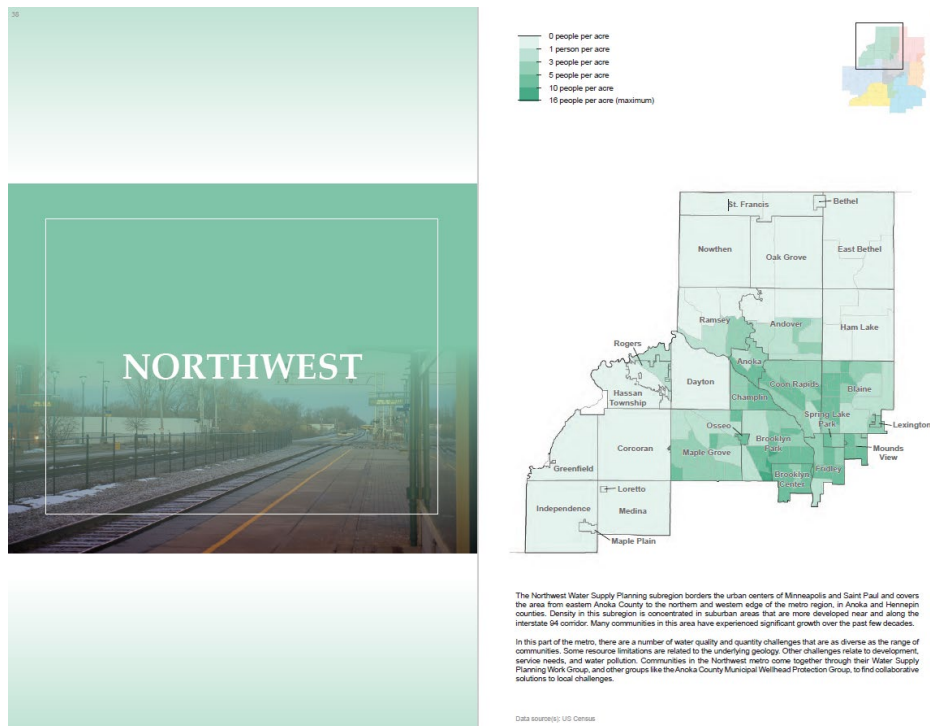


Figure 2. The [Northwest chapter of the recently-released Water Supply Planning Atlas for the Twin Cities Metropolitan Area](#) provided subregional water supply information and context to support group discussion.



Figure 3. Workshop 1 for the northwest metro water supply group was hosted by the City of Champlin and held at the Mississippi Crossing Event Center.

Glossary and Initialisms

BWSR: Minnesota Board of Water and Soil Resources

CECs: Contaminants of emerging concern

Data standards: Data standards are documented agreements on representation, format, definition, structuring, tagging, transmission, manipulation, use, and management of data.

DNR: Minnesota Department of Natural Resources

DWSMA: Drinking water supply management area, designated by municipal water suppliers and the Minnesota Department of Health.

MC: Metropolitan Council

MDH: Minnesota Department of Health

MPCA: Minnesota Pollution Control Agency

PFAS: Per- and Polyfluorinated Substances

WD: Watershed District

WMO: Watershed Management Organization

VOC: Volatile organic compounds are compounds that have a high vapor pressure and a low water solubility.

What other terms should be included to ensure we all mean the same thing?

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