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December 2, 2021

Commissioners
 Shingle Creek and West Mississippi
 Watershed Management Commissions
 Hennepin County, Minnesota

The agenda and meeting packet are available to all interested parties on the Commission's web site:
<http://www.shinglecreek.org/minutes--meeting-packets.html>

Dear Commissioners:

A joint regular meeting of the Shingle Creek and West Mississippi Watershed Management Commissions will be held **Thursday, December 9, 2021, at 12:45 p.m.** This will be a virtual meeting.

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

To join the meeting, click <https://zoom.us/j/834887565> or go to www.zoom.us and click **Join A Meeting**. The meeting ID is **834-887-565**. The password is **water**. If your computer is not equipped with audio capability, you need to dial into one of these numbers:

- | | | |
|-------------------------------|------------------------------|-------------------------------|
| +1 929 205 6099 US (New York) | +1 312 626 6799 US (Chicago) | +1 669 900 6833 US (San Jose) |
| +1 346 248 7799 US (Houston) | +1 253 215 8782 US | +1 301 715 8592 US |

Meeting ID: 990 970 201. Passcode: 579973

Meetings remain open to the public via the instructions above.

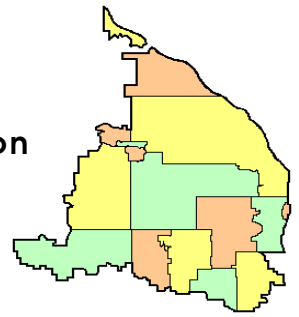
Please email me at judie@jass.biz to confirm whether you or your Alternate will be attending the regular meeting. Thank you.

Regards,

Judie A. Anderson
 Administrator

cc: Alternate Commissioners Member Cites Wenck/Stantec Troy Gilchrist
 TAC Members Hennepin County Reviewing Agencies

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AGENDA – December 9, 2021

A combined regular meeting of the Shingle Creek (SC) and West Mississippi (WM) Watershed Management Commissions will be convened Thursday, December 9, 2021, 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.*

To join the meeting, click <https://zoom.us/j/834887565> or go to www.zoom.us and click Join A Meeting. The meeting ID is **834-887-565**. The password is **water**. If your computer is not equipped with audio capability, you need to dial into one of these numbers:

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- Meeting ID: 990 970 201. Passcode: 579973

1. Call to Order.
 - SCWM a. Roll Call.
 - ✓ SCWM b. Approve Agenda.*
 - ✓ SCWM c. Approve Minutes of Last Meeting.*
2. Reports.
 - ✓ SC a. **Treasurer’s Report and Claims** - voice vote.**
 - ✓ WM b. **Treasurer’s Report and Claims** - voice vote.**
- SCWM 3. Open forum.
4. Project Review.
- SCWM 5. Fourth Generation Watershed Management Plan.
 - a. Potential Revisions to Rules and Standards.*
 - b. Maintenance and Resiliency Funding.*
 - c. Initial Story Map Ideas.**
6. Water Quality.
 - ✓ SC a. **Bass and Pomerleau Lakes Alum Project Final Report.***
 - SCWM b. Hennepin County Chloride Initiative Update.*
7. Grant Opportunities.
 - ✓ SC a. **Approve SRP Channel Extension Cooperative and Subgrant agreement.***
 - SCWM b. Clean Water and WBIF Grants.
 - 1) Watershed-Based Implementation Funding Grants.*
 - ✓ SC c. **Planning Grants for Resilience.***
8. Education and Public Outreach.
 - SCWM a. Update.**
 - b. Approve WMWA Educator Contract.**
 - c. Next WMWA meeting – via zoom. 8:30 a.m., Tuesday, January 11, 2022. (over)

- SCWM 9. Communications.
 - a. Hennepin County Natural Resources Strategic Plan.*
 - b. Staff Report.*
 - c. Communications Log.*
- SCWM 10. Other Business.
- SCWM 11. Adjournment.

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



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MINUTES

November 4, 2021

(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 virtual meeting of the Shingle Creek Watershed Management Commission and the West Mississippi Watershed Management Commission was called to order by Shingle Creek Chairman Andy Polzin at 12:45 p.m. on Thursday, November 4, 2021.

Present for Shingle Creek were: Alex Prasch, Brooklyn Park; Burt Orred, Jr., Crystal; Karen Jaeger, Maple Grove; Ray Schoch, Minneapolis; Robert Grant, New Hope; John Roach, Osseo; Andy Polzin, Plymouth; Wayne Sicora, Robbinsdale; Ed Matthiesen, Diane Spector, Katie Kemmitt, Erik Megow, and Todd Shoemaker, Stantec; Sam Ketchum, Kennedy & Graven; and Amy Juntunen and Judie Anderson, JASS.

Not represented: Brooklyn Center.

Present for West Mississippi were: Alex Prasch, Brooklyn Park; Gerry Butcher, Champlin; Karen Jaeger, Maple Grove; Harold Johnson, Osseo; Ed Matthiesen and Diane Spector, Stantec; Sam Ketchum, Kennedy & Graven; and Amy Juntunen and Judie Anderson, JASS.

Not represented: Brooklyn Center.

Also present were: Andrew Hogg, Brooklyn Center; Melissa Collins, Brooklyn Park; Mark Ray, Crystal; Derek Asche, Maple Grove; David Lemke, New Hope; Amy Riegel and Ben Scharenbroich, Plymouth; Richard McCoy and Marta Roser, Robbinsdale; and Stephen Mastey and Lisa Van Der Pol, Landscape Architecture, and Tara Anderson, Crescent Cove, for Item IV.

II. Agendas and Minutes.

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

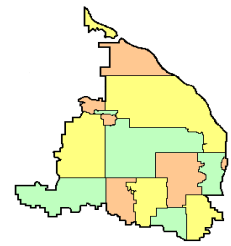
Motion by Jaeger, second by Johnson to approve the **West Mississippi agenda** as amended.* *Motion carried unanimously.*

Motion Schoch, second by Roach to approve the **minutes of the October 14, 2021, regular meeting.*** *Motion carried unanimously.*

Motion by Jaeger, second by Prasch to approve the **minutes of the October 14, 2021, regular meeting.*** *Motion carried unanimously.*

III. Finances and Reports.

A. Motion by Schoch, second by Grant to approve the Shingle Creek **November Treasurer's Report* and claims** totaling \$50,496.56 . Voting aye: Prasch, Orred, Jaeger, Schoch, Grant, Roach, Polzin, and Sicora; voting nay – none; absent – Brooklyn Center.



B. Motion by Johnson, second by Jaeger to approve the **West Mississippi November Treasurer's Report* and claims** totaling \$37,854.28. Voting aye: Prasch, Jaeger, and Johnson; voting nay – none; absent – Brooklyn Center and Champlin.

IV. Open Forum.

Mastey, T. Anderson, and VanDerPol presented a pictorial update of the **Crescent Cove Project**. The final pictures showed how the spaces are being enjoyed by the children, their parents, birds, butterflies, and even turtles.

[Butcher arrived 1:15 p.m.]

V. Project Review.

SC2021-09: Schmidt Lake Woods Drainage Improvement Project, Plymouth.* Re-creation of a channel in the wetland, pond dredging and pipe busting of existing storm sewer on a site located in the southwest corner of Zachary Lane and CP Railroad. The project review application was received on October 13, 2021. The site is 4.65 acres. Following development, the site will be 0 percent impervious with 0 acres of impervious surface, an increase of 0 acres.

To comply with the Commission's water quality treatment requirement, the site must provide ponding designed to NURP standards with dead storage volume equal to or greater than the volume of runoff from a 2.5" storm event, or BMPs providing a similar level of treatment - 85% TSS removal and 60% TP removal. Infiltrating 1.3-inches of runoff, for example, is considered sufficient to provide a similar level of treatment. If a sump is used the MnDOT Road Sand particle size distribution is acceptable for 80% capture. This project is not creating any new impervious area; therefore, this requirement does not apply.

Commission rules require that site runoff is limited to predevelopment rates for the 2-, 10-, and 100-year storm events. There is no change in land use nor any additional impervious surface. The applicant meets Commission rate control requirements.

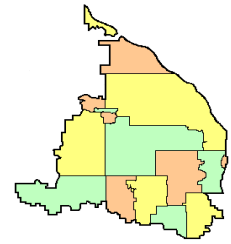
Commission rules require the site to infiltrate 1.0 inch of runoff from new impervious area within 48 hours. The applicant proposes no infiltration. This Project is not creating any new impervious area; therefore, this requirement does not apply.

The erosion control plan includes 2 rock construction entrances, floating silt fence surrounding detention ponds/infiltration basins and inlet protection. The erosion control plan meets Commission requirements.

The National Wetlands Inventory identifies a 1.6-acre freshwater pond on the northwest portion of the site. The City of Plymouth is the LGU for WCA administration. No loss of wetland is proposed, just a re-creation of the wetland channel. The applicant meets Commission wetland requirements.

There are no Public Waters on this site. The applicant meets Commission Public Waters requirements. There is no FEMA-regulated floodplain on this site and there are no proposed buildings. The applicant meets Commission floodplain requirements.

The site is located in a Drinking Water Management Area but is outside of the Emergency Response Area. Therefore, infiltration is permitted, but infiltrated water must first filter through 1 foot of soil, the top four inches of which are amended topsoil, and the bottom 8 inches of which are tilled. The applicant proposes no infiltration. The applicant meets Commission drinking water protection requirements.



The City of Plymouth engineering staff sent letters to and met with each adjacent property owner in July and August 2021 informing them of the proposed project, meeting Commission public notice requirements.

A draft Operations & Maintenance (O&M) agreement between the applicant and the City of Plymouth is not needed because the City is responsible for the maintenance.

The Project Review Fee has not been received.

Motion by Orred, second by Schoch to advise the City of Plymouth that project SC2021-02 is approved conditioned upon receipt of the project review application fee. *Motion carried unanimously.*

VI. Fourth Generation Watershed Management Plan.

In October the Commission reviewed water quality trends and completed a whiteboard exercise to identify areas of success and shortfalls over the past ten years. The Commissioners also explored areas of focus for the coming ten years. Recaps* of these discussions are included in the meeting packet.

The Commissioners reviewed the whiteboard results to come to a consensus on the successes/lack of successes in order to complete the Self-Assessment portion of the Fourth Generation Plan. They also discussed potential areas of focus. They reviewed the Third Generation Plan goals and policies and identified those that continue to be relevant and those that likely will need to be modified. They also identified potential additions. The purpose of this discussion was to begin to establish a framework to consider when working through specific programmatic discussions.

One thing that stood out during the whiteboarding was a desire to be more active in chloride management. If the Commissions choose to make that an area of focus then, as they work through the monitoring program review, the rules review, the sustainability discussion, and discussions regarding education and outreach, they must consider how this program or these actions can relate to and help them work towards their chloride management goals. By next spring, after those more detailed program discussions have occurred, the Commissions will revisit the goals and policies and translate “be more active in chloride management” into a series of very specific goals and actions.

