

January 6, 2022

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**, **January 13**, **2022**, 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 begin the regular meeting, we will welcome Dr. Ken Blumenfeld, Senior Climatologist with the Minnesota State Climate Office and an Adjunct Assistant Professor. He has been tracking precipitation and will give us his thoughts on how the Commissions can plan for changing precipitation.

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

TAC Members

Member Cites Hennepin County Wenck/Stantec Reviewing Agencies

Troy Gilchrist

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Email: judie@jass.biz • Website: www.shinglecreek.org

AGENDA - January 13, 2022

A combined regular meeting of the Shingle Creek (SC) and West Mississippi (WM) Watershed Management Commissions will be convened Thursday, January 13, 2022, 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.

	SCWM	1.	Call to order.
	SPEAKER		Dr. Ken Blumenfeld, Senior Climatologist with the Minnesota State Climate Office and Adjunct
			Assistant Professor. How can the Commissions plan for changing precipitation?
	SCWM		a. Roll call.
٧	SCWM		b. Approve agenda.*
٧	SCWM		c. Approve minutes of last meeting.*
		2.	Reports.
٧	SC		a. Treasurer's Report and Claims** - voice vote.
٧	WM		b. Treasurer's Report and Claims** - voice vote.
	SCWM	3.	Open forum.
		4.	Project reviews.
٧	SC		a. SC2022-01 5308 Perry Ave., Crystal.*
		5.	Third Generation Watershed Management Plan.
٧	SC		a. Draft 2022 Work Plan.*
٧	WM		b. Draft 2022 Work Plan.*
	SCWM	6.	Fourth Generation Watershed Management Plan.*
	SCWM		a. Rules Update.
	SCWM		b. Maintenance Policy.*
	SCWM		c. Public Input and Review.
		7.	Water quality.
	SC		a. HUC8 Study – update.*
		8.	Grant opportunities.
٧	SC		a. Crystal Lake Management Plan change order.*
٧	SC		b. Bass Lake grant application.*
		9.	Education and public outreach.
	SCWM		a. WMWA update.**
	SCWM		b. 2021 Social media metrics.**
	SCWM		c. Next WMWA meeting – via zoom. 8:30 a.m., Tuesday, February 8, 2022.
		10.	Communications.
	SCWM		a. Staff Report.*
			b. Communications Log.*
		10.	Other business.
	SCWM	-	a. Annual Appointments – Maple Grove, Minneapolis, New Hope, Champlin and Maple Grove.
	SCWM		b. Nominating Committees.
		11.	Adjournment.
			- 7

MINUTES December 9, 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 12:49 p.m. on Thursday, December 9, 2021.

Present for Shingle Creek were: David Vlasin, Brooklyn Center; 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; Troy Gilchrist, Kennedy & Graven; and Amy Juntunen and Judie Anderson, JASS.

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

Also present were: Andrew Hogg, Brooklyn Center; Mitchell Robinson and Melissa Collins, Brooklyn Park; Mark Ray, Crystal; Derek Asche, Maple Grove; Liz Stout and Katie Kowalczyk, Minneapolis; David Lemke and Nick Macklem, New Hope; Amy Riegel and Ben Scharenbroich, Plymouth; Richard McCoy, Robbinsdale; Steve Christopher, Board of Water and Soil Resources (BWSR); and Joe Scalzo, Schmidt Lake Improvement Association.

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 Jaeger to approve the **minutes of the November 4, 2021, regular meeting.*** *Motion carried unanimously.*

Motion by Johnson, second by Prasch to approve the **minutes of the November 4, 2021, regular meeting.*** *Motion carried unanimously.*

III. Finances and Reports.

A. Motion by Jaeger, second by Schoch to approve the Shingle Creek **December Treasurer's Report* and claims** totaling \$43,645.39. Voting aye: Vlasin, Prasch, Orred, Jaeger, Schoch, Grant, Roach, Polzin, and Sicora; voting nay – none.



