Shingle Creek Watershed Management Commission
West Mississippi Watershed Management Commission

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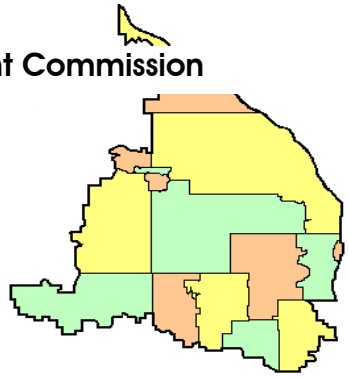


MINUTES
December 9, 2021

(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.*

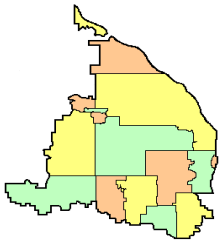
Motion by Jaeger, second by Johnson to approve the **West Mississippi agenda** as amended.* *Motion carried unanimously.*

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

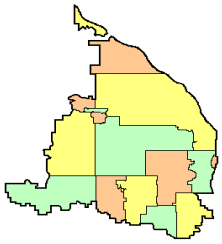
3. Add clarity to how the Commissions will review certain project elements to align with City and surrounding Watershed requirements.

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/

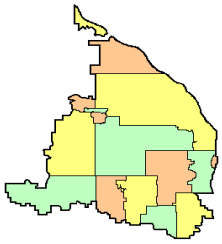
3. Columbia Heights Snowmelt System. The Mississippi WMO highlighted a recent project completed with grant assistance from MWMO: a snowmelt system at the new Columbia Heights Library, and similar upcoming project at the new Columbia Heights City Hall. A pavement heating system at the entryways to the 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.

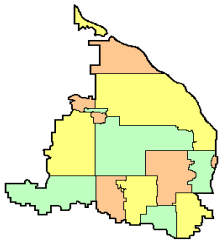
X. Staff Report.

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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