Based on what they heard during the whiteboarding, Staff are researching other watersheds similar to Shingle Creek/West Mississippi to see what kinds of priorities they have identified in their plans and will incorporate those findings into the discussion.

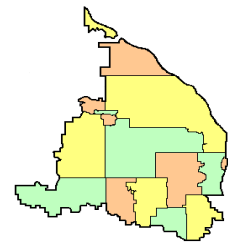
The Citizen Advisory Committee (CAC) process will be discussed -- what kind of review/input would the Commissions and Technical Advisory Committee (TAC) like to get from the individual city CACs? Given how difficult it may be to get meetings scheduled in November/December, Staff recommend pushing the first CAC meetings back to January.

At the December meeting members will complete the Self-Assessment by reviewing TMDL implementation status. Staff are currently working with the implementation data that cities compiled as part of their NPDES permit applications as well as data compiled as part of the series of TMDL Five Year Reviews. The secondary topic for December will be discussion of maintenance options and funding.

Staff’s memo* included a Gantt chart* of activities associated with the planning process.

VII. Water Quality.

A. Hennepin County Chloride Initiative.* The Hennepin County Chloride Initiative (HCCI) met on September 20, 2021, for a progress report on the various actions currently underway. A “small group” of



partners, including Spector, has met a few times since that meeting to proceed on one of the actions presented below. (The HCCI is a collaborative initiative of the 11 watersheds in Hennepin County, funded by about \$111,000 set aside from the last round of Watershed-Based Funding provided by the Board of Water and Soil Resources (BWSR).) Scharenbroich from Plymouth is the Shingle Creek representative to HCCI and Hogg from Brooklyn Center is the West Mississippi representative. The HCCI is currently chaired by Laura Jester, administrator of the Bassett Creek WMO, and the fiscal agent is the Riley-Purgatory-Bluff Creek Watershed District. The following is a brief overview of the various ongoing items.

1. Chloride Barriers Research. HCCI had previously worked with Fortin Consulting and a graduate student at the U of M to undertake interviews and with private salt applicators to assess their knowledge of salt contamination issues and barriers to change. The purpose was to develop and guide more targeted programming and messaging county-wide. The results were discussed in an HCCI update memo a few months ago but, because it is relevant to other activities below, here is a brief overview of the findings:

a. Client demand was the most cited barrier to salt reduction. Many applicators felt that, without the pressure to meet client requests, they would be able to implement more mindful salting practices.

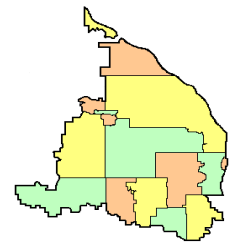
b. Legal concerns were a motivating factor for almost all participants. Fear of being sued over a slip-and-fall injury was motivation enough to continue with the status quo.

c. Inherent in the liability and client demands are the end-user. Winter maintenance operators are looking to avoid lawsuits from their clients, and their clients, in turn, are worried about slip-and-falls from the end-users of their properties. Others felt that the end-users themselves are not doing everything they can to avoid a slip-and-fall and are putting too much onus on the applicators.

2. NEW Marketing Campaign RFP.* A “small group” has met several times to brainstorm ideas for developing educational materials and/or a media campaign for targeted audiences. The group noted that property managers are likely the highest priority group to target because they have the most control over property maintenance and drive the decision for how much and when to apply salt. The group discussed outreach to different audiences or sectors of property managers and potentially effective communications avenues and landed on creating an outreach/marketing campaign specifically designed to engage and build relationships with boards or committees of homeowner’s associations and faith-based communities to empower these groups with the knowledge and tools to influence their property managers. The aim is to build a grassroots effort to change the paradigm about winter maintenance practices starting with where people live and worship, and then moving on to where they work and shop.

The small group has developed an RFP to hire a marketing firm to develop a marketing plan for targeted education and outreach efforts. While this is focused on a narrow target audience, the expectation is that the work products can be repurposed and used for other target audiences as well.

3. Winter Maintenance Plan Template Project.* The purpose of this project is to develop common templates for winter maintenance that can be used by property managers, cities, etc. to specify approved maintenance actions. Fortin Consulting worked with an advisory board of property managers and applicators to understand their issues and what might be helpful and not be unduly burdensome to implement. Many of those discussions centered around liability. It was also noted that at least two WMOs in the county require winter maintenance plans to be submitted by developers at the time of watershed permit review and approval. It was noted that the developers usually have no connection to the ultimate property managers, and that may not be the most appropriate point in the process. The final draft of the template was



included in the meeting packet. As the Commissioners and TAC work through the Fourth Generation Plan there will be more discussion about chloride management.

4. Parkers Lake Chloride Project Facilitation Plan. The City of Plymouth has been working with its consultant to compile data and meet with a technical advisory committee.

5. Training. Several of the HCCI partners have been contracting with Fortin Consulting and/or MPCA to host workshops for applicators. Most of the workshops have been targeted to applicators working within that particular partner's watershed or city and are reaching saturation in their small geographic area. An option for using some of the funds is to offer several workshops throughout the county and make them more widely available. There is also the possibility for hosting shorter, refresher type courses for applicators who have already gone through the certification training. There are several thousand dollars of grant funds not yet committed to other activities that may be available to use for this purpose. The grant period has been extended one year to December 31, 2022.

B. Gaulke Pond and Crystal Lake Pump Operating Plan.* Shoemaker presented the updated plan which was amended October 27, 2021. Motion by Schoch, second by Orred to accept the amended plan. *Motion carried unanimously.*

C. Meadow Lake Drawdown.* The Commission and the City of New Hope have partnered to complete a number of management actions as part of the Meadow Lake Management Plan. These include this winter's whole lake drawdown followed by future alum treatments and fish and aquatic vegetation management and monitoring. This project is being funded by the Commission through levy and two different grants from the Board of Water and Soil Resources.

Up to this point, the Commission and the City have been operating under a Memorandum of Understanding regarding the drawdown portion of the project, with the understanding that at some point in the future the two parties would enter into a formal cooperative agreement. Now that the two grants are in hand and the levy has been certified, it is appropriate to enter into that Cooperative and Subgrant Agreement.

Included in the meeting is the agreement.* It specifies that the Commission will reimburse the City for its costs associated with the drawdown and alum treatment, and the Commission will be responsible for the costs of monitoring and project management. It also specifies that the Commission may use grant proceeds to reimburse the City, and that the City agrees to abide by the terms of those grant contracts.

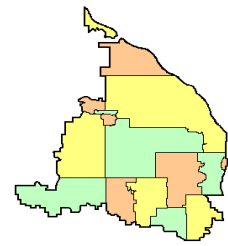
The agreement has been reviewed by the Commission's attorney. At its October 25, 2021, meeting the New Hope City Council reviewed the agreement and authorized its execution.

Motion by Grant, second by Schoch to approve the agreement and authorize the Chairman to execute it. *Motion carried unanimously.*

D. The November Technical Advisory Committee (TAC) meeting scheduled to precede this meeting was cancelled. The next TAC meeting will be held via Zoom and is scheduled for 11:00 a.m., prior to the Commissions' December 9 meeting.

VIII. Grant Opportunities.

A. FY22 Watershed-Based Implementation Funding (WBIF). The Board of Water and Soil Resources (BWSR) biennially appropriates funding for its WBIF program. This pot of funding from the Land and Legacy Amendment supplements the funding made available through the Clean Water Fund (CWF)



Projects and Practices grants. While those are competitive grants for specific projects, the WBIF funding is allocated to targeted watersheds. The BWSR Board recently approved allocations of the fiscal year 2022 (FY22) funding, which will become available July 1, 2022. Both the Shingle Creek and the West Mississippi Commissions have been awarded funding.

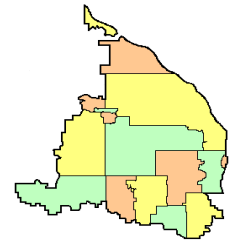
Outside the Metro area, BWSR has been working with counties, Soil and Water Conservation Districts (SWCDs), and watershed districts to prepare comprehensive studies called One Watershed One Plans (1W1Ps). For Greater Minnesota watersheds that may be 1,000 square miles or more in area and encompass two or more counties, these 1W1Ps are attempts to plan collectively across counties, cities, and watershed districts. Following completion of their plans, these consortia of agencies can receive noncompetitive WBIF funding to jump start implementation.

In the Metro area, cities have been completing such plans (at a smaller scale) since the early 1980s. In 2018, BWSR realized the Metro partners were missing out on the opportunity for noncompetitive funding and allocated WBIF funding for Metro watersheds. In 2018 BWSR allocated funding to each of the seven Metro counties, and then asked the watersheds and cities in each county to develop their own method of deciding how to spend it. The eleven watersheds in Hennepin County elected to allocate 10% of the funds to the Hennepin County Chloride Initiative and to allocate the rest to the watersheds based on their size and tax capacity. Shingle Creek received \$68,129 and West Mississippi \$35,442. Both elected to use those funds to supplement cost-sharing for projects. In 2020, BWSR allocated funds in a different way. Instead of allocating to counties, the funding was allocated to basins. Shingle and West Mississippi are in the Metro-Mississippi Twin Cities West basin partnership. That group chose to use a competitive process and requested the watersheds and cities in the basin to submit grant requests for specific projects. Shingle Creek was awarded \$40,000 for the Meadow Lake Drawdown and \$70,000 for the Bass Creek Restoration Project.

Having had two different allocation processes in as many biennia, BWSR held several Listening Sessions to take feedback and help in making the decision on how to allocate FY22 funds. On October 27, 2021, the BWSR Board approved an allocation process that would allocate funds to Metro watersheds with “a \$75,000 minimum per watershed planning area inside of the Metro, and a distribution of funds based on a weighting of 90% private land and 10% on public waters to all eligible areas.” Staff are in contact with BWSR staff to learn more about that method, timing, funding availability, etc. It does look like project requirements include a minimum 10% match, that they must be load reduction practices, and could be structural or non-structural. Table 1 in Staff’s October 29, 2021, memo* shows that the West Mississippi Commission will be granted \$75,000 in funding, while the Shingle Creek Commission will receive \$95,501.