- **B.** Motion by Johnson, second by Jaeger to approve the **West Mississippi December Treasurer's Report* and claims** totaling \$15,292.37. Voting aye: Vlasin, Prasch, Jaeger, and Johnson; voting nay none; absent Champlin.
- IV. Open Forum.
- V. Project Reviews.
- VI. Fourth Generation Watershed Management Plan.
- **A.** Kemmitt presented initial **Story Map ideas** developed by Staff. Commissioners offered suggestions for additional interactive activities that could be incorporated into the maps. Updates will be provided at future meetings.

[Butcher arrived 1:18 p.m.]

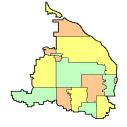
- **B.** Rules and Standards.* As part of the Fourth Generation Plan development process, the Commissions will be reviewing the existing Rules and Standards of the Shingle Creek/West Mississippi Watershed Management Commissions and revising them as necessary to:
 - **1.** Align with the new MS4 general 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 from the Commissions 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 today's Technical Advisory Committee (TAC) meeting, members discussed the three items listed above. Staff recapped those discussions and will draft some proposed language revisions for discussions with the TAC and the Commissions at their January 13, 2022, meetings.

C. Maintenance and Resilience Funding.* The TAC and Commissions have previously discussed the potential to create an annual levy for "maintenance" to fund work resulting from capital projects which don't fall neatly into either operations or bricks-and-mortar projects. This would include such work as ongoing rough fish management, aquatic vegetation management, and 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 a 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.

Staff estimated 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 agreed that there was sufficient statutory authority for a levy for maintenance. However, when the pandemic struck, there was no interest in considering a new levy in that time of uncertainty.

However, the need still remains. Staff believes that the magnitude of annual potential need is still 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. 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? The following is a partial list Staff has been discussing:

- 1. Annual rough fish maintenance management
- 2. Curly-leaf pondweed maintenance treatment
- 3. Carp barrier cleaning
- 4. Carp barrier repair and maintenance
- 5. SRP filter maintenance or refresh
- 6. Emergency repairs
- 7. Channel bank maintenance where Commission has done restoration projects
- 8. Crystal Pond filter bench maintenance if needed, till in biochar
- 9. Champlin Pond filter bench maintenance if needed
- 10. Lake alum touchup treatment
- 11. 639W weir maintenance

After initial discussion, it was agreed to begin to craft a potential policy. The earliest a levy could be considered would be fall 2022 for collection in 2023.

VII. Water Quality.

A. Bass and Pomerleau Lakes Alum Project.* Bass and Pomerleau lakes are located in Plymouth. Bass Lake is shallow and eutrophic; 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. 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.

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. 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. Staff's December 3, 2021, 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. Alum was applied in two doses in each lake. The first dose was applied in May 2019, the second in October 2020. 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.

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, one location was sampled in Pomerleau Lake. Cores were incubated in the lab in triplicates and averages were reported for each station and year.

Anoxic release rates were 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.

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. TP was particularly low in 2021, with the lowest average TP on record since 1994 and 1996 for Bass and Pomerleau, respectively.

Staff's memo details the estimated total final project cost, excluding the final two years of submerged aquatic vegetation (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.

Motion by Schoch, second by Roach to accept the report. *Motion carried unanimously*.

Motion by Roach, second by Schoch to set aside in a dedicated account the funds remaining from this project for the purposes noted above. *Motion carried unanimously*.

- **B.** Hennepin County Chloride Initiative.* The HCCI met on November 29. Following are updates and links from that meeting.
- 1. 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 demographics.

- **2. 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/
- **3.** 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 and ice and limits the need for salt application. https://www.mwmo.org/news/no-salt-required-sidewalk-snowmelt-system-fights-snow-ice/.
- **4. 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)
- **5. 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
- c. SRP Channel Extension Project.* 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 (Phase 2). After discussing with the TAC and the City of Crystal, Staff agreed that it made sense to delay the start of Phase 1 and construct both phases as one project. Included in the meeting packet are:
- **1. 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 Commission and City attorneys and is recommended for approval. Motion by Schoch, second by Roach to approve the agreement. *Motion carried unanimously*. Ray reported that the agreement was approved by the City on December 7.

- 2. 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. Cost of this work is \$46,070. It is recommended for approval. Motion by Roach, second by Schoch to approve the revised scope of work. *Motion carried unanimously*.
- **D.** The **Technical Advisory Committee (TAC)** met prior to this meeting. Member discussion focused on potential revisions to the Commissions' rules and standards and maintenance and resilience funding. They will continue these discussions at their next meeting, via Zoom, January 13, 2022, at 11:00.