B. Conservation Corps. Following passage of the Clean Water, Land, and Legacy Amendment the Minnesota Legislature directed BWSR to appropriate \$500,00 of the Clean Water Fund to be contracted for services with the Conservation Corps on an annual basis. BWSR contracts with the Corps to provide funded labor to cities, counties, soil and water conservation districts, metropolitan watershed management organizations, watershed districts, and joint powers organizations of those government units to undertake projects consistent with the Corps’ mission, BWSR grant policies and CWF goals. Funds are available for Corps crew labor only on projects with the purpose of protecting, enhancing, and restoring water quality in lakes, rivers, and streams and/or protecting groundwater and drinking water sources from degradation. There are no minimum match requirements, but applicants must itemize local financial contributions. Application deadline is December 15, 2021. <https://conservationcorps.org/partner/clean-water-funding/>

C. Spector announced that \$870,000 in **planning grants for stormwater, wastewater, and community resilience** are available from the MPCA. Deadline to apply is December 21, 2021. [Apply now:](#)



Planning grants for stormwater, wastewater, and community resilience | Minnesota Pollution Control Agency (state.mn.us)

IX. Education and Public Outreach.

The West Metro Water Alliance (WMWA) met on October 12, 2021. Emphasis was on finalizing flyers for water softener use, pet waste, and chloride. A graphic designer has been selected.

Five resumes have been received for the **Watershed PREP educator position**. Roach has been assisting with the interview process and a finalist should be identified at the November WMWA meeting.

The **next WMWA meeting** is scheduled for 8:30 a.m., Tuesday, November 9, 2021. This will be a Zoom meeting.

X. Staff Report.

No staff report this month.

XI. Communications.

October Communications Log.* No items required action.

XII. Other Business.

XIII. Adjournment. There being no further business before the Commissions, the joint meeting was adjourned at 2:53 p.m.

Respectfully submitted,

A handwritten signature in black ink that reads "Judie A. Anderson".

Judie A. Anderson,
Recording Secretary
JAA:tim

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To: Shingle Creek/West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.
Erik Megow, P.E.
Diane Spector

Date: December 3, 2021

Subject: Fourth Generation Plan Rules and Standards Update

**Recommended
Commission Action**

For discussion and staff direction.

As part of the 4th Generation Plan, we will be reviewing the Rules and Standards for the Shingle Creek and West Mississippi Watershed Management Commissions and revising them as necessary to:

1. Align with the 2020 MS4 general permit,
2. Align with the latest guidance in the Minnesota Stormwater Manual, and
3. Add clarity to how the Commissions will review certain project elements to align with City and surrounding Watershed requirements.

When the Commissions were first formed in 1985, there was no one entity imposing stormwater management standards on developing and redeveloping properties in the two watersheds. The Commissions established standards in their First Generation Plans and initiated a Project Review Program. Member cities were required to revise their ordinances to incorporate those standards and require applicants to obtain review and approval of the watershed prior to approving any building permits.

In subsequent years, the State of Minnesota developed and promulgated various stormwater management permit standards, including permits for industrial and wastewater discharges; construction site discharges; and Municipal Separate Storm Sewer System (MS4) discharges. All of the cities in the watersheds, Hennepin County, MnDOT, and some other individual entities in the watersheds are regulated MS4s and are subject to the state permit conditions and must update their ordinances to be in conformance. In addition, the State has developed and published the State Stormwater Manual that serves as a handbook and guidance document for stormwater management that has helped impose some consistency and standards for design and construction.

At its December 9, 2021 meeting, the Technical Advisory committee (TAC) will be discussing the following. The TAC will report its initial discussions to you at your December 9 meeting. We expect to draft some proposed language revisions with the TAC and the Commissions at the January 13, 2022 meetings.

1. Align with 2020 MS4 general permit.

Over time most watershed organizations have moved to aligning their own Rules and Standards to be consistent with the MS4 General Permit, or more stringent when necessary. There is one significant area that underwent significant change in the latest MS4 permit where the Commissions' Rules are no longer consistent, and that is for linear projects such as highway and city street projects (see Table 1). Currently the Commissions' Rules only apply when such a project creates more than one acre of new impervious surface. The new Permit requires the standards to apply not only to new impervious but also *fully reconstructed* impervious. Many cities undertake street reconstruction projects that also include repair or replacement of underground utilities. Previously, they could excavate the existing street, work on the utilities, and then reconstruct the street without having to add new stormwater treatment as long as they did not create more than one acre of new impervious surface. The new Permit imposes stormwater

management requirements on that fully reconstructed impervious even if it is just putting back what was already there. This is a significant new requirement that will require the Commissions to revise the Rules.

2. Align with the latest guidance in the Minnesota Stormwater Manual

Stormwater management technology is becoming more sophisticated and provides many more options for treating stormwater runoff than the traditional stormwater pond or infiltration basin. Many of these are designed to be placed underground, allowing the space above to be used for parking or other uses. There are a growing number of devices that fall under the category of Manufactured Treatment Devices (MTDs). Each manufacturer provides its own guidance on how they work and what kind of sediment or phosphorus removal can be expected. Given their proliferation and the need to provide some consistency and third-party testing to verify the manufacturer's claims, many states are now providing guidance on where and how these MTDs should be used and how permitting authorities should be allowing treatment credit. The TAC will be discussing how the Minnesota Stormwater Manual will be revised to include guidance for Minnesota and how that should be reflected in the Commissions' Rules.

3. Add clarity to how the Commissions will review certain project elements to align with City and surrounding Watershed requirements

The TAC will be discussing topics such as working with Bassett and Elm Creeks to achieve more uniformity in water quality and rate control standards (for example, Elm Creek requires 1.1" of infiltration, Shingle and West Mississippi 1.3", and Bassett 1.1" with 75% TP reduction). The TAC will also discuss some other potential standards or practices raised by the Hennepin County Climate Action Plan.

Table 1. Comparison of current Commission stormwater requirements and MS4 standards.

Project Land Use	Project Size	Reviewer	Project Type	Current Requirements	MS4 Requirements	Proposed Change
Detached Single-Family Residential	>1 acres to <15 acres	City	Development	Rate, WQ, and Volume control for entire site	Volume Control (1.0" times the sum of the new and fully reconstructed impervious area)	None. Commission requirements exceed MS4 Requirements
			Redevelopment	Rate, WQ, and Volume control for disturbed area or entire site with ≥50% disturbance trigger		
	≥ 15.0 acres	Commission	Development	Rate, WQ, and Volume control for entire site		
Redevelopment						
Linear	> 1acre	Commission	New or reconstructed impervious surface	Rate, WQ, and Volume control for projects that create one acre or more of new impervious for net new impervious surface.	The larger of: •1.0" times the new impervious surface •0.5" times the sum of the new and fully reconstructed impervious surface	<i>Adopt the MS4 requirements for Linear projects with greater than 1.0 acre of land disturbance. Include projects less than 1 acre that are part of a larger plan/scheme of development</i>
All Other Land Uses	0.5 acres to <1.0 acres	City	Development	Volume Control for entire site	No Requirements	None. Commission requirements exceed MS4 Requirements
			Redevelopment	Incorporate Permanent WQ BMPs		
	≥1.0 acres to <5.0 acres	City	Development	Rate, WQ, and Volume control for entire site	Volume Control (1.0" times the sum of the new and fully reconstructed impervious area)	None. Commission requirements exceed MS4 Requirements
			Redevelopment	Rate, WQ, and Volume control for disturbed area or entire site with ≥50% disturbance trigger		
	≥5.0 acres	Commission	Development	Rate, WQ, and Volume control for entire site		
Redevelopment						

To: Shingle Creek/West Mississippi WMO TAC/Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: December 3, 2021

Subject: Fourth Generation plan:
Maintenance and Resiliency Funding

**Recommended
Commission Action**

For discussion.

The TAC and Commissions had previously discussed the potential to create an annual levy for “maintenance” to fund work resulting from capital projects which didn’t fall neatly into either operations or bricks and mortar projects. This would include such work as ongoing rough fish management, aquatic vegetation management, repair and maintenance of Commission-installed BMPs such as carp barriers and iron-enhanced sand filters. In many cases this work was initiated as part of a grant-funded project and the initial years’ work was funded through the grant. However, once the grant was completed, it is necessary to continue that maintenance type work to sustain the water quality benefits of the project.

It was out estimate that there was \$30,000 – \$50,000 in annual ongoing maintenance-type work. The Commissions’ attorney consulted with an attorney at Hennepin County, and they were in agreement that there was sufficient statutory authority for a levy for maintenance. However, then the pandemic struck and there was no interest in considering a new levy in that time of uncertainty.

However, the need still remains. Staff still believes that the magnitude of annual potential need is in the \$30,000 - \$50,000 range. If the TAC and Commissions agree to pursue this, it will be necessary to craft a policy that clearly defines what kinds of maintenance expenses could be funded, and what would be the member cities’ responsibilities. It is our sense that there are some activities that clearly would fall under the Commission category – maintenance of a BMP that was installed by the Commission that the City would not have chosen to do themselves, such as repair or replacement of a carp barrier or an iron-enhanced sand filter. There are also activities that are clearly City responsibilities – pond dredging, operating a street sweeper, or removing invasive vegetation. However, there is the “muddy middle” that needs further discussion. Who is responsible for removing a tree that falls into a stream where the Commission has undertaken a stream restoration project? What if a 500 year storm comes through and takes out a whole section of restored stream? Here’s a partial list staff has been discussing:

- Annual rough fish maintenance management
- Curly-leaf pondweed maintenance treatment
- Carp barrier cleaning
- Carp barrier repair and maintenance
- SRP filter maintenance or refresh
- Emergency repairs
- Channel bank maintenance where Commission has done restoration projects
- Crystal Pond filter bench maintenance if needed, till in biochar
- Champlin Pond filter bench maintenance if needed
- Lake alum touchup treatment
- 639W weir maintenance

We’d like to have an initial discussion at the December 9 meeting so we can begin to craft a potential policy. If there is agreement moving forward, the earliest a levy could be considered would be fall 2022 for collection in 2023.

To: Shingle Creek WMO Commissioners

From: Ed Matthiesen, P.E.
Diane Spector
Katie Kemmitt

Date: December 3rd, 2021

Subject: Bass and Pomerleau Lakes Alum Project Completion Memo

**Recommended
Commission Action**

Discuss. Accept report and direct staff to create a reserve account to carry over unspent project funds to be dedicated to future SAV management on Bass Lake as needed.

Background

Bass and Pomerleau Lakes are located in Plymouth, Minnesota. Bass Lake is shallow and eutrophic, and Pomerleau Lake is deep and eutrophic. Pomerleau discharges through upper Bass Creek to Bass Lake. In 2002 the Minnesota Pollution Control Agency (MPCA) listed both lakes as impaired for excess nutrients. In 2009, Wenck completed a TMDL and Implementation Plan for Bass, Pomerleau, and Schmidt Lakes to assess nutrient loading concerns and provide strategies to reduce excess nutrient loading (Wenck 2009a, 2009b). Since the TMDL was published, Schmidt Lake, which drains to Bass Lake, has been delisted because of improved water quality resulting from a number of actions taken by the City of Plymouth, residents, and the lake association. Table 1 below shows physical characteristics of Bass and Pomerleau lakes and their lakesheds.

Table 1. Physical characteristics of Bass and Pomerleau Lakes.

Parameter	Bass Lake	Pomerleau Lake
Surface area (acres)	175	30
Average (maximum) depth (feet)	10.1 (31)	10.9 (26)
Volume (acre-feet)	1,760	329
Residence time (years)	0.47	0.73
Littoral area (acres)	143 (82%)	19.8 (66%)
Watershed (acres)	3,183	266

In 2017 the Commission completed a TMDL Five Year Review, summarizing progress to date and updating the nutrient budgets and targets using more recent and complete monitoring data (Wenck 2017). Those nutrient budget updates used actual monitored flow and nutrient concentration data from the watershed, sediment core data, and more intensive in-lake data to update the lake response models. For both lakes the model updates indicated that internal loading accounts for a greater proportion of the nutrient budget than was assumed in the TMDL, which calculated budgets and targets using literature values, model residuals, and a more limited in-lake data set from the late 1990s. For Bass Lake, the updated estimates suggest internal load is approximately 21% of the total phosphorus (TP) budget, a significant departure from the TMDL nutrient budget which suggests that internal loading was a minimal component of the phosphorus budget. For Pomerleau Lake, the modeling update showed a need to reduce internal load by 130 pounds/year (92% reduction), which is significantly more than the 20-pound reduction estimated in the TMDL.

The TMDL Five Year Review estimated that BMPs constructed in the Bass and Pomerleau Lakes watershed have reduced TP loading by approximately 950 pounds of TP per year since the original TMDL was published, mostly by converting untreated agricultural land in the upper watershed to developed uses with stormwater treatment and at least 1" of volume control. However, the review estimated that in addition to internal load reduction, an external TP load reduction of 16% (215 lbs) is still needed for Bass Lake and a 62% (96 lbs) reduction for Pomerleau Lake to reach the target nutrient budgets. Since significant progress has been made in reducing watershed load, it is appropriate at this time to start to manage the internal load. This technical memorandum summarizes the aluminum sulfate (alum) treatments that occurred on Bass and Pomerleau Lakes in Spring 2019 and Fall 2020 to reduce internal phosphorus loading. Changes in anoxic sediment phosphorus release rates and water quality following the alum treatments are described.

Alum Applications

Alum was applied in two doses in each lake. The first dose was applied in May 2019 and the second dose was applied in October 2020. Table 2 describes each alum dose applied to the lakes. The same dose was applied to each lake in 2019 and 2020. In Pomerleau Lake, alum was applied to the 7-foot and deeper contour. In Bass Lake, alum was applied to the 13-foot and deeper contour.

Table 2. Alum application details for each half-dose.

	Bass Lake	Pomerleau Lake
AlSO ₄ applied (gallons)	27,615	19,236
Lake area applied (acres)	35	14
Grams Al/m ² applied	43	76

Lake Sediments

Lake sediments were sampled using intact sediment cores before and after alum treatments. Cores were analyzed in the laboratory at University of Wisconsin Stout for anoxic sediment phosphorus release rates to determine the potential for lake sediments to release soluble phosphorus under anoxic conditions. Two locations were sampled in Bass Lake (Stations 1 & 4) and one location was sampled in Pomerleau Lake (Station 1). Cores were incubated in the lab in triplicates and averages are reported for each station and year.

Table 3 summarizes anoxic release rates measured in 2018 before alum was applied, in 2020 following the first dose, and in 2021 following both doses. Release rates were highest in 2018 for each lake and station and lowest in 2021 following both alum doses. Release rates following alum treatment were lower than expected at the outset of the project. Anoxic release rates measured in 2021 from Pomerleau Lake were undetectable.

Table 3. Anoxic sediment phosphorus release rates (g/m²/day) measured before alum treatments (2018), after the first dose was applied (2020), and after both doses were applied (2021).

Anoxic Sediment Phosphorus Release (g/m²/day)	Bass Lake		Pomerleau Lake
	Station 1	Station 4	Station 1
2018	10.61	11.13	11.8
2020	2.93	1.83	1.03
2021	1.37	0.65	0.00

Water Quality

Water quality in Bass and Pomerleau Lakes has been excellent in years following the alum treatments (2019-2021). Average total phosphorus (TP) for the growing season (June – September) has been below the appropriate State standard for each lake (Figure 1). TP was particularly low in 2021, with the lowest average TP on record since 1994 and 1996 for both Bass and Pomerleau, respectively.

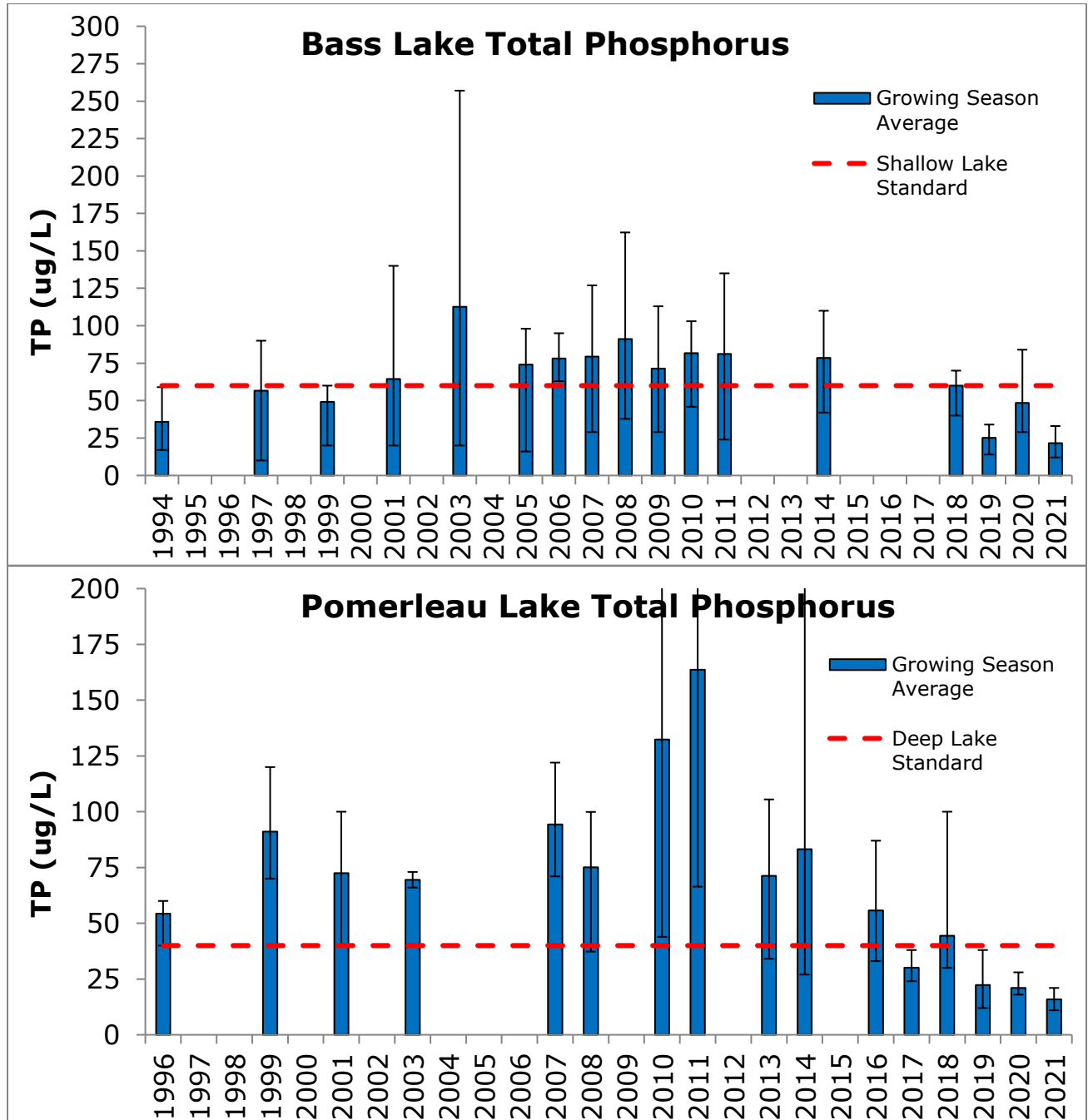


Figure 1. Average growing season (June – September) TP concentrations in Bass and Pomerleau Lakes. Error bars represent minimum and maximum TP concentrations measured during the season.

Conclusion

Alum treatments applied to Bass and Pomerleau Lakes were successful in reducing the release of soluble phosphorus from lake sediments, as measured in lake sediment cores incubated in the lab under anoxic conditions. Comparing 2018 release rates to 2021 release rates, phosphorus release was reduced by a factor of 10 in Bass Lake and was undetectable in Pomerleau Lake. Water quality in both lakes has been excellent following the alum applications. Average growing season TP was the lowest on record in both lakes and is meeting State standards

Longevity of the alum treatments was estimated in the Bass and Pomerleau Lakes Alum Dosing Feasibility and Cost Estimate (Wenck 2017) as 16-19 years (Bass Lake) and 11-30 years (Pomerleau Lake). Shorter longevity was estimated using the most current estimated (2017) watershed load rate and longer longevity was estimated assuming the TMDL watershed load rate has been met.

Biannual water quality, aquatic vegetation, and plankton monitoring will continue in both lakes following the completion of the project. Curly-leaf pondweed will be monitored and treated as-needed in both lakes for the next two years, 2022 and 2023.

Final Project Cost

Table 4 below details the estimated total final project cost, excluding the final two years of SAV treatment, of \$438,100. This project was funded by a grant from the Board of Water and Soil Resources (BWSR) and Commission levy funds. The Commission must match the \$267,040 of grant funds with at least \$66,760 of its own funds. The Commission match provided was \$171,060, which satisfies the grant requirement.

The Commission did commit to providing up to five years of curly-leaf pondweed treatment. The balance of project funds of \$31,310 should be sequestered in a dedicated account to provide for that work in 2022 and 2023 as necessary. That reserve should be sufficient to fund the required delineation, permitting, treatment, and reporting.

Table 4. Estimated total final project cost and revenues.

Cost	Estimated
Initial Feasibility, Monitoring, Coring, and Dosing	\$49,879
Alum Treatments	239,777
Sediment Coring	8,469
Sediment Core Analysis	31,598
Technical Services	35,500
Water Quality and Biological Monitoring	31,000
SAV Surveys and CLP Delineations	24,677
SAV Treatments	17,200
TOTAL	\$438,100
<hr/>	
Revenue Source	Amount
Grant Funds	\$267,040
Commission Levy Funds	202,370
TOTAL	\$469,410
Balance	\$31,310
Grant Share	\$267,040
Commission Match	\$171,060



To: Shingle Creek/West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: December 3, 2021

Subject: Hennepin County Chloride Initiative Update

**Recommended
Commission Action**

For information.

The Hennepin County Chloride Initiative (HCCI) met on Monday, November 29, 2021. Following are various topics of discussion and links for further information.