VIII. Grant Opportunities.

A. 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. Staff reported 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.

The cities of Maple Grove and Plymouth have 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.

- **B.** Watershed-Based Implementation Funding (WBIF). Included in the meeting packet is background and guidance from BWSR regarding the recently approved WBIF. In early 2022 the TAC will meet to begin the required Convene process to discuss how to allocate these funds, which will become available July 1, 2022. The Shingle Creek Watershed Planning Area (WPA) was allocated \$95,501, the West Mississippi WPA \$75,000.
- **C. Planning Grants for Resilience.*** 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.
- **1.** Some of the **stormwater planning activities** that can be funded through this grant are:
- **a.** Vulnerability assessment using hydrologic/hydraulic modeling 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.
- **b.** 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.



- 2. 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:
- a. 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.
- **b.** 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.
- **c.** Develop policy and technical guidance to guide development or redevelopment in those areas.

Staff estimate a cost of 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 including large parts of Minneapolis, Brooklyn Center, Brooklyn Park, Robbinsdale, Crystal, and New Hope are located in these MPCA-identified areas for Environmental Justice.

Motion by Schoch, second by Orred to submit an application for the work described above, with the Commission's share to be taken from the Subwatershed Assessment budget line. *Motion carried unanimously*.

IX. Education and Public Outreach.

The West Metro Water Alliance (WMWA) met on November 9, 2021. Three candidates were interviewed for the **Watershed PREP educator position and Jessica Sahu Teli** was selected for the position. Motion by Schoch, second by Jaeger to approve the Professional Services Agreement for Educational Services between the Commission and SahuTeli. *Motion carried unanimously*.

The December WMWA meeting has been cancelled. The **next meeting** is scheduled for 8:30 a.m., Tuesday, January 11, 2022.

X. Staff Report.

The December Staff Report included updates on items previously discussed in this meeting as well as the Meadow Lake drawdown and the Connections II project.

XI. Communications.

- A. Included in the meeting packet was a flier updating the progress on the Hennepin County Natural Resources Strategic Plan.
 - **B.** November 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 2:50 p.m.

Respectfully submitted,

Judie A. Anderson, Recording Secretary

JAA:tim

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SHINGLE CREEK WATERSHED MANAGEMENT COMMISSION

PROJECT REVIEW SC2022-01: 5308 Perry Ave. N. House Construction

<u>Owner</u>: Scott Kevitt <u>Company</u>: Private owner

Address: 5306 Perry Ave, N. Crystal, MN 55429

Engineer: Dan Schmidt **Company:** Sathre-Bergquist

Address: 150 South Broadway, Wayzata, MN 55391

Phone: 952-476-6000

Email: schmidt@sathre.com

Purpose: Construction of one home on 1.32 acres.

Location: 5308 Perry Ave. N., Crystal (Figure 1).

Exhibits: 1. Project review application and project review fee of \$300, dated 1-6-2022, received 1-6-2022.

2. Site plan, preliminary plat, grading (Figure 2), utility, erosion control, and landscaping plans dated 11-8-2021, revised 1-7-2022, received 1-7-2022.

Findings:

- 1. The proposed project a fill in lot on the southwest corner of Upper Twin Lake. The site is 1.32 acres. Following development, the site will be 8 percent impervious with 0.10 acres of impervious surface, an increase of 0.10 acres.
- 2. The complete project application was received on 1-7-2022. To comply with the 60-day review requirement, the Commission must approve or deny this project no later than the February Commission meeting on 2-10-2022. Sixty calendar-days expires on 3-8-2022.
- 3. 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.

Runoff from the site is proposed to be routed by overland flow through a 30' native vegetation vegetated buffer. The applicant meets Commission water quality treatment requirements.

- 4. Commission rules require that site runoff is limited to predevelopment rates for the 2-, 10-, and 100-year storm events. Runoff from the building flows over four times the hard surface on a turfed area. The applicant meets Commission rate control requirements.
- 5. Commission rules require the site to infiltrate 1.0 inch of runoff from new impervious area within 48 hours. The new impervious area on this

SC2022-001:

Wenck Associates, Inc.