Marketing Consultant

A subcommittee of HCCI met several times to develop an RFP, review proposals, and interview marketing consultants to conduct market research and develop a county-wide education and outreach campaign to encourage reduction in overuse of salt for winter de-icing. The consortium agreed to contract with the recommend consultant, who will begin work by mid-December. The project schedule includes a first draft of a marketing campaign by March 2022, with roll-out by mid-summer.

The subcommittee will continue to meet more frequently than the full HCCI to direct the consultant's work. Comments from the group include a reminder to be sure that all marketing materials are rendered in plain language rather than technical terms, and that the consultant bear in mind the diversity of the county, both in terms of highly urban/rural land uses and demographically.

Minneapolis Winter Salt Short Course

The group saw a demonstration by the City of Minneapolis of an online short course on best winter salt practices developed by city staff and targeted toward residents or small businesses. HCCI partners were encouraged to share the link or use content from it as needed.

<https://www2.minneapolismn.gov/government/programs-initiatives/environmental-programs/salt/>

Columbia Heights Snowmelt System

The Mississippi WMO highlighted a recent project completed with grant assistance from MWMO: a snowmelt system at the new Columbia Heights Library, and similar upcoming project at the new Columbia Heights City Hall. A pavement heating system at the entryways to the buildings helps keep those areas free of snow an ice and limits the need for salt application. <https://www.mwmo.org/news/no-salt-required-sidewalk-snowmelt-system-fights-snow-ice/>.

Holland Michigan Steet Heating System

There was also a reference to the city of Holland, Michigan and its street heating system:

<https://www.holland.org/snow-free-holland>; [Holland's heated sidewalks, streets were a gamble that seems to have paid off \(michiganradio.org\)](https://www.holland.org/snow-free-holland)

Statewide Chloride Resources

Tools and material for partners and stakeholders website now includes links to the winter maintenance management plan templates developed by HCCI. <https://www.pca.state.mn.us/water/statewide-chloride-resources>



To: Shingle Creek WMO Commissioners

From: Ed Matthiesen, P.E.
Erik Megow, P.E.
Diane Spector

Date: December 3, 2021

Subject: SRP Channel Extension Project:
Approve Cooperative and Subgrant Agreement
Approve Revised Scope of Work

**Recommended
Commission Action**

By motion approve the agreement with the city of Crystal.
By motion, approve the revised scope of work with Stantec.

As the Commission will recall, the SRP Channel Extension Project was originally proposed in two phases. The first phase would install an iron-enhanced sand filter in the overflow channel at wetland 639W in Crystal from the overflow weir about halfway down the channel. That project was to be funded with a \$75,000 Hennepin County Opportunity Grant and \$50,000 match from the Closed Projects Account. The Commission subsequently levied an additional \$125,000 to continue the filter down to the end of the overflow channel. After discussing with the TAC and City of Crystal, we agreed that it made sense to delay the start of Phase 1 and construct both phases as one project.

Attached to this memo are to items for approval by the Commission.

- A Cooperative and Subgrant Agreement with the City of Crystal. This is a standard agreement by which the city agrees to contract for the construction of the project, and the Commission agrees to reimburse the City for its costs. This compensation includes proceeds of the Hennepin County grants, and the City agrees to adhere to the same grant requirements. This agreement has been drafted and reviewed by the attorneys and is recommended for approval.
- A revised Professional Services Scope of Work. This revision reflects the larger project, including the need for some project redesign and a more formal bidding process. It also includes follow-up monitoring above and downstream of the filter to document effectiveness. It is recommended for approval.

The estimated cost and revenues for this project are as follows:

Cost		Estimate
Construction		\$160,000
Contingency	10%	16,000
Professional Services	Design	23,050
	Construction	15,000
	Monitoring + report	8,020
TOTAL		\$222,070
Revenue Source		Available
Opportunity Grant		\$75,000
Closed Projects Account		50,000
Levy		125,000
TOTAL		\$250,000
<i>Available Funds</i>		27,930



Stantec Consulting Services Inc.
7500 Olson Memorial Hwy #300
Golden Valley, MN 55427

December 2, 2021

Attention: Andy Polzin, Chair

Shingle Creek Watershed Management Commission
3235 Fernbrook Lane N
Plymouth, MN 55447

Dear Mr. Polzin,

Reference: Revised Scope of Services for SRP Channel Filter Project in Crystal, Minnesota

We appreciate the opportunity to present this scope of services and budget estimate for the Wetland 639 SRP Channel Filter project. This letter includes a revised scope of work and budget to prepare plans, obtain quotes, and assist with project bidding and construction oversight for the combined Phase 1 and Phase 2 projects to construct an iron enhanced sand filter (IESF) at the wetland outlet site in Crystal, Minnesota. This scope replaces the previously approved scope dated June 2, 2021.

We will coordinate the work with the City of Crystal and the Metropolitan Airport Commission (MAC) and other interested stakeholders. The project is situated on land owned by the MAC but leased to the City of Crystal for environmental preserve purposes. An updated access agreement with MAC is currently under discussion. The project design, construction and monitoring are being funded through a Hennepin County Opportunity Grant and with matching funds provided by the SCWMC. The City of Crystal will be a partner to administer the project but will not provide any funding for the work.

Scope of Work

The scope of work will include coordination, design, permitting and construction oversight for the IESF project. The site is located adjacent to the Crystal Airport in Crystal, MN. The overall objective of the project is to provide treatment for soluble reactive phosphorous (SRP) that discharges from the wetland under some conditions. The aspects of the project include all work needed to design and oversee construction for an IESF in the existing channel from the Wetland 639 overflow weir, discharging downstream of the outlet weir.

The project is divided into 6 tasks. These individual tasks and the scope of work associated with them are described in the following sections.

Task 1: Project Coordination. Stantec will coordinate a project kick-off meeting with the City of Crystal, SCWMC, and MAC. The key outcomes from the meeting will be established project roles and responsibilities, project schedules, permit requirements, and project deliverables. We will continue to keep the Technical Advisory Committee (TAC) informed of the project progress at the regular monthly meetings.

Task 2: 60% Plans and Specifications. Stantec will prepare a set of 60% draft plans and specifications for the project for stakeholder review and discussion. The 60% plans will provide adequate information for the TAC to envision the finished project and provide feedback. The plans will include a project layout, plan and profile, construction details and an engineer's opinion of probable cost.

Task 3: Final Plans and RFQ. Stantec will incorporate feedback from the City and TAC into the plans to prepare a final plan set and a request for construction quotes. The City of Crystal will solicit quotes to complete the work. The deliverables for the final plans and RFQ task will include:

- Final construction plans.
- Final RFQ with list of selected contractors vetted to bid on the work.
- Bid form with itemized construction items, quantities, and unit costs for both the base bid and for the base bid with alternate bid items.
- Engineers Opinion of Probable Cost.

Reference: Scope of Services, SRP Filter Channel, Crystal, MN

Stantec will prepare a bid tabulation upon receipt of contractor bids and work with the City to evaluate the bids and select a contractor to perform the work.

Task 4: Construction Administration. Stantec will assist the City in administering the awarded contract. The following are subtasks included in the construction administration task:

- **Subtask 4a: Pre-construction Meeting.** Stantec will attend a preconstruction meeting attended by the awarded contractor, City, and other project partners.
- **Subtask 4b: Construction Observation.** Stantec will provide construction observation throughout the construction of the project. For estimating purposes, we anticipate that a project representative will be on site for approximately 40 hours during construction.
- **Subtask 4c: Contract Administration.** The contract administration subtask includes tracking the project progress and providing updates to the TAC and City, reviewing any change orders, and processing up to two progress pay requests and one final payment application for the work.

Task 5: Project Closeout. Stantec will prepare final project closeout documents for the project. The following are subtasks included in the project closeout task:

- **Subtask 5a: Punch List.** Stantec will work with the contractor to complete a final punch list for the project prior to final payment. We anticipate one site meeting and one follow-up site inspection to finalize the project.
- **Subtask 5b: Final O&M Plan.** Stantec will prepare a final Operation and Maintenance plan for the BMP long term operation and maintenance.
- **Subtask 5c: Record Plans.** Stantec will prepare record plans for the project using survey data provided by the contractor.

Task 6: Monitoring and Reporting. Stantec will provide two years of performance monitoring. We will take samples and compile and analyse the data and prepare a final report suitable for submittal to the Commission and to the granting agencies.

- **Subtask 6a: Monitoring.** Stantec will take biweekly water samples from the pool above the overflow weir and at the outflow of the channel, to be analysed for TP, TSS, and SRP as well as flow, temperature, pH, and conductivity.
- **Subtask 6b: Final report.** Stantec will prepare a presenting the collected data and its analysis, and will compile and submit the data to the state monitoring database EQUIS as required.

Fee Estimate

Stantec will perform the scope of work described above for \$46,070. We will perform the work on a time and materials basis. We will provide a written budget estimate to be approved for any out-of-scope work that is identified as the project progresses. The estimated budget is summarized by task in Table 1.

December 2, 2021
 Andy Polzin, SCWMC
 Page 3 of 4

Reference: Scope of Services, SRP Filter Channel, Crystal, MN

Table 1. Estimated Budget

Task #	Task Name	Labor	Expenses	Task Total
1	Project Coordination	\$2,215	\$-	\$2,215
2	60% Plans	\$8,510	\$-	\$8,510
3	Final Plans and RFQ	\$12,325	\$-	\$12,325
4	Construction Administration	\$12,300	\$500	\$12,800
5	Project Closeout	\$2,200	\$-	\$2,200
6	Monitoring and Reporting	\$4,500	\$3,520	\$8,020
	Project Total	\$21,000	\$200	\$46,070

Schedule

Stantec will work with the team to prepare plans and specifications targeting a Request for Quotes in December 2021. Construction will occur in spring 2022.

Project Team

The following Stantec staff have been selected to lead the various tasks in the Scope of Work. Other Stantec staff will be identified to complete the various aspects of the project.

- **Project Lead:** Ed Matthiesen, PE
- **Project Manager:** Erik Megow, PE
- **Design Engineer:** Brendan Barth
- **Grant Administration:** Diane Spector

Proposal Terms & Acceptance

- We will execute the project according to the agreement with the SCWMC.
- Stantec will provide these services on a time and materials basis and will not exceed the stated amount without prior authorization.
- Stantec will invoice the work monthly in proportion to the amount of work completed.

As you consider our scope of services, please note that effective January 1, 2021, Wenck has joined Stantec, a community that unites approximately 22,000 employees working in more than 350 locations across 6 continents. Stantec is designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships.

Thank you for this opportunity to work on this project. Should you have any questions or need clarification of anything presented in the attached proposal, please do not hesitate to call Erik at 763-252-6857.

December 2, 2021
Andy Polzin, SCWMC
Page 4 of 4

Reference: Scope of Services, SRP Filter Channel, Crystal, MN

This scope of work shall remain valid for a period of not less than 120 days from the date of submittal. Please sign in the area provided to authorize this scope of work.

Regards,

Stantec Consulting Services Inc.