- site is 0.10 acres, requiring infiltration of 0.008 acre-feet (363 cubic feet) within 48 hours. The applicant proposes the lawn and buffer that have the capacity to infiltrate the required volume within 48 hours. The applicant meets Commission volume control requirements.
- 6. The erosion control plan is included consisting of a rock construction entrance, perimeter silt fence and WIMCO catch basin inserts. The erosion control plan meets Commission requirements.
- 7. The National Wetlands Inventory does not identify any wetlands on the site but the lake edge corresponds with the NWI. Shingle Creek is LGU for WCA administration. A wetland buffer a minimum of 20 feet in width and averaging 30 feet in width is provided. The applicant meets Commission wetland requirements.
- 8. There are Public Waters abutting the site. Twin Lake is a DNR Public Water. It is impaired for nutrients. The proposed project is not anticipated to negatively impact Twin Lake. The applicant meets Commission Public Waters requirements.
- 9. There is FEMA-regulated floodplain on this site. The low floor elevation of the building is at least two feet higher than the high-water elevation of the detention ponds/infiltration basins according to Atlas 14 precipitation. The 100-year elevation for Twin Lake is 856.0 and the basement floor is 858.5. The applicant meets Commission floodplain requirements.
- 10. The site is not located in a Drinking Water Management Area (DWSMA). The applicant meets Commission drinking water protection requirements.
- 11. A public hearing is not needed because this is an already platted lot. The applicant however with be going through the City of Crystal permitting process. The applicant meets Commission public notice requirements.]
- 12. A draft Operations & Maintenance (O&M) agreement is not needed.
- 13. A Project Review Fee of \$300.00 has been received.

Recommendation: Recommend approval subject to the following condition:

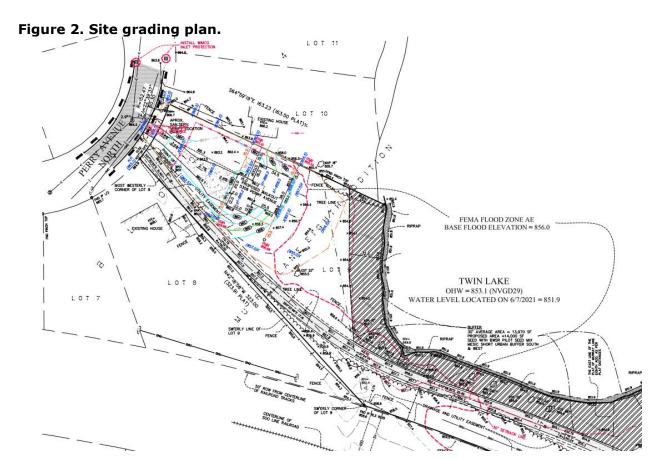
1. Provide an on-site verification with photos and seed tags that the vegetation buffer has been planted in the proposed area with the BWSR native species noted on the 1/7/2022 revised drawing.

Engineers for the Commission		
Ed Matthiesen, P.E.	Date	

SC2022-001:



SC2022-001:





To: Shingle Creek WMO Commissioners

From: Ed Matthiesen, P.E.

Diane Spector

Date: January 7, 2021

Subject: Draft 2022 Work Plan

Recommended Commission Action Review, discuss, and propose desired modifications. Approve the work plan or request it be brought back in February.

The following are suggested activities for the 2022 Work Plan. While work on the Fourth Generation Plan will be ongoing throughout the first part of the year, there are also routine, ongoing activities as well as some Commission-funded construction projects expected. Note that we will bring a proposed 2022 Monitoring Plan to the Commission in February, which will provide additional details. Activities in calendar form are attached.