Ed Matthiesen, PE
Senior Associate
Phone: (763) 252-6851
edward.matthiesen@stantec.com



Erik Megow, PE (MN)
Project Manager, Water Resources Engineer
Phone: (763) 252-6857
erik.megow@stantec.com

Attachment: Standard Terms and Conditions
Cc: Mark Ray, City of Crystal, MN

Authorization

By signing this proposal, the Shingle Creek Watershed Management Commission authorizes Stantec to proceed with the services herein described and the Client acknowledges that it has read and agrees to be bound by the attached Professional Services Terms and Conditions.

This proposal is accepted and agreed on the _____ day of _____, 2021.

Per: Shingle Creek Watershed Management Commission

Print Name & Title

Signature

**COOPERATIVE AND SUBGRANT AGREEMENT
FOR
SRP CHANNEL EXTENSION PROJECT**

This Cooperative and Subgrant Agreement (“**Agreement**”) is made as of this ___ day of _____ 2021 by and between the Shingle Creek Watershed Management Commission, a joint powers watershed management organization, (“**Commission**”) and the City of Crystal, a Minnesota municipal corporation, (“**City**”). The Commission and the City may hereinafter be referred to individually as a “party” and collectively as the “parties.”

RECITALS

- A. On April 11, 2013, the Commission and the West Mississippi Watershed Management Commission jointly adopted the Shingle Creek and West Mississippi Third Generation Watershed Management Plan (“**Plan**”), a watershed management plan within the meaning of Minn. Stat. § 103B.231.
- B. The Plan includes a capital improvement program (“**CIP**”) that lists several water quality project capital improvements.
- C. The water quality projects identified in the CIP include the SRP Channel Extension Project (“**Project**”), which is more fully described in the attached Attachment One.
- D. The Plan specifies that projects in the CIP will be partially or fully funded by a County tax levy under Minn. Stat. § 103B.251.
- E. The Commission entered into a grant agreement related to the Project with the Hennepin County Board (“**County**”) effective as of March 23, 2021, a copy of which is attached hereto as Attachment Two (“**County Grant Agreement**”).
- F. The County Grant Agreement provides that the County will grant the Commission a sum not to exceed Seventy-five Thousand and No/100 Dollars (\$75,000.00), which funds are to be used for the Project to perform the duties and tasks specified in the County Grant Agreement.
- G. On August 9, 2018, the Commission adopted a resolution ordering the Project, directing that that the Commission’s share of the Project costs be funded from a levy previously certified to Hennepin County (“**County**”) in accordance with Minn. Stat. § 103B.251.
- H. On November 12, 2021, the Commission authorized the expenditure of \$50,000 from the Closed Projects Account to increase the scale of the Project and to provide the required cash match to the County Grant.
- I. The Commission and City have agreed the City will assume, as subgrantee, certain duties and responsibilities of the Commission, as grantee, under the County Grant Agreement in

consideration of receiving a portion of the funds provided for in the grant agreement and subject to the terms, conditions, and limitations set forth therein.

- J. On September 9, 2021, the Commission adopted a resolution expanding the Project, directing that it be constructed by the City and that the Commission's additional share of the Project costs be funded from a levy certified to Hennepin County in accordance with Minn. Stat., § 103B.251.
- K. The City is willing to construct the Project and to perform the duties as a subgrantee in accordance with the terms and conditions of this Agreement.

AGREEMENT

In consideration of the mutual covenants and agreements hereinafter set forth, and intending to be legally bound, the parties hereby agree as follows:

1. Project. The Project will consist of the work required to construct the improvements in the City as more fully described in Attachment One. The Project will be constructed on land owned by the City or within easement areas held by the City.
2. Design and Plans. The Commission will design the Project and prepare plans and specifications for construction of the Project. Plans and specifications are subject to approval by the City.
3. Contract Administration. The City will advertise for bids and award the contract for the Project in accordance with the requirements of law. The City will supervise and administer the construction of the Project to ensure that it is completed in accordance with the scope of the Project identified in Attachment One. The City will require the contractor to name the Commission as additional insured on all liability policies required by the City of the contractor and the Commission shall be given the same notification of cancellation or non-renewal as is given to the City. The City will require that the contractor defend, indemnify, protect and hold harmless the Commission and the City, their agents, officers, and employees, from all claims or actions arising from performance of the work of the Project conducted by the contractor. The City will supervise the work of the contractor. However, the Commission may observe and review the work of the Project until it is completed.
4. Contract Payments. The City will pay the contractor and all other expenses related to the construction of the Project and keep and maintain complete records of such costs incurred.
5. Commission Reimbursement. Reimbursement to the City will be made as soon as funds are available, provided a request for payment has been received from the City providing such detailed information as may be requested by the Commission to substantiate costs and expenses.

6. Limits on Reimbursement. The total reimbursement paid by the Commission to the City for the Project will not exceed the cost of the channel extension contract, estimated to be One Hundred Seventy-Five Thousand Dollars (\$175,000). Reimbursement will not exceed the costs and expenses incurred by the City for the Project, less any amounts the City receives for the Project as grants from other sources. In no case will the amount of the Reimbursement exceed the amount the Commission received in grant and levy funds and that it otherwise allocated to this Project. All costs of the Project incurred by the City in excess of such reimbursement, including all costs incurred in excess of estimated project costs due to unforeseen conditions or any other cause, shall be borne by the City or secured by the City from other sources.
7. Grant Agreement. The Commission agrees to forward to the City the funds the Commission receives from the County Grant Agreement for the Project based upon approved reimbursement requests received from the City and conditioned on City's continuing compliance with its obligations under this Agreement.
8. City Obligations as Subgrantee. The City will perform and satisfy certain obligations of the Commission under the Grant Agreement. Specifically, but without limiting the foregoing, the City will perform all of the following with respect to the Project and in satisfaction of the obligations of the Grant Agreement:
 - (a) The City will perform, or participate in, all elements of the Project as described or otherwise identified in the Grant Agreement, as it may be amended, and will properly document expenses, including time and materials, in the manner expressed in the Grant Agreement and will provide information to the Commission to aid in accurate grant reporting as required in the Grant Agreement. Any amendments made to the Grant Agreement, including its exhibits, are incorporated in and made part of this Agreement by reference.
 - (b) The City will comply with all requirements and conditions of the Grant Agreement applicable to the Project that, by their nature, must be performed by City rather than Commission and that are conditions of award of funds under the Grant Agreement.
 - (c) The times of performance and expiration of City's obligations under this Agreement shall be as provided in the Grant Agreement.
 - (d) The City will provide invoices for reimbursement in accordance with the requirements of the Grant Agreement.
 - (e) The City will take all other actions as are needed to ensure compliance with the Grant Agreement and provide such information and assistance to the Commission as may be needed to ensure the Commission can comply with the requirements of the Grant Agreement that, by their nature, must be performed by the Commission rather than the City.

9. Ongoing Maintenance. The City will have ownership of the associated improvements and agrees to, at its cost, maintain them in good operating condition in perpetuity or until such time as they are replaced with like improvements.
10. Indemnification. The City will defend, indemnify, protect and hold harmless the Commission and its agents, officers, and employees, from any claims arising out of conducting the Project, including environmental claims. Nothing herein shall be deemed a waiver of the limitations of liability in Minnesota Statutes, chapter 466.
11. Audit. All City books, records, documents, and accounting procedures related to the Project are subject to examination by the Commission and either the State Auditor or the Legislative Auditor for at least six years after completion of the Project.
12. Data Practices. The City shall retain and make available data related to the letting of contracts and construction of the Project in accordance with the Minnesota Government Data Practices Act.
13. Legal Compliance. The City is responsible for complying with all applicable federal, state, and local laws, rules, regulations, and ordinances and for securing all required permits related to the Project.
14. Term. This Agreement shall be in effect as of the date first written above and shall continue until the Project is fully constructed and all obligations under the Grant Agreement have been completed. The indemnification, data practices, audit, and ongoing maintenance obligations set out herein shall survive the termination of this Agreement.
15. Entire Agreement. The above recitals and the attachments attached hereto are incorporated in and made part of this Agreement. This Agreement contains the entire understanding between the parties regarding this matter and no amendments or other modifications of its terms are valid unless reduced to writing and signed by both parties.

[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized officers on behalf of the parties as of the day and date first above written.

**SHINGLE CREEK WATERSHED
MANAGEMENT COMMISSION**

By: _____
Its Chair

And by: _____
Its Secretary

CITY OF CRYSTAL

By: _____
Its Mayor

And by: _____
Its City Manager

ATTACHMENT ONE
SRP Channel Extension Project

Overall Project Narrative:

The SRP Channel Extension Project is a follow up the SRP Reduction Project completed in 2018-2020. That was a research project and pilot field test to evaluate various filter media designed to reduce Soluble Reactive Phosphorus (SRP), a dissolved form of phosphorus, from stormwater outflow from degraded wetlands. One such location was the outlet of a wetland known by its Minnesota DNR number - Wetland 27-639W - adjacent to MAC Crystal Airport in the City of Crystal. That wetland's overflow weir was filled with filter media to treat runoff before being discharged into an 800-foot-long channel. The SRP Channel Extension Project scales up the field test by lining that channel with iron-enhanced sand, the most cost-effective medium from the pilot study. The project will construct within the channel a series of cells lined with filter media underlain with drain tile assuring that each cell can draw down to allow the media to dry out. The project will be constructed in Spring 2022. The Commission will monitor flow and water quality to estimate effectiveness.

ATTACHMENT TWO
County Grant Agreement

(attached hereto)

To: Shingle Creek/West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: December 3, 2021

Subject: Grants:
Clean Water Fund
Watershed-Based Implementation Funding

**Recommended
Commission Action**

For information.

Clean Water Fund

Earlier this year the Commission submitted a Projects and Practices grant for the Palmer Creek Estates Stream Stabilization project in the City of Plymouth, just upstream of Bass Lake. The project includes both stream stabilization and installation of two sediment capture devices to treat stormwater prior to discharge into the channel. The grant request was for \$384,000. We are happy to report that the Board of Water and Soil Resources (BWSR) Grants Program and Policy Committee has recommended this project for funding, and it will be considered at the full Board of Water and Soil Resources board meeting on December 16.

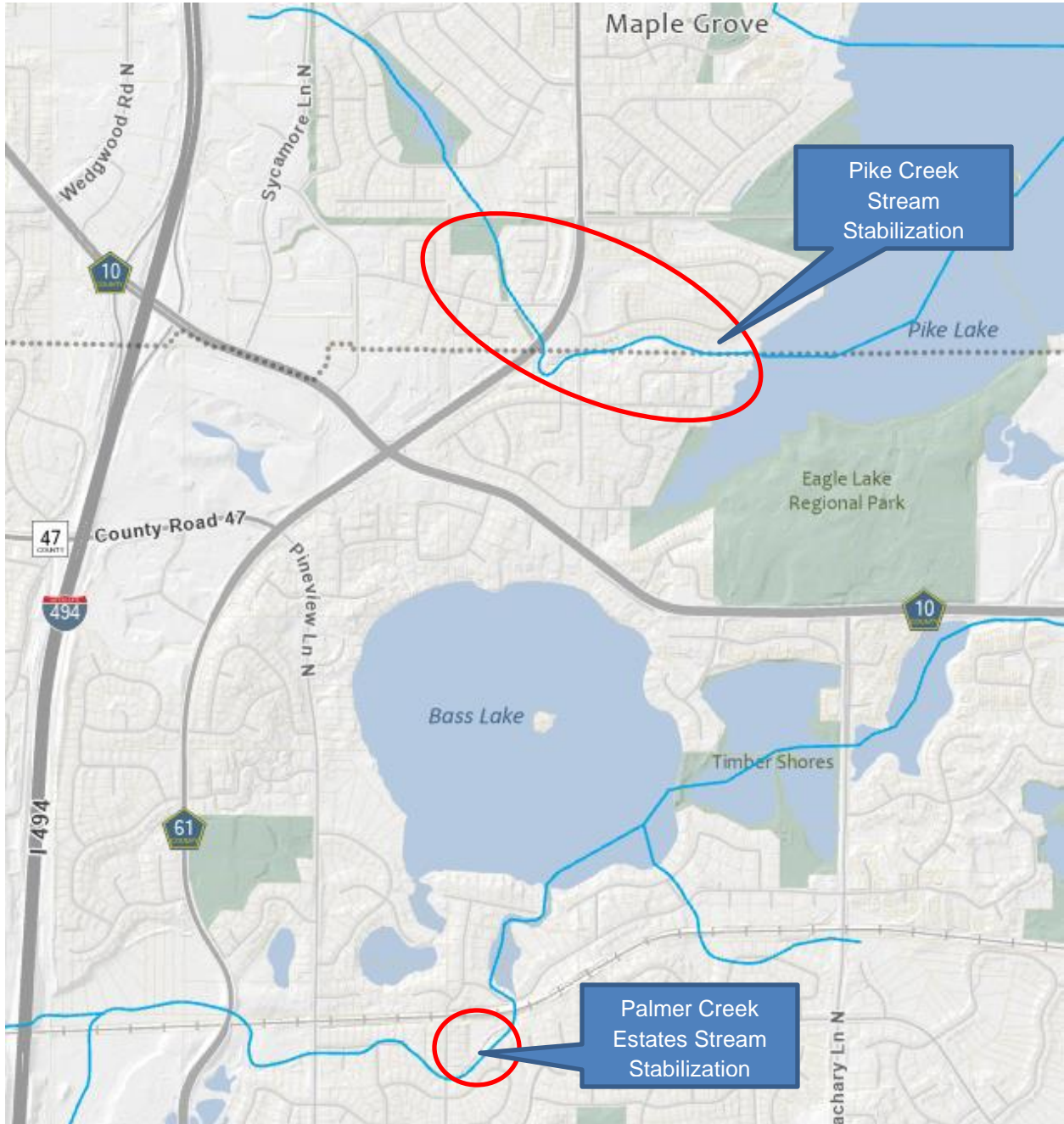
Also of note, the cities of Maple Grove and Plymouth paired up to submit a grant application for Pike Creek stabilization, and that project was also recommended for approval. The two cities jointly completed a stream restoration of Pike Creek between Hemlock and Pike Lake about 20 years ago.

Watershed Based Implementation Funding

Attached is background and guidance from BWSR regarding the recently approved watershed Based Implementation Funding (WBIF). You may recall that the Shingle Creek Watershed Planning Area (WPA) was allocated \$95,501 and the West Mississippi WPA \$75,000. In early 2022 the TAC will meet to begin the required Convene process to discuss how to allocate those funds, which will become available July 1, 2022.



now part of



11/19/21

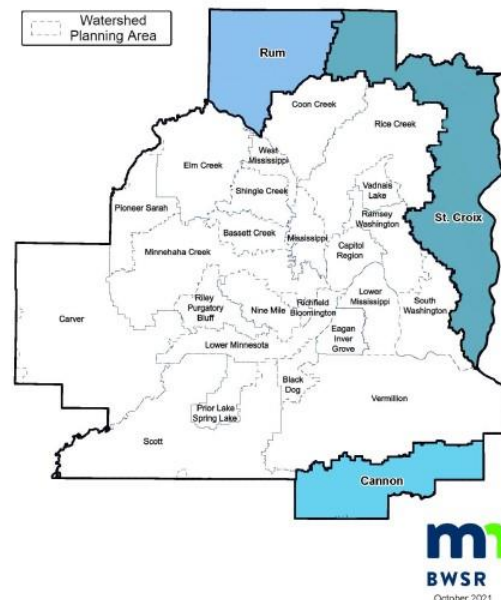
Metro Area Watershed-Based Implementation Funding (WBIF) Program FY22-23 Convene Process Guidance

The purpose of WBIF is to supplement existing funding to accelerate clean water activities (practices, projects, and programs) toward advancing Minnesota’s water resources goals through prioritized and targeted cost-effective actions with measurable water quality results.

In the seven-county Metropolitan Area (Metro), only activities identified in the *implementation section* of a state approved and locally adopted comprehensive watershed management plan developed under Minnesota statutes §103B.101, Subd. 14 or §103B.801, watershed management plan required under §103B.231, county groundwater plan authorized under §103B.255, or a Metro soil and water conservation district enhanced plan as described in the “*Metro SWCD Enhanced Comprehensive Plan Options Guidance Document*” (<https://bwsr.state.mn.us/watershed-based-implementation-funding-program>) and authorized under §103C.331 are eligible to be funded. Activities must also have a primary benefit towards water quality.

For purposes of this document, the group of participants in each watershed allocation area (see map) will be called a partnership (e.g., Rice Creek partnership or Rum partnership) and meetings will be referred to as convene meetings.

Twin Cities Metro Area Allocation Map for the Watershed-based Implementation Funding Program



Convene Meeting Process

The convene meeting process allows the partnership to jointly coordinate on the development of a WBIF budget request for submittal to BWSR that is prioritized, targeted and measurable. Each partnership will include one decision-making representative (participant) from each watershed district and/or watershed management organization, soil and water conservation district, county with a current groundwater plan, and up to two decision-making representatives from municipalities within the allocation area.

Prior to the initial meeting, individual organizations must select one decision-making representative to the partnership. Municipalities in each allocation area must coordinate prior to the start of the convene process to self-select up to two decision-making representatives. Municipal representatives are expected to communicate with other municipalities on the solicitation and selection of projects and

activities during the process. The partnership can then either select a local government entity (or entities) to coordinate and facilitate the convene meeting(s) or request assistance from BWSR by contacting the Board Conservationist (BC). The BWSR BC and Clean Water Specialist (CWS) must be invited to convene meetings. Meeting notes that document the general discussion, decisions, and attendees will be taken by the facilitating entity and shared with the partnership soon after each meeting and be made available upon request.

Each partnership must meet at a minimum of one time prior to submitting a budget request. Ideally, partnerships will develop a shared understanding of proposed activities during the convene meeting process. In order to improve the efficiency of the convene meeting process, BWSR recommends the following meeting objectives.

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).
Partnerships may select activities by:
 - Developing a list of potential activities from eligible plans,
 - Dividing funding among eligible entities in an equitable manner,
 - Selecting a few priority waterbodies (lake, streams) and/or groundwater areas to prioritize activities,
 - Using agreed upon criteria to select activities, or
 - Using a process approved by the BWSR Central Region Manager.
3. Select the highest priority, targeted, measurable, and eligible activities to be submitted to BWSR as a budget request (see submittal process below).
4. 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.

Eligibility

To better understand the eligibility of proposed activities, BWSR recommends that you first refer to the FY22-23 WBIF Policy at <https://bwsr.state.mn.us/grant-program-policies>. If there are questions regarding eligibility, it is recommended that the BWSR BC be consulted as early as possible.

The partnership must send the BWSR BC a list of partnership-approved activities prior to submittal of an eLINK budget request when there will be multiple grantees per watershed allocation area to ensure funds are not being overextended. This list should include the project title and description, water resource(s), proposed measurable outcome(s), grant funds requested, plan reference(s), entity requesting funding (grantee), and fiscal agent (if different from grantee).

Even if your partnership will not have multiple grantees, it is still recommended that partnerships provide the BWSR BC this same list of project details prior to completion of a budget request in eLINK in order to accelerate the eligibility screening process. This step could reduce the need for additional meetings or the number of times an eLINK budget request is completed.

A template can be provided if requested. For plan references, please provide the title(s) to the eligible water management plan(s), page number where these are found in the *implementation section* of the

eligible plan(s), and weblink to the referenced plan(s).

Submittal of the Budget Request

Once the activities have been agreed upon by the partnership, each grantee will then be responsible for submitting an eLINK (<https://bwsr.state.mn.us/elink>) budget request to BWSR. BWSR may deny the budget request for reasons such as activities are ineligible according to the WBIF Policy, activities are not identified in the implementation section of an eligible plan, requested amount is inaccurate, the request is incomplete, etc. Please save the budget request information outside of eLINK as this information is not retained in eLINK if a budget request is denied and a new budget request would need to be submitted.

Once the eLINK budget request is approved by BWSR, each grantee will be responsible for completing an eLINK work plan, which needs to be approved by BWSR **no later than March 30, 2023**. Note that if a work plan cannot be approved by this date, BWSR will reallocate these funds through the WBIF Program. Therefore, we highly recommend that eLINK budget requests are submitted no later than November 30, 2022 and the eLINK work plan is submitted by December 30, 2022. The work plan must be approved by BWSR prior to funds being distributed.

Guidance on the eLINK budget request and work plan can be found at <https://bwsr.state.mn.us/grant-profile-watershed-based-implementation-funding> under “Resources”.

Timeline (hard deadlines are in bold font)

- BWSR holds informational meeting(s) (Jan. – Feb. 2022)
- Organizations select decision-making representatives for convene meetings (Jan. – March 2022)
- Partnerships select meeting coordinator/facilitator (Spring 2022)
- 1-2 convene meetings held (Spring 2022)
- Funding available (**July 1, 2022**)
- Send list of partnership-approved activities to BWSR – this is required for areas with multiple grantees and recommended for other areas (prior to the submittal of the eLINK budget request)
- Submit eLINK budget requests (July 2022 – Nov. 2022)
- eLINK Work Plan submittal deadline (Aug. 2022 – Dec. 2022)
- eLINK Work Plan approval deadline (**March 30, 2023**). Note that if a work plan cannot be approved by this date, BWSR will reallocate these funds through the WBIF Program.
- Grant expiration date (**Dec. 31, 2025**)

Additional Information

- Please see the WBIF Policy, Allocation Table, FAQs and other guidance documents on our website at <https://bwsr.state.mn.us/watershed-based-implementation-funding-program>.
- More information about the terms “prioritize, target, and measure” can be found at https://bwsr.state.mn.us/sites/default/files/2021-11/WP_1W1P_guidebook.pdf.
- Partnerships should consider the high-level priorities of the Nonpoint Priority Funding Plan (<https://bwsr.state.mn.us/reports>).