1. Continue to implement TMDLs.

- a. Complete the 5-year performance review for the Bass and Shingle Creek Biotic and DO TMDL.
- b. Complete aquatic vegetation surveys on Bass Lake and provide aquatic invasive species treatment as necessary.
- c. Partner with the City of Robbinsdale to continue implementing the Crystal Lake Management Plan, including carp removal, aquatic vegetation management, and alum treatment.
- d. Partner with the City of New Hope to implement the Meadow Lake Management Plan, including potential additional vegetation and fish management and preparation for an alum treatment.
- e. Partner with the Cities of Brooklyn Park and Brooklyn Center to undertake Connections II streambank improvements for Shingle Creek from Regent Avenue to Brooklyn Boulevard.
- f. Partner with the City of Brooklyn Park to undertake Bass Creek Park streambank improvements from Cherokee Drive to I-694.
- g. If permission from MAC is secured, extend the SRP Reduction filter along the Wetland 639W overflow channel.
- h. Continue to pursue grant funding for TMDL implementation projects.
- Expand the Directly Connected Untreated Areas geodatabase to include boundaries of the untreated areas directly connected to the lakes in the watershed. (Streams was completed in 2017.)
- j. Stay abreast of other regional and state TMDLs.



2. Partner with other organizations to increase reach and cost effectiveness.

- a. Participate in the West Metro Water Alliance joint education and outreach group.
- b. Continue to partner with the USGS to operate the Queen Avenue monitoring site.
- c. Partner with the USGS, DNR, and other interested parties to stay abreast of groundwater issues.
- d. Complete the HUC study in partnership with the DNR.

3. Continue ongoing administration and programming.

- a. Conduct routine Commission lake water quality monitoring and aquatic vegetation and fish surveys on Magda and Ryan Lakes and grant funded monitoring on Crystal and Meadow Lakes.
- b. Conduct Commission routine flow and water quality monitoring at SC-0 and SC-3 on Shingle Creek and Bass Creek Park (BCP) on Bass Creek as well as two DO longitudinal studies as part of the Shingle and Bass Creeks Dissolved Oxygen (DO) and Biotic Integrity TMDL 5 Year Review.
- c. If available in 2022, sponsor volunteer stream monitoring through RiverWatch and wetland monitoring through WHEP (Hennepin County).
- d. Sponsor volunteer lake monitoring through CAMP (Met Council) on Bass, Upper, Middle, and Lower Twin Lakes.
- e. Complete reviews of development and redevelopment projects as necessary.
- f. Prepare an annual water quality report.
- g. Solicit cost-share projects from member cities funded from the Cost Share Fund and the annual \$100,000 levy and the Partnership Cost Share Fund and the annual \$50,000 levy.
- h. Review feasibility studies for 2022 proposed capital projects, undertake Plan Amendments, hold public hearings, order projects and certify levies.
- i. Prepare a 2023 annual budget.
- j. Host a Convene Meeting for the 2022 Watershed-Based Funding awarded to the Shingle Creek Partnership.
- k. Complete the Fourth Generation Management Plan and submit for public and BWSR review.
- 1. Invite three guest speakers to make lunchtime water resources presentations.
- m. Tour project sites in the watershed.

2022 PROJECTED WORKPLAN	Jan	Feb	Mar	Apr	May	Jun	luL	Aug	Sep	Oct	Nov	Dec
ROUTINE BUSINESS												
Set annual workplan												
Set annual monitoring program												
Call for CIP/plan amendment proposals												
TAC considers CIP/ amendments and refers to Commission												
Call for public meeting on any proposed plan amendments												
Annual water quality report												
Lake monitoring												
Stream monitoring												
Adopt any plan amendments and set max levy												
Plan amendments and maximum levies to County												
Initial annual budget review for following year												
Finalize budget and send to cities												
Continue Fourth Generation Management Plan												
Bass/Shingle Biotic and DO TMDL Five Year Review												
Clean Water Fund grant applications												
Call for public hearing on proposed capital projects												
Public hearing on proposed capital projects												
Annual progress review, education and outreach report												
PROJECTS												
Bass, and Pom CLP delineation, treatment if necessary												
Crystal Lake Carp Removals												
Crystal Lake second alum treatment												
SRP filter channel extension (if proceeding)												
Meadow Lake monitoring and addl management												
Connections II stream restoration												
Bass Creek stream restoration												



To: West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.

Diane Spector

Date: January 7, 2022

Subject: Draft 2022 Work Plan

Recommended Commission Action Review, discuss, and propose desired modifications. Approve the work plan or request it be brought back in February.

The following are suggested activities for the 2022 Work Plan. While work on the Fourth Generation Plan will be ongoing throughout the first part of the year, there are also routine, ongoing activities. Note that we will bring a proposed 2022 Monitoring Plan to the Commission in February, which will provide additional details. Activities in calendar form are attached.

1. Continue to stay abreast of regional TMDLs.

- a. Continue to identify, pursue grant funding for, and implement projects and programs addressing the bacterial impairment in the Mississippi River.
- b. Stay abreast of other regional and state TMDLs.
- c. Identify boundaries of the untreated areas directly connected to the Mississippi River or other conveyances.

2. Partner with other organizations to increase reach and cost effectiveness.

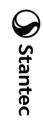
- a. Participate in the West Metro Water Alliance joint education and outreach group.
- b. Partner with the USGS, DNR, and other interested parties to stay abreast of groundwater issues.
- c. Partner with the MWMO to undertake monitoring at the 65th Avenue outfall.
- d. Partner with a member city to complete a subwatershed BMP analysis.

3. Continue ongoing administration and programming.

- a. Undertake routine flow and water quality at two outfalls into the Mississippi River.
- b. If available in 2022, sponsor volunteer stream monitoring through RiverWatch and wetland monitoring through WHEP (Hennepin County).
- c. Complete reviews of development and redevelopment projects as necessary.
- d. Prepare an annual water quality report.



- e. Solicit cost-share projects from member cities funded from the Cost Share Fund and the annual \$50,000 levy.
- f. Review feasibility studies for 2022 proposed capital projects, undertake Plan Amendments, hold public hearings, order projects and certify levies.
- g. Prepare a 2023 annual budget.
- h. Complete the Fourth Generation Management Plan and submit for public and BWSR review.
- i. Host a Convene Meeting for the 2022 Watershed-Based Funding awarded to the West Mississippi Partnership.
- j. Invite three guest speakers to make lunchtime water resources presentations.
- k. Tour project sites in the watershed.





2022 PROJECTED WORKPLAN	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ROUTINE BUSINESS												
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Plan amendments and maximum levies to County												
Initial annual budget review for following year												
Finalize budget and send to cities												
Continue Fourth Generation Management Plan												
Clean Water Fund grant applications												
Call for public hearing on proposed capital projects												
Public hearing on proposed capital projects												
Annual progress review, education and outreach report												
PROJECTS												
None ongoing												



To: Shingle Creek/West Mississippi WMO TAC

From: Ed Matthiesen, P.E.

Diane Spector Katie Kemmitt

Date: January 7th, 2022

Subject: Fourth Generation Plan Update

Recommended
Commission Action
For discussion.

Over the past few months, the TAC and Commissions have begun work on the watersheds' 4th Generation Plan. Since the December 9th, 2021 meeting staff have updates on the following initiatives:

- Potential Maintenance and Resiliency Funding to address ongoing maintenance-type work.
- Rules and Standards Update to align the watersheds' project standards with the 2020 MS4 General Permit, the Minnesota Stormwater Manual, and the City and surrounding watershed requirements.
- Online story map to visualize watershed data, projects, and history.

<u>Maintenance and Resiliency Funding:</u> Staff have drafted a Maintenance and Resiliency Funding policy for TAC and Commission review (attached). The policy addresses the types of work that may be eligible for funding, including any work resulting from capital projects that doesn't fall neatly into either operations or brick and mortar projects. At the January 13th meeting we'd like to discuss the draft policy for comments and suggested changes. A potential topic for discussion includes how the policy relates to ongoing, regular operations and maintenance (O&M). For example, if the Commission were to install a pump and filter, would O&M be handled by the Commission, park boards, or cities?

<u>Rules and Standards Update:</u> Staff are currently working to provide a draft Rules and Standards Update for the 4th Generation Plan. Updates will be presented at the February meeting.

Online Story Map: The Commissions have seen an early-stage online story map draft to accompany the 4th Generation Plan. Work on the story map continues, with updates to layers and data shown. The plan moving forward is to use the story map as a visual, data-driven tool and keep the WMO website as the main source for watershed information. The story map will link back to the website where possible for indepth information on projects, Commission processes, and more.



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 statuary 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 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 of 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 WMC From: Todd Shoemaker

Woodbury

Project/File: 227701170 Date: January 6, 2022

Reference: HUC8 Study Update

Reference: HUC8 Study Update

The Minnesota DNR initiated the process to update FEMA flood risk maps in 2017. One component of that process is to update the hydrologic and hydraulic computer model for each participating Twin Cities Hydrologic Unit Code (HUC) 8 watersheds (i.e., Shingle Creek, Coon Creek, Minnehaha Creek).

Stantec completed the Shingle Creek HUC8 model update and submitted it to the DNR for review in March 2021. The DNR subsequently held a "Flood Risk Review" (FRR) meeting on April 1, 2021, to discuss model results and implications to property owners and local floodplain administrators. There were two key outcomes from the FRR:

- 1. The effective (current) floodplain map and profile differ by up to ten feet. This is a mapping error in either the effective map or profile not a calculation error; regardless, it may create a perceived increase and discrepancy compared to the updated model. The DNR is aware and must be prepared to educate data users.
- There is an increase in flood elevation upstream of Noble Avenue in Brooklyn Center that causes
 encroachment to properties along Unity Avenue. Structures here appear to have been permitted by
 elevating above the effective flood elevation and receiving approval through FEMA's Letter of Map
 Change process.

The DNR paused the flood risk map update in mid-2021 due to staffing shortages, but we were informed on December 21, 2021 that the process is now resuming. Stantec has confirmed the DNR has the most current Shingle Creek model submitted as a result of the 2021 Ryan Lake Subwatershed Assessment. At this time, final review of the Shingle Creek model and updated flood risk maps are scheduled to be completed by September 1, 2022.

Z:\Shingle Creek\GrantOpportunities\2018 Flood Mapping\M - SCWMC re HUC8 Update.docx





To: Shingle Creek/West Mississippi WMO TAC

From: Ed Matthiesen, P.E.

Diane Spector Katie Kemmitt

Date: January 7th, 2022

Subject: Bass Lake Vegetation Improvements

RecommendedFor discussion. Direct staff to move forward with a grant application to pursue work.

The Commission has successfully improved water quality and clarity on Bass Lake in Plymouth, MN through the Bass and Pomerleau Lakes Alum Project. Water quality is the best it has been in decades; however, the native aquatic plant community appears to be limited. Curly-leaf pondweed (CLP) is still present in the lake in significant areas, and overall native species diversity is low.

In January, staff met with the DNR and the Bass Lake Improvement Association (BLIA) to discuss lake vegetation management options moving forward. The DNR was supportive of continued herbicide spottreatments of CLP and recommended native plant introductions from a donor lake to increase plant diversity in the lake. The BLIA would like to prioritize CLP management and was supportive of increasing native plant diversity through plant introductions of plants that won't impede recreation. The DNR provided a list of recommended plants to introduce and will be providing staff with the permitting requirements associated with plant translocation.

Staff discussed pursuing a DNR Conservations Partners Legacy Grant (CPL) in February 2022 for available funds in May 2022 to fund native plant introductions and monitoring efficacy. The DNR CPL grant would fund up to two plant harvest and translocation events and the related pre- and post-monitoring to evaluate efficacy. The BLIA expressed support for pursuing the grant and would be willing to provide volunteer time and designate undisturbed areas of the lake for plant introductions. The DNR would also provide staff support during the translocation events but would not be available to provide all the staff work, which would need to be supplemented by volunteer and Commission staff time.

This would be a relatively low-cost project (<\$25,000) based on the DNR's estimate of the overall level of effort for the plant collection and translocation and follow-up monitoring. The CPL grants require a 10% match. Time spent by volunteers is eligible to serve as a portion of that match as in-kind services. There should be sufficient funds left over in the aquatic vegetation management reserve to provide any additional cash match. If you wish to proceed staff will prepare a draft grant application for your review at the February 10 meeting. The grants are due by February 21.



To: Shingle Creek/West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.

Date: January 7, 2022

Subject: December 2021 Staff Report

Recommended Commission Action

For discussion and information.

General Updates

Staff is working with BWSR to get guidance on how to proceed with the Watershed Based Funding convene meeting and process. The amount allocated to the Shingle Creek partnership is \$95,501 and to West Mississippi is \$75,000. Cities, counties, and WMOs within the watershed are eligible to receive this funding, as determined by the members of the partnership.

Project Updates

Crystal Lake Management Plan. Work has concluded for the season and staff are working with the MPCA on a change order to reallocate some of the alum treatment savings to additional carp management.

Bass and Pomerleau Lakes Management Plan. See the separate item with the potential native vegetation restoration grant project.

Meadow Lake Management Plan. The Meadow Lake drawdown has been completed and pumping infrastructure removed for the winter. Staff will conduct an on-site visit with the contractor and City the week of January 10 and may have more to report at the January 13 meeting.

Connections II and Bass Creek Restoration Projects. Both these projects were bid in December for construction in spring-summer 2022. Bid prices came in below the Engineer's Estimate.

SRP Extension Project. This project is temporarily on hold as the City of Crystal continues to work with MAC to obtain permission to construct the project on MAC property. Once that is secured it is expected that work will proceed starting approximately in March depending on the weather and be complete by mid-summer 2022.



SHINGLE CREEK / WEST MISSISSIPPI WATERSHED MANAGEMENT COMMISSION MONTHLY COMMUNICATION LOG December 2021

			שכבו	Decelline 707T	12
Date	From	То	SC	WM	Description
12-1-2021	Ann Ackerson @ New Hope	Ed Matthiesen	×		Culvert maintenance at Meadow Lake, New Hope
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Dr. Kenneth Blumenfeld @		×	×	Guest speaker for the 2022 monting recognisitation and climate change
	Amy Reigel. City of				WCA Notice of Decision for No Loss finding for a City of Plymouth pipe outfall
12-2-21	Plymouth	SC WMC	×		repair project on Pike Lake.
12-2-21	Amy Reigel, City of Plymouth	SC WMC	×		WCA Notice of Decision for No Loss finding for a City of Plymouth pipe outfall repair project on a public waters wetland.
12-2-21	Amy Reigel, City of Plymouth	SC WMC	×		WCA Notice of Decision for No Loss finding for a City of Plymouth pipe outfall repair project on a public waters wetland.
12-3-21	Ben Scharenbroich	SC WMC	×		WCA Notice of Decision for wetland type delineation for Nathan Lane Business Center
12-3-21	DNR MPARS	SC WMC	×		Notice of issuance of Work in Public Waters permits to City of Crystal for replacing the lift station and sediment removal in Gaulke Pond
12-6-2021	MnDNR	Judie Anderson	×		Gaulke Pond DNR permit for pump station reconstruction, Crystal
12-6-2021	MnDNR	Judie	×		Gaulke Pond DNR permit for Gaulke Pond sediment removal, Crystal
12-6-2021	MnDNR	Judie	×		WCA Notice of Decision for Nathan Lane Business Center, Plymouth
12-14-2021	Alex Holter @ Trust for Public Land	Ed M.	×		Brooklyn Center Elementary School park redesign
12-15-2021	Andrew Hogg @ Brooklyn Center	Ed M.	×		Addendum for AEON-II project review
12-15-2021	Mitch Robinson @ Brooklyn Park	Ed M.		×	10816 Zieglers Dr, need for a project review.
12-16-2021	Maria Riewer @ Boisclair Corp.	Judie A., Ed M.	×		Reimbursement for Brook Gardens rain gardens in Brooklyn Center.
12-16-21	BWSR	SC WMC	×		Notice that the CWF grant request for the Palmer Creek Estates project was approved
12-17-2021	April Londo @ MnDNR	Ed M.	×		Bass Lake Annual Meeting and Data
12-17-2021	Kelly Besser @ Stonebrooke Engineering	Ed M.		×	Three River Park District North Mississippi Regional Trail Project
12-17-2021	Dan Schmidt @ Sathre- Berquist	Diane Spector., Ed M.	×		Project review question for 5308 Perry, Crystal. Adjacent to Upper Twin Lake.
12-17-2021	Minnesota Erosion Control Board	Diane S., Ed M.	×	×	Thank you note for speaking and representing Shingle Creek and West Mississippi at a Webinar.
12-30-2021	Mitch Robinson @ Brooklyn Park	Ed M.	×		Boundary change for Norwood Park