To: Shingle Creek WMO TAC/Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: December 3, 2021

Subject: Planning Grants for Resilience

**Recommended
Commission Action**

Consider submitting a Resiliency Grant to MPCA to use the HUC8 watershed model to predict future flood areas based on changing precipitation patterns, identify infrastructure at risk, and develop planning guidance.

This is a new MPCA grant program in 2021 providing financial assistance to undertake **planning for increased resilience** to the impacts of Minnesota's changing climate (warmer and wetter with more damaging rains and cold weather warming, and more extreme heat and drought in the future) **within any of the following three focus areas: stormwater, wastewater, community resilience.**

Some of the stormwater planning activities that can be funded through this grant are:

- Vulnerability assessment using hydrologic/hydraulic modelling to identify areas (e.g. stream corridors, bridges, intersections, etc.) that are at increased risk for flooding, including assessing potential scenarios of short- and long-term changes to precipitation.
- Inventory of infrastructure issues to identify critical impacts (e.g. number of structures flooded, frequency of flooding, social vulnerability, local environmental impacts, etc.), resulting in a prioritized list of critical areas needing infrastructure improvements to increase resilience.

The HUC8 model update identified flood risk areas based on current climate and weather patterns. As we continue to experience a non-stationary climate, this model provides an opportunity to explore the potential for flood risk 50-100 years out and identify critical infrastructure for protection before the need arises. It is our suggestion that the TAC and Commission consider submitting a grant application to include the following activities:

1. In recent discussions with the State Climatologist and with Hennepin County previously while working on similar resiliency assessment for Minnehaha Creek, it seems a reasonable proxy for the 2050-2060 critical event is the 90th percentile Atlas 14 precipitation depth, or the 500 year event depth, which in many cases is very close to the 90th percentile. Conduct additional model runs using the selected depth and map the resulting flood risk areas.
2. Use GIS and field surveys to identify critical public and private infrastructure that could be impacted with an emphasis on structures, crossings, and road flooding. Prioritize the list based on impacts to public health and safety and identify potential improvements to increase resiliency.
3. Develop policy and technical guidance to guide development or redevelopment in those areas.

Our back of the envelope estimate is about \$25,000 to complete this work. The grant program requires a 10% match, so the Commission's investment would be about \$2,500. Funding would be available in spring 2022 and run through June 2023.

This grant prioritizes (but is not limited to) communities with higher concentrations of low-income residents, people of color and non-English speakers, including tribal communities. Much of the lower watershed includes large parts of Minneapolis, Brooklyn Center, Brooklyn Park, Robbinsdale, Crystal, and New Hope are located in these MPCA-identified areas for Environmental Justice.

Shaping priorities for protecting natural resources in Hennepin County

We need your input! Let us know how you would like to be engaged in the update of the Hennepin County Natural Resources Strategic Plan

From lakes and rivers to urban parks, forests and prairies, Hennepin County has an abundance of diverse landscapes and natural resources. These natural resources provide critical habitat for wildlife, protect water quality, offer recreational opportunities, and enhance our collective quality of life.

We all play a role in protecting our natural resources, and we need to hear from you. We are seeking input from the community as we update the Hennepin County Natural Resources Strategic Plan, which will define our natural resources goals and strategies for the next 10 years. The updated plan will seek to better align with new county initiatives, shifting demographics, and changing landscapes. This is the first opportunity to incorporate the county's climate and racial equity priorities into the foundation of the plan.

We will be seeking input from the community throughout the year-long plan development process to ensure your values and priorities are reflected.

About the Hennepin County Natural Resources Strategic Plan

The Hennepin County Natural Resources Strategic Plan guides the county's work to improve, protect, and preserve natural resources. The plan provides a framework for our natural resources policies, programs, and partnerships. This plan guides the duties and authorities of the Soil and Water Conservation District, a role that Hennepin County fulfills. The plan also includes science and data-based information to guide staff in addressing the technical issues facing surface waters, groundwater, natural resources, wildlife, and soils of Hennepin County.

Hennepin County's role in protecting natural resources

Work the county does to protect land and water resources includes:

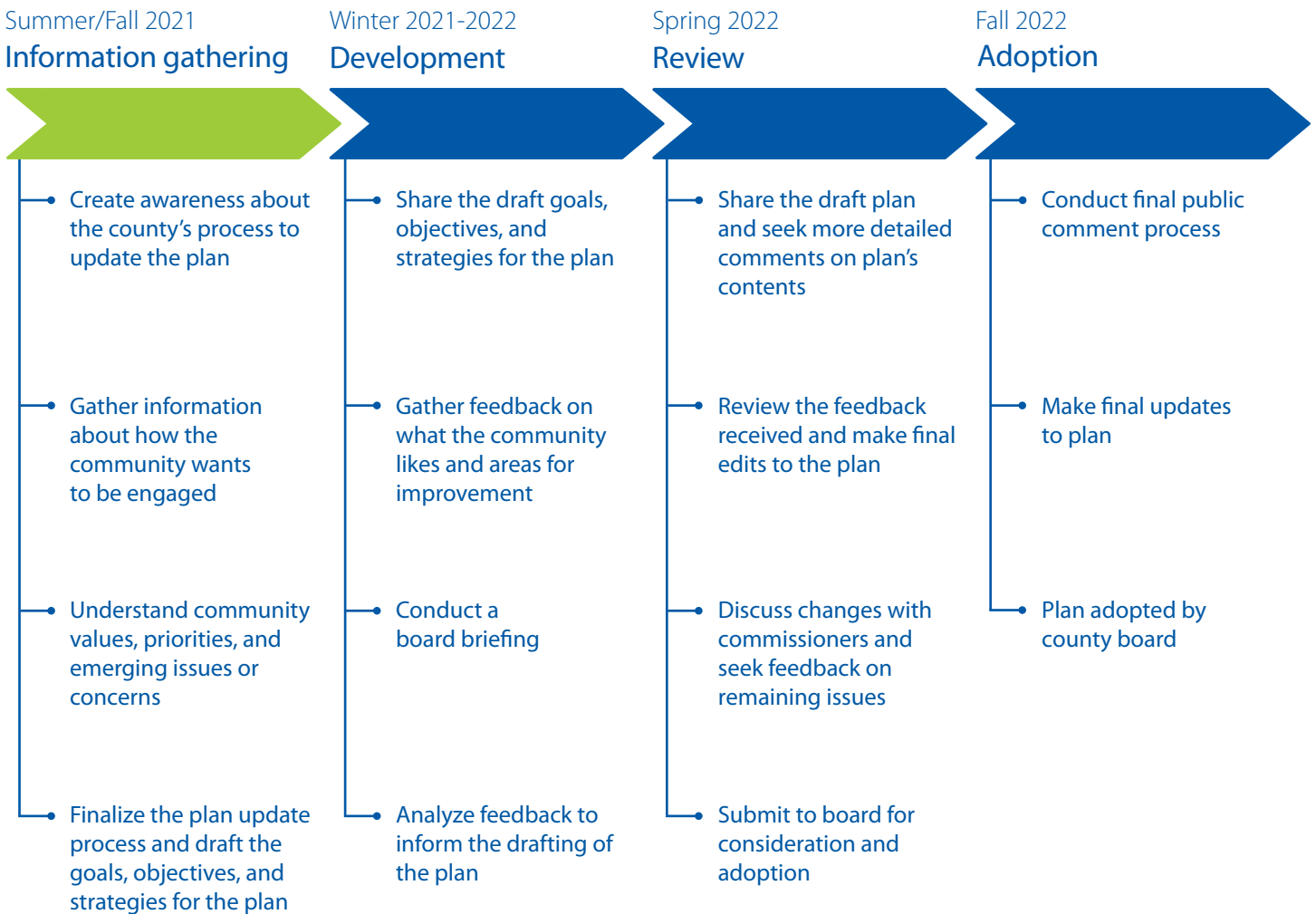
- Protect and restore natural areas, including managing and acquiring conservation easements to permanently protect the best remaining natural areas in the county.
- Protect and restore wetlands, including enforcing the state's Wetland Conservation Act.
- Improve water quality by partnering with local watershed management organizations and cities.
- Prevent the spread of noxious weeds and aquatic invasive species by conducting inspections, educating residents, and working with partners on projects.
- Improve and diversify the tree canopy by growing, planting and maintaining healthy trees, working with partners on large-scale planting events and through grants, managing threats to the tree canopy, and educating the public.
- Educate residents and provide technical and financial assistance to landowners on topics such as sustainable landscaping, agricultural best management practices, soil health initiatives, and other practices to protect water quality and wildlife habitat.
- Manage navigational buoys and public access points for several public waters, including Lake Minnetonka, Lake Independence and Lake Sarah.



Plan update process and timeline

Staff are planning the update process now. We anticipate four phases, each of which will include community engagement. Staff are committed to listening to understand community values about natural resources, learn about their priorities, and identify emerging issues or concerns that should be considered in the plan.

Each phase will include opportunities for the public to offer feedback and stay up to date on the progress toward the adoption of the updated plan. A variety of engagement tools will be used throughout the process, including surveys, meetings, and one-on-one conversations. Staff will share updates through the Natural Resources Strategic Plan email list, on the county’s website, and through social media and local news outlets.



Stay up to date

Learn more at hennepin.us/natural-resources-plan and sign up for email updates to stay informed of the process each step of the way.





To: Shingle Creek/West Mississippi WMO Commissioners
From: Ed Matthiesen, P.E.
Diane Spector
Date: December 3, 2021
Subject: November 2021 Staff Report

**Recommended
Commission Action**

For discussion and information.

General Updates

See the separate items on the Hennepin County Chloride Initiative and grants updates.

Project Updates

Crystal Lake Management Plan. Work has concluded for the season.

Bass and Pomerleau Lakes Management Plan. See the separate item with the project final report.

Meadow Lake Management Plan. The Meadow Lake drawdown began on November 18 and is ongoing. The weather has been very cooperative, and pumping has proceeded even with a film of ice on the surface. Staff are working with the contractor to firm up the contingency plans in the event there is a late season rain event, or how to deal with any remaining pools. We will have a presentation at the December 9 meeting showing photos of the pumping.

Connections II and Bass Creek Restoration Projects. Both these projects will be bid in December for construction in spring-summer 2022.

SRP Extension Project. The project specs and quote package will be reviewed by the Crystal City Council this month along with the cooperative agreement (see separate agenda item), and quotes will then be obtained in January 2022. It is expected that work will proceed starting approximately in March depending on the weather and be complete by mid-summer 2022.



The Meadow Lake pump and enclosure in a resident's backyard at the start, with the intake pipe extending out into the lake.

Two weeks later:



