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March 4, 2021

Commissioners
Members of the TAC
Shingle Creek and West Mississippi
Watershed Management Commissions
Hennepin County, Minnesota

The agendas and meeting packets for both the TAC and regular meetings are available to all interested parties on the Commission's web site at <http://www.shinglecreek.org/tac-meetings.html> and <http://www.shinglecreek.org/minutes--meeting-packets.html>

Dear Commissioners and Members:

Regular meetings of the Shingle Creek and West Mississippi Watershed Management Commissions will be held **Thursday, March 11, 2021, at 12:45 p.m.** This will be a virtual meeting.

The Joint SCWM Technical Advisory Committee will meet at 11:30 a.m., prior to the regular meeting.

Until further notice, all meetings will be held online to reduce the spread of COVID-19. **To join a meeting**, click <https://us02web.zoom.us/j/834887565?pwd=N3MvZThacmNRVDFrOWM3cU1KRU5qQT09>, which takes you directly to the meeting.

OR, go to www.zoom.us and click **Join A Meeting**. **Please use the regular meeting ID and passcode for both meetings.** The meeting ID is **834-887-565**. The passcode for this meeting 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

Meetings remain open to the public via the instructions above.

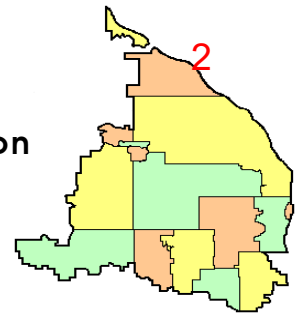
Please email me at judie@jass.biz to confirm whether you or your Alternate will be attending the regular and TAC meetings. Thank you.

Regards,

Judie A. Anderson
Administrator

- cc: Alternate Commissioners
- Member Cites
- Troy Gilchrist
- TAC Members
- Wenck/Stantec
- BWSR
- MPCA
- Met Council

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A combined regular meeting of the Shingle Creek (SC) and West Mississippi (WM) Watershed Management Commissions will be convened Thursday, March 11, 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 passcode is **water**. If your computer is not equipped with audio capability, dial into one of these numbers: +1 929 205 6099 US (New York) | +1 312 626 6799 US (Chicago) | +1 253 215 8782 US | +1 669 900 6833 US (San Jose) | +1 346 248 7799 US (Houston) | +1 301 715 8592 US

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.
3. Open forum.
- √ SCWM 4. Project Reviews.
 - √ SC a. SC2021-02 Avery Park, Maple Grove.*
5. Watershed Management Plan.
 - SCWM a. Technical Advisory Committee Report - verbal.
6. Water Quality.
 - SC a. HUC 8 Model Status - presentation.
 - SCWM b. Clean Water Council Report.*
 - SC c. Wild Wings Western Wetland – presentation.*
7. Grant Opportunities.
 - SC a. BWSR Grant Project Update.*
 - √ SC 1) Meadow Lake Assurance Agreement.*
8. Education and Public Outreach.
 - √ SCWM a. 2020 NPDES Annual Report.*
 - SCWM b. Hennepin County Chloride Initiative Update.
 - √ SCWM c. Hennepin County Climate Action Plan.*
 - d. WMWA Update.**

Next WMWA meeting – 8:30 a.m., Tuesday, April 13, 2021. *Virtual meeting at*
<https://us02web.zoom.us/j/922390839?pwd=RU95T2ttL3FzQmxHcU9jcFhDdng1QT09>
 Meeting ID: **922 390 839** | Passcode: **water** | or by phone using numbers above.

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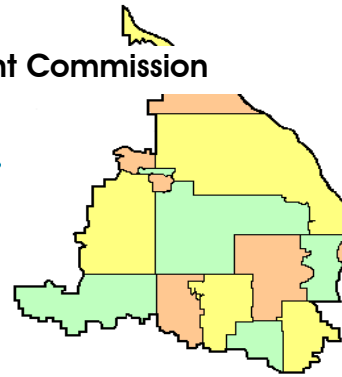
- SCWM 9. Staff Report. *No report this month.*
- 10. Communications.
 - SCWM a. Communications Log.*
 - SCWM b. HF 1586.*
- 11. Other Business.
- 12. Adjournment.

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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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REGULAR MEETING MINUTES

February 11, 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, February 11, 2021.

Present for Shingle Creek were: David Vlasin, Brooklyn Center; Adam Quinn, Brooklyn Park; Burton Orred, Jr., Crystal; Karen Jaeger, Maple Grove; Ray Schoch, Minneapolis; Bill Wills, New Hope; John Roach, Osseo; Andy Polzin, Plymouth; Wayne Sicora, Robbinsdale; Ed Matthiesen and Diane Spector, Wenck/Stantec; Troy Gilchrist, Kennedy & Graven; and Judie Anderson and Amy Juntunen, JASS.

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

Also present were: Andrew Hogg, Brooklyn Center; Melissa Collins and Mitch Robinson, Brooklyn Park; Todd Tuominen, Champlin; Mark Ray, Crystal; Derek Ashe, Maple Grove; Bob Grant and Megan Hedstrom, New Hope; Leah Gifford, Ben Scharenbroich and Amy Riegel, Plymouth; Richard McCoy and Marta Roser, Robbinsdale.

II. Agendas and Minutes.

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

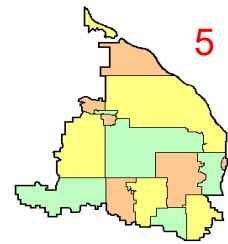
Motion by Butcher, second by Johnson to approve the **West Mississippi agenda** as amended.* *Motion carried unanimously.*

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

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

III. Finances and Reports.

A. Motion by Orred, second by Schoch to approve the Shingle Creek **February Treasurer's Report* and claims** totaling \$58,174.00. Voting aye: Vlasin, Quinn, Orred, Jaeger, Schoch, Wills, Roach, Polzin, and Sicora; voting nay – none.



B. Motion by Butcher, second by Roach to approve the **West Mississippi February Treasurer's Report* and claims** totaling \$10,183.34. Voting aye: Vlasin, Prasch, Butcher, Jaeger, and Johnson; voting nay – none.

IV. Open Forum.

A. The members were introduced to **Melissa Collins**, the new West Mississippi Alternate Commissioner from the City of Brooklyn Park. Collins is an Environmental Assessment Ecologist with the DNR.

B. Johnson inquired about the efficacy of using **shredded rubber** on playground areas, etc. Matthiesen responded that when shredded and washed properly before installation the shredded material should not contribute negatively to the water quality of runoff. It neither decomposes nor attracts dogs or cats, which can lead to a build-up of unsanitary bacteria.

V. Election of Officers.

A. Shingle Creek. Motion by Sicora, second by Schoch to elect the following as **officers for 2021**: Polzin, Chair; Sicora, Vice Chair; Jaeger, Secretary; and Orred, Treasurer. *Motion carried unanimously.*

B. West Mississippi. Motion by Butcher, second by Johnson to elect the following as **officers for 2021**: Butcher, Chair; Johnson, Vice Chair; and Jaeger, Secretary/Treasurer. *Motion carried unanimously.*

VI. Project Reviews.

A. SC2021-001: Brooklyn Park-Osseo Interceptor, Brooklyn Park.* The proposed project is the lining and replacement of sewer and force main, relocation of a bioxide tank, road replacement and patching, surface restoration and trail construction on a 0.67-acre site located in a right-of-way across the street from 9401 85th Avenue North. The site is currently 0.41 acres impervious and there is no proposed change in impervious surface. The project is being reviewed for the erosion control plan. A complete project review application was received on January 14, 2021.

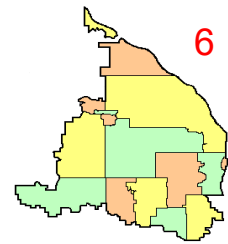
The erosion control plan includes inlet protection devices, fence surrounding project limits, rock construction entrances, and silt fence surrounding the nearby wetland. The erosion control plan meets Commission requirements.

The National Wetlands Inventory does not identify any wetlands on site; however, a wetland delineation determined there is a constructed stormwater basin near the project site. The applicant proposes no wetland impacts as the project boundary is mostly outside the wetland. The applicant meets Commission wetland requirements.

A public hearing on the project has not yet been conducted. In an email to Katie Kemmitt, Wenck/Stantec, on February 1, 2021, Jeny Baroda from the Metropolitan Council stated that an open house will be conducted closer to the beginning of construction work planned for Summer 2021. There will also be a project website and 24/7 hotline number during the project. Utilities, cities, and property owners that will be directly impacted have been contacted already.

Motion by Jaeger, second by Schoch to advise the City of Brooklyn Park that project SC2021-001 is approved with no conditions. *Motion carried unanimously.*

B. WM2021-001 Highview 610, Brooklyn Park.* Construction of a multi-tenant 75,000 square foot industrial building on a 5.7-acre site located at 9501 Louisiana Avenue. Following development, the site



will be 75 percent impervious with 4.4 acres of impervious surface, an increase of 4.2 acres. A complete project review application was received February 9, 2021.

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.

The applicant proposes to meet the water quality treatment requirements by infiltrating runoff from a 1.3-inch event. Most runoff from the site is proposed to be routed to an infiltration basin on the eastern portion of the site outfitted with an outlet control structure to the MnDOT pond offsite. Prior to discharging to the pond, runoff is routed through sump manholes outfitted with SAFL Baffles for additional pre-treatment. Small portions of pervious area on the NE and NW side of the site drain uncontrolled offsite. A small berm area east of the infiltration basin will be left undisturbed and drains into Louisiana Avenue. The applicant meets Commission water quality treatment requirements.

Commission rules require that site runoff be limited to predevelopment rates for the 2-, 10-, and 100-year storm events. Runoff from the site is proposed to be routed through an infiltration basin with an outlet control structure that overflows to the MnDOT pond. There is runoff from the site to the MnDOT pond during the 2, 10, and 100-year events; however, runoff rates are lower than pre-development rates. 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 to infiltrate 1.3 inches of runoff within 48 hours to meet Commission infiltration and water quality requirements. The new impervious area on this site is 4.2 acres, requiring infiltration of 0.46 acre-feet within 48 hours. The applicant proposes that the newly constructed stormwater basin on site has the capacity to infiltrate the required volume within 48 hours. The applicant meets Commission volume control requirements.

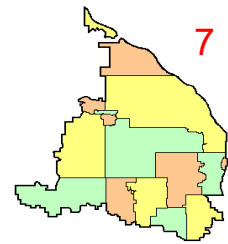
Erosion control plan includes rock construction entrances, perimeter silt fence, silt fence surrounding the infiltration basins, inlet protection, rip rap at inlets, and native seed specified on the pond slopes. The erosion control plan meets Commission requirements.

The National Wetlands Inventory does not identify any wetlands on site. The applicant meets Commission wetland requirements. There are no Public Waters or FEMA-regulated floodplain on this site. The applicant meets Commission Public Waters and floodplain requirements.

The site is located in a Drinking Water Management Area (DWSMA) but is outside of the Emergency Response Area. The applicant proposes to amend the infiltration basin with soil per MPCA Stormwater Manual Requirements. Groundwater must be at least 3 feet below the infiltration basin bottom to ensure proper filtration of water. The applicant meets Commission drinking water protection requirements.

A public notice has been published as part of Planning Commission and City Council review of this project, meeting Commission public notice requirements.

A draft Operations & Maintenance (O&M) agreement between the applicant and the City of Brooklyn Park is in progress.



Motion by Jaeger, second by Prasch to advise the City of Brooklynpark that project WM2021-001 is approved with two conditions:

1. The engineer needs to verify that the bottom of the infiltration basin is at least 3 feet higher than the normal groundwater level to ensure proper filtration during infiltration.
2. A complete O&M agreement must be provided between the applicant and the City of Brooklynpark for the infiltration basin on the project site.

Motion carried unanimously.

C. WM2021-002 NorthPark Business Center Building V & VII, Brooklynpark.* Construction of two office-warehouse buildings on a 25-acre site located at the northeast corner of Oxbow Creek Drive and Xylon Avenue. Following development, the site will be 70 percent impervious with 17.3 acres of impervious surface, an increase of 17.3 acres. A complete project review application was received on February 8, 2021.

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.

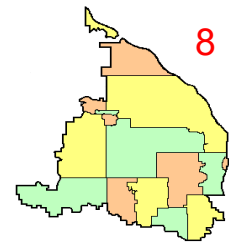
Runoff from the site is proposed to be routed to two wet ponds and infiltration basins on-site. Wet pond P-G.1 flows through an infiltration basin that flows off-site to the west. Pond P-G.2 flows off-site to the west to a temporary pond. All runoff is infiltrated on-site, including after two back-to-back 100-year events. The applicant needs to verify the pond/infiltration bottoms are at least 3' about the highest anticipated groundwater or provide an impermeable layer or raise the bottom elevation.

Commission rules require that site runoff is limited to predevelopment rates for the 2-, 10-, and 100-year storm events. The applicant proposes to manage all runoff on-site. 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 new impervious area on this site is 17.3 acres, requiring infiltration of 1.9 acre-feet within 48 hours. The applicant proposes to infiltrate all runoff onsite due to highly permeable soils that have the capacity to infiltrate more than the required volume within 48 hours. The applicant meets Commission volume control requirements.

The erosion control plan includes rock construction entrances, sediment traps during construction, perimeter silt fence, inlet protection, rip rap at pond inlets, and native seed specified on the pond slopes. The erosion control plan meets Commission requirements.

The National Wetlands Inventory does not identify any wetlands on site. The applicant meets Commission wetland requirements. There are no Public Waters or FEMA-regulated floodplain on this site. The applicant meets Commission Public Waters and floodplain requirements.

In a telephone conversation on May 29, 2014 between Erik Megow, Wenck Associates, and Dan Bowar of EVS Engineering, the latter had stated that there is no known groundwater contamination on the project site. The site is located in a Drinking Water Supply Management Area (DSWMA); however, it is outside the emergency response area.



A public hearing on the project will be conducted on April 11, 2021 as part of Planning Commission and City Council review of this project, meeting Commission public notice requirements.

Motion by Johnson, second by Jaeger to advise the City of Brooklyn Park that project WM2021-002 is approved with three conditions:

1. Add silt fence surround the infiltration basins and wet ponds to the erosion control plans.
2. Provide a complete O&M agreement between the applicant and the City of Brooklyn Park for all stormwater facilities on the project site.
3. The engineer must verify that the bottom of the infiltration basins and ponds are at least 3 feet higher than the normal groundwater level to ensure proper filtration during infiltration and separation from ground water or install impermeable layers or raise the bottom elevations.

Motion carried unanimously.

VII. Watershed Management Plan.

A. Staff recapped the **Technical Advisory Committee meeting** held earlier today. Topics discussed at the meeting included the Twin/Ryan Lake SWA, funding Ryan Creek improvements, and revising/updating the 2021-2022 CIP in anticipation of adoption of a minor plan amendment in April.

B. Twin/Ryan Lake Subwatershed Assessment.*

The cities of Robbinsdale and Crystal are developing/revising pumping plans to outlet areas within their cities into the Twin/Ryan Lakes chain. The City of Robbinsdale is installing a permanent emergency overflow from Crystal Lake into Ryan Lake. The City of Crystal has in place a pumping operation plan for managing the Gaulke Pond chain that receives runoff from Crystal and New Hope. That system outlets into Lower Twin Lake. Crystal is looking to make improvements to that pond system to provide more storage, alleviate flooding, and potentially revise its pump operation plan.

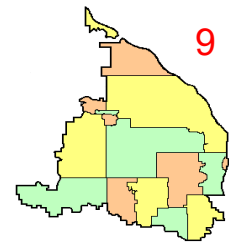
With both cities proposing emergency flood relief pumping to the Twin/Ryan Lake system, it makes sense to develop a coordinated pumping plan. Because there are multiple cities involved (New Hope, Crystal, and Robbinsdale upstream and Minneapolis downstream), they have requested that this be completed as a Subwatershed Plan.

The Subwatershed Assessment Account has about \$8,800 carried over, with another \$10,000 in the 2021 Shingle Creek budget for a total of \$18,800. Staff's slide presentation* outlined a scope of work to complete this assessment in the amount of \$18,000.

This project was reviewed at the TAC meeting held earlier today where the members recommended that the Commission authorize Staff to complete a subwatershed assessment for the Twin/Ryan Lake tributary area to develop a master Gaulke Pond and Crystal Lake Pump Operating Plan. Motion by Schoch, second by Orred to approve the recommendation. *Motion carried unanimously.*

VIII. Shingle Creek 2021 Water Quality Monitoring.

Each year the Commission budgets and undertakes monitoring activities, including routine stream and lake monitoring and volunteer lake, stream, and wetland monitoring. Water quality and quantity monitoring on Shingle Creek and select lakes is performed by Wenck staff and the USGS and macroinvertebrate monitoring in Shingle Creek is performed by volunteers through the Hennepin County



Environmental Services’ (HCES) RiverWatch program. Lake monitoring is performed by volunteers through the Met Council’s Citizen Assisted Lake Monitoring Program (CAMP). Wetland monitoring is conducted through HCES’s Wetland Health Program (WHEP).

Staff’s February 4, 2021 memo* presents the **proposed 2021 monitoring program**. This proposal is consistent with the program set forth in the Third Generation Watershed Management Plan, which includes routine monitoring tasks, specific monitoring efforts to support Commission-administered grants, and monitoring to evaluate progress toward the TMDLs every five years. This year the Commission will complete the 5-year biotic and DO TMDL review report for Shingle and Bass Creeks.

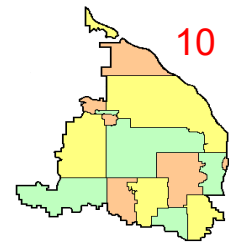
The table below shows the various monitoring programs, their purpose, and the proposed costs and funding.

Activity	2021 Budget	2021 Proposed
<i>Routine Stream Monitoring</i>		
Routine Streamflow and Water Quality	\$36,000	\$31,850
Monitoring Equipment		\$1,450
Planning & potential biotic sampling		\$2,700
<i>Routine Lake Monitoring</i>		
Intensive Lake WQ Monitoring (Cedar Island, Success)	\$24,000	\$9,310
Aquatic Vegetation Surveys (Cedar Island, Success)		\$6,540
Fish survey (Cedar Island)		\$2,090
Carp population estimate (Cedar Island)		\$1,520
Monitoring and Survey Equipment		\$4,130
Planning		\$410
<i>Monitoring to Support Grant Projects (funded by grants, not budget)</i>		
Twin Lake CLP ¹ delineation	N/A	\$1,860
Bass and Pomerleau WQ Monitoring, CLP delineation, SAV ² surveys, and sediment coring	N/A	\$41,380
Crystal Lake WQ Monitoring, SAV survey, and fisheries survey	N/A	\$18,620

¹CLP curlyleaf pondweed | ² SAV submerged aquatic vegetation

A. Stream Monitoring. The Commission has routinely monitored stream flow and water quality in Shingle Creek since 1996. Two locations, one downstream of Humboldt Avenue in Minneapolis (SC-0) and one upstream of Zane Avenue in Brooklyn Park (SC-2) have been monitored for water quantity and various water quality chemical parameters. In 2007, the monitoring location upstream of Zane Avenue was moved from upstream to just downstream of Brooklyn Boulevard to obtain a better stage-discharge relationship. This site is identified as SC-3 and SC-2 is no longer monitored. In 2015 Bass Creek (BCP) was added as a third site to be routinely monitored for water quality and conductivity. The Bass Creek monitoring station has helped provide better information about water quality in Bass Creek, which is impaired for chloride and biota. A fourth site at Queen Avenue in Minneapolis (SC-1) is monitored for flow by the US Geological Survey (USGS) as a part of its ongoing National Assessment of Water Quality (NAWQA).

Except for continuous conductivity and temperature, chemical parameters are no longer routinely measured at the USGS site. That data are available on-line real-time at waterdata.usgs.gov/mn/



[nwis/uv?05288705](#). The Commission also partners financially with the USGS in the operation of the Queen Avenue monitoring station.

To support the TMDL 5-year review of DO and biota in Bass and Shingle Creeks, Staff are proposing to conduct two additional dissolved oxygen longitudinal surveys at designated road crossings. Surveys will target a single high flow and a single low flow period in which recordings will occur before 9:00 am and after 4:00 pm on the same day. Costs for the routine stream flow and water quality monitoring activities total \$36,000.

In 2019, new deep-cycle batteries were purchased to power monitoring equipment (i.e., transducers and pumps). All equipment is in working order for 2021.

The remaining budget will be used to fund planning meetings and cover other tasks related to field season preparation and troubleshooting. If funding allows, some biotic monitoring may be completed to supplement the biotic TMDL review.

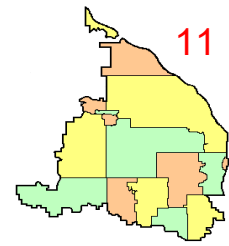
B. Lake Monitoring. To track the effectiveness of BMP implementation in improving lake water quality, the Commission routinely performs intensive lake monitoring to supplement the volunteer surface monitoring. Because the Commission's goals include achieving delisting of lakes that meet their TMDLs and water quality, the Third Generation monitoring plan includes more rigorous lake monitoring sufficient to demonstrate to the MPCA and EPA that conditions have improved. Attachment 5 of Staff's memo shows the lake monitoring schedule from the Third Generation Plan, updated to reflect the actual monitoring completed.

For 2021, Cedar Island and Success will be monitored biweekly. The water quality data collected for the lakes will include surface and deep-water samples, water column temperature/DO profiles, and zooplankton and phytoplankton sampling. The year 2017 marked the point where Staff had completed a full round of sampling for all lakes; the Commission is now on to round two of Intensive Lake monitoring to support the 5-Year TMDL Reviews.

A component of the intensive monitoring is to obtain or update surveys of lake aquatic vegetation. Aquatic vegetation plays an important role in water quality and biotic integrity, and the vegetation community can change as water quality changes. For 2021, surveys for Cedar Island and Success will be updated in tandem with the intensive monitoring. A fisheries survey as well as a carp population estimate will also be completed on Cedar Island Lake in 2021. Costs for the various lake monitoring activities total \$24,000.

C. Grant project monitoring. The following monitoring tasks are built into ongoing grant projects and are not funded from the Commission's general fund budget.

1. The Twin Lake Carp Management 319 grant project ended in 2019. This project included active management of SAV within the lakes for the first three years following initial internal management activity. The first carp removal occurred in the winter of 2018 and SAV management began in the spring of 2018 to treat curlyleaf pondweed (CLP). As part of the management, the Commission is required by the MN DNR to conduct annual AIS (aquatic invasive species) delineation of CLP for treatment purposes and conduct annual water quality sampling. In 2021, the fifth year of CLP delineations will be completed in collaboration with the MN DNR. Water quality sampling requirements are not specified and do not need to follow the intensive monitoring schedule.



As part of the Twin Lake Carp project, a CLP delineation may be conducted on Upper Twin Lake in 2021. The delineation would be conducted in April/May in collaboration with the MN DNR. The cost of the delineation is \$1,860.

2. The Bass and Pomerleau Alum project is an ongoing management project aimed at addressing nutrient impairment. Alum was first applied to the lakes in 2019 and was applied again in 2021 to further reduce phosphorus concentrations in the water.

Another season of regular water quality monitoring will be conducted on the lakes as part of monitoring the response to the Alum Treatment Project. In 2021, Bass and Pomerleau Lakes will be monitored twice monthly, late May-September. The water quality data collected for the lakes will include surface and deep-water samples, water column temperature/DO profiles, and zooplankton and phytoplankton sampling. CLP delineations, assisted by the MN DNR, will also be completed on each lake in Spring 2021. Sediment cores will be taken in Summer 2021 from both Bass and Pomerleau Lakes and sent to UW-Stout for analysis. Data from sediment cores will be used to assess the efficacy of the two alum treatments. The cost of these activities is \$41,380.

3. The Crystal Lake Grant Project began in 2020. This project includes carp assessment and tracking, alum application, carp removal, SAV surveys, and water quality monitoring and is intended to address Crystal Lake's impairment for nutrients. The second year of this grant will be focused on fisheries, water quality, and vegetation data that will allow Staff to track changes to the lake as nutrient management occurs. An alum treatment is planned for Spring 2021, and Summer 2021 monitoring will track the impact of the alum treatment on the lake.

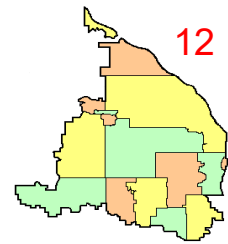
Regular water quality monitoring will be conducted on Crystal Lake in 2021. The lake will be monitored twice monthly, late May-September. The water quality data collected will include surface and deep-water samples, water column temperature/DO profiles, and zooplankton and phytoplankton sampling.

A fall aquatic vegetation survey will be performed on Crystal Lake. Aquatic vegetation plays an important role in water quality and biotic integrity, and the vegetation community can change as water quality and invasive species presence changes. The fall aquatic vegetation survey will show impacts to the vegetation community after the alum treatment and be compared to the results of the summer 2020 survey.

The DNR has planned a general fisheries survey on Crystal Lake. Staff will supplement their survey with a near-shore survey for fish index of biological integrity (IBI) calculation. In 2021, Staff will also continue to explore options for tracking and removing the carp population from Crystal Lake. The associated costs for all these activities total \$18,620.

D. Volunteer Monitoring.

1. Volunteer Lake Monitoring. The Shingle Creek Commission has participated in the Met Council's "Citizen Assisted Lake Monitoring Program" (CAMP) since 1993. This program trains volunteers to take surface water samples and make water quality observations from late spring to early fall, using standardized reporting techniques and forms. The CAMP program has been the Commission's primary means of obtaining ongoing lake water quality data. This program is also a National Pollutant Discharge Elimination System (NPDES) Education and Outreach BMP.



CAMP was initiated by the Met Council to supplement the water quality monitoring performed by Met Council staff and to increase our knowledge of the water quality of area lakes. Volunteers in the program monitor the lakes every other week from mid-April to mid-October. They measure surface water temperature and Secchi depth, and collect surface water samples that are analyzed by the Met Council for total phosphorous, total Kjeldahl nitrogen, and chlorophyll-a. The volunteers also judge the appearance of the lake, its odor, and its suitability for recreation.

The Met Council charges \$760 per lake to cover the cost of supplies for volunteers, analysis of samples, and the Regional Reports. The Commission owns seven equipment kits purchased in past years and will not have to purchase any more kits unless key equipment needs to be replaced.

Lakes are monitored on a rotating schedule. The larger lakes are monitored every other year while the smaller lakes are monitored every three years. It is assumed that when a lake undergoes the intensive sampling program, no CAMP monitoring will be performed that year. Lakes scheduled for 2021 volunteer lake monitoring are Meadow, Magda, Schmidt, Eagle, and Pike. The 2021 budget is \$3,800.

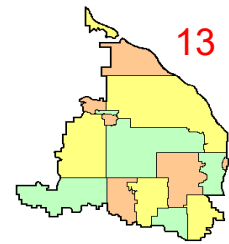
2. Volunteer Stream Monitoring. In previous years high school student volunteers have conducted macroinvertebrate monitoring through Hennepin County Environmental Services' RiverWatch Program at two locations on Shingle Creek. The Commission contracts with the County for this service at a cost of \$1,000 per site. Hennepin County maintains an interactive online map showing locations throughout the county and stream grades going back to 1996: hennepin.us/riverwatch. Two sites were monitored in 2019: Shingle Creek near Park Center High School (year 24!) and Shingle Creek in Webber Park. Due to the pandemic no sites were monitored in 2020. The 2021 budget includes \$1,000 to monitor one site.

3. Volunteer Wetland Monitoring. In 2007 the Commission began participating in Hennepin County Environmental Services' Wetland Health Evaluation Program (WHEP). Through this program, adult volunteers monitor vegetative diversity and macroinvertebrate communities. Hennepin County has an interactive online map showing WHEP locations throughout the County: hennepin.us/your-government/get-involved/wetland-health-evaluation-program. Two sites were monitored in 2019: Wetland 639W and a wetland in Brookdale Park in Brooklyn Park. The WHEP program did not take place in 2020. The 2021 budget includes \$2,000 to monitor two wetlands. Staff will work with member cities to identify sites for 2021.

Motion by Schoch, second by Orred to approve the 2021 Shingle Creek Monitoring Plan as presented. *Motion carried unanimously.*

IX. West Mississippi 2021 Water Quality Monitoring.

The West Mississippi Watershed Management Commission for many years did not routinely monitor water quality in the few streams that are present in the watershed. The Commission undertook stream and outfall monitoring in 1990-1992 and found that the water quality of runoff from the watershed was generally within ecoregion norms. Since much of the watershed was poised to develop under Commission rules regulating the quality and rate of runoff, the Commission elected to discontinue further monitoring. In 2010 and 2011 the Commission authorized a repeat of the 1990-1992 monitoring, to determine current conditions and evaluate whether the development rules were protective of downstream water quality. The Third Generation Plan and subsequent budgets incorporated ongoing,



routine monitoring for West Mississippi that includes monitoring flow and water quality at two sites per year on a rotating basis. In 2020 the Commission monitored the Environmental Preserve outlet and the 65th Avenue outfall.

A. Routine Monitoring. The 65th Avenue outfall and Mattson Brook will be monitored in 2021 for flow and water quality using automatic samplers. Continuous flow will be monitored using pressure transducers, and water quality will be analyzed through field parameter measurements, periodic grab samples, and storm composite sampling using ISCO automated samplers purchased by the Commission in 2010.

Due to continued difficulties accessing the 65th Avenue outfall, the Commission partnered with the Mississippi Watershed Management Organization (MWMO) to perform the monitoring in 2020. MWMO has experience and equipment for doing stream monitoring in confined spaces like stormwater pipes and can perform the monitoring safely and efficiently. Results from MWMO’s 2020 monitoring were satisfactory and the partnership will be continued in 2021. A breakdown of the activities and costs of the routine monitoring is shown below:

Activity and cost breakdown for West Mississippi 2021 monitoring

ACTIVITY	COST
Install/remove equipment	\$1,750
Collect routine/storm samples and maintain equipment	\$5,150
Data entry/maintaining rating curves	\$1,270
Project management	\$810
Analytical services (RMB Laboratories)	\$1,030
Equipment and mileage	\$1,300
Planning	\$2,026
Contract with MWMO for 65th Avenue Outfall	\$9,264
TOTAL BUDGET	\$22,600

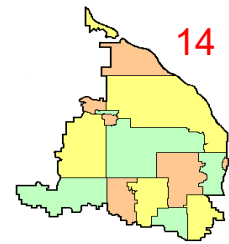
Activity and cost breakdown from MWMO for 65th Ave monitoring.

ACTIVITY	COST
Data management	\$1,152
Collect samples	\$1,633.50
Equipment Maintenance	\$1,969
Mileage – Expense	\$ 349.44
Analytical services (Metropolitan Environmental Lab)	\$2,088
Admin – invoicing and annual report	\$2,072
TOTAL	\$9,263.94

B. Volunteer Monitoring.

1. In previous years high school student volunteers conducted **macroinvertebrate monitoring** through Hennepin County Environmental Services’ RiverWatch Program at one location in West Mississippi – Mattson Brook. In the past few years, the County has been finding it difficult to recruit a high school to monitor this site. The Commission did not budget for RiverWatch in 2021.

2. Volunteer Wetland Monitoring. In 2007 the Commission began participating in Hennepin County Environmental Services’ Wetland Health Evaluation Program (WHEP), a volunteer mon-



itoring program. In 2019, the wetlands monitored were in the Environmental Preserve and the Zane Sports Park, both in Brooklyn Park. No wetlands were monitored in 2020 due to COVID-19. The 2021 budget includes \$2,000 to monitor two wetlands. Staff will work with the cities to identify those wetlands.

Motion by Jaeger, second by Butcher to approve the 2021 West Mississippi Monitoring Plan as presented. *Motion carried unanimously.*

Motion by Butcher, second by Prasch to approve the 2021 Professional Services Agreement* with the Mississippi Watershed Management Organization. *Motion carried unanimously.*

X. Grant Opportunities.

A. Watershed-Based Implementation Funding Grant.* The Board of Water and Soil Resources (BWSR) has approved the workplans for the Meadow Lake Management Plan (\$40,000) and the Bass Creek Stabilization Project (\$70,000). Staff recommends the Commission approve the grant agreement* between the Commission and BWSR and authorize its signature by the Chair, subject to review and approval by the Commission's attorney. Motion by Jaeger, second by Schoch to approve this recommendation. *Motion carried unanimously.*

B. Hennepin County Opportunity Grants. The Commission submitted two grant applications to Hennepin County: one on behalf of the City of Robbinsdale for shoreline naturalization on Ryan Lake, and the other to expand the SRP Filter Project by extending the filter down the Wetland 639 outlet channel in Crystal. County staff have notified the Commission that the SRP project has been recommended to the County Board for funding at \$75,000; however, the Robbinsdale project will not be recommended for funding at this time. Funding decisions should be made at the end of March. County staff provided Commission staff with feedback that should assist Robbinsdale in submitting a stronger application in the next round of funding.

C. Clean Water Fund. As Staff reported last month, CWF grants have been awarded for the Connections II (\$328,000) and Meadow Lake Management Plan (\$153,510) projects. Staff is in the process of developing work plans for both. After they have been reviewed and approved by BWSR staff, grant contracts will be generated, likely in March-April 2021. Once the contracts are executed, BWSR will release 50% of the grant funds and work can begin.

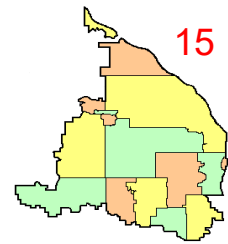
XI. Education and Public Outreach.

A. The next **West Metro Water Alliance (WMWA)** meeting is scheduled for Tuesday, March 9, 2021 at 8:30 a.m. This a virtual meeting. The **Zoom number** is <https://us02web.zoom.us/j/922390839>. **Or** call in at any of these numbers using **meeting ID: 922 390 839**: (1) +1 301 715 8592 US (Germantown); (2) +1 312 626 6799 US (Chicago); (3) +1 929 205 6099 US (New York); or (4) +1 253 215 8782 US (Tacoma). The **passcode is water**.

B. Spector and Juntunen provided an update from Tuesday's WMWA meeting. A subcommittee has been formed to help identify educational components on which WMWA will concentrate in response to education requirements spelled out in the new MS4 permit. They will focus on topics such as dog waste, chloride use, model ordinances, and signage.

XII. Communications.

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



B. February Staff Report. No report this month.

C. Resolutions 2021-001 Authorizing the Electronic Storage of Government Records, Electronic Transactions, and Electronic Signatures.

Motion by Schoch, second by Jaeger to approve Shingle Creek Resolution 2021-001.
Motion carried unanimously.

Motion by Jaeger, second by Butcher to approve West Mississippi Resolution 2021-001.
Motion carried unanimously.

XIII. Other Business.

XIV. Adjournment. There being no further business before the Commissions, the joint meeting was adjourned at 2:16 p.m.

Respectfully submitted,

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

Judie A. Anderson,
Recording Secretary
JAA:tim

Z:\Shingle Creek\Meetings\Meetings 2021\February 11, 2011 minutes.docx

SHINGLE CREEK WATERSHED MANAGEMENT COMMISSION**PROJECT REVIEW SC2021-002: Avery Park**

Owner: Avery Park, LLC.

Company:

Address: 13432 Hanson Blvd.
Andover, MN 55304

Engineer: Robert S. Molstad

Company: Sathre-Bergquist, Inc.

Address: 150 Broadway Ave S.
Wayzata, MN 55391

Phone: 952-476-6000

Email: molstad@sathre.com

Purpose: Construction of single family and row home residential development on 24 acres.

Location: 9533 Jefferson Highway N, Maple Grove MN 55369 (Figure 1).

- Exhibits:**
1. Project review application and project review fee of \$2,500, dated 2/1/2021, received 2/3/2021.
 2. Site plan, preliminary plat, grading (Figure 2), utility, and erosion control plans dated 1/15/2021, received 2/3/2021. Revisions to grading and erosion control plans dated and received 2/24/2021.
 3. Hydrologic calculations by AE2S, dated 2/2/2021, received 2/3/2021. Revisions to hydrologic calculations dated and received 2/24/2021.

- Findings:**
1. The proposed project is the construction of a residential development. The site is 24.6 acres. Following development, the site will be 36 percent impervious with 8.8 acres of impervious surface, an increase of 8.6 acres.
 2. The complete project application was received on 2/3/2021. To comply with the 60-day review requirement, the Commission must approve or deny this project no later than the 4/8/2021 meeting. Sixty calendar-days expires on 5/1/2021.
 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 to three stormwater ponds and two infiltration basins on site. The infiltration basins alone meet the Commission's standards and do not account for any additional treatment provided by the stormwater ponds. The applicant meets Commission water quality treatment requirements.

SC2021-002: Avery Park

4. Commission rules require that site runoff is limited to predevelopment rates for the 2-, 10-, and 100-year storm events. Runoff from the site is routed to 3 stormwater ponds and 2 infiltration basins on site. The majority of the site (19.1 acres, 80%) ultimately drains to the MnDOT pond northwest of the development. The rest of the site drains to existing storm sewer on the east side of the site. The applicant meets Commission rate control requirements (Table 1).

Table 1. Runoff from site (cfs).

Drainage Area	2-year event		10-year event		100-year event	
	Pre-	Post-	Pre-	Post-	Pre-	Post-
To MnDOT pond	30	8.0	52.4	14.4	103.9	21.5
To East	16.6	0.5	25.7	1.1	45.6	2.4

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 site is 8.8 acres, requiring infiltration of 35,300 cubic feet within 48 hours. The applicant proposes two infiltration basins that have the capacity to infiltrate more than the required volume of 38,700 cubic feet within 48 hours. The applicant meets Commission volume control requirements.
6. The erosion control plan includes a rock construction entrance, perimeter silt fence, silt fence surrounding wet ponds and infiltration basins, inlet protection, rip rap at pond and basin inlets, and native seed specified on the pond slopes. The erosion control plan meets Commission requirements.
7. The National Wetlands Inventory does not identify any wetlands on site. The applicant meets Commission wetland requirements.
8. There are no Public Waters on this site. The applicant meets Commission Public Waters requirements.
9. There is no FEMA-regulated floodplain on this site. The low floor elevations of the buildings are at least two feet higher than the high water elevation of the ponds/infiltration basins according to Atlas 14 precipitation. The applicant meets Commission floodplain requirements.
10. The site is located in a Drinking Water Management Area (DWSMA) with high vulnerability but is outside of the Emergency Response Area. Therefore, infiltration is permitted, but infiltrated water must first filter through 3 feet of soil before contacting groundwater. The groundwater elevation on site is >3 ft below the infiltration basin bottoms. The applicant meets Commission drinking water protection requirements.
11. A public hearing on the project was conducted on 11/9/2020 as part of Planning Commission and City Council review of this project, meeting Commission public notice requirements.
12. A template Operations & Maintenance (O&M) agreement between the applicant and the City of Maple Grove was provided.

SC2021-002: Avery Park

13. A Project Review Fee of \$2,500 has been received.

Recommendation: Recommend approval subject to the following conditions:

1. Provide a complete O&M agreement between the applicant and the City of Maple Grove for all stormwater facilities on the project site.
2. Demonstrate by double ring infiltrometer or witness test that the site's infiltration basins can meet the design infiltration rate of 0.4 inches/hour.
3. Provide verification that extending the two new storm sewer pipes to MnDOT pond are allowable.

Wenck Associates, Inc.
Engineers for the Commission

Ed Matthiesen, P.E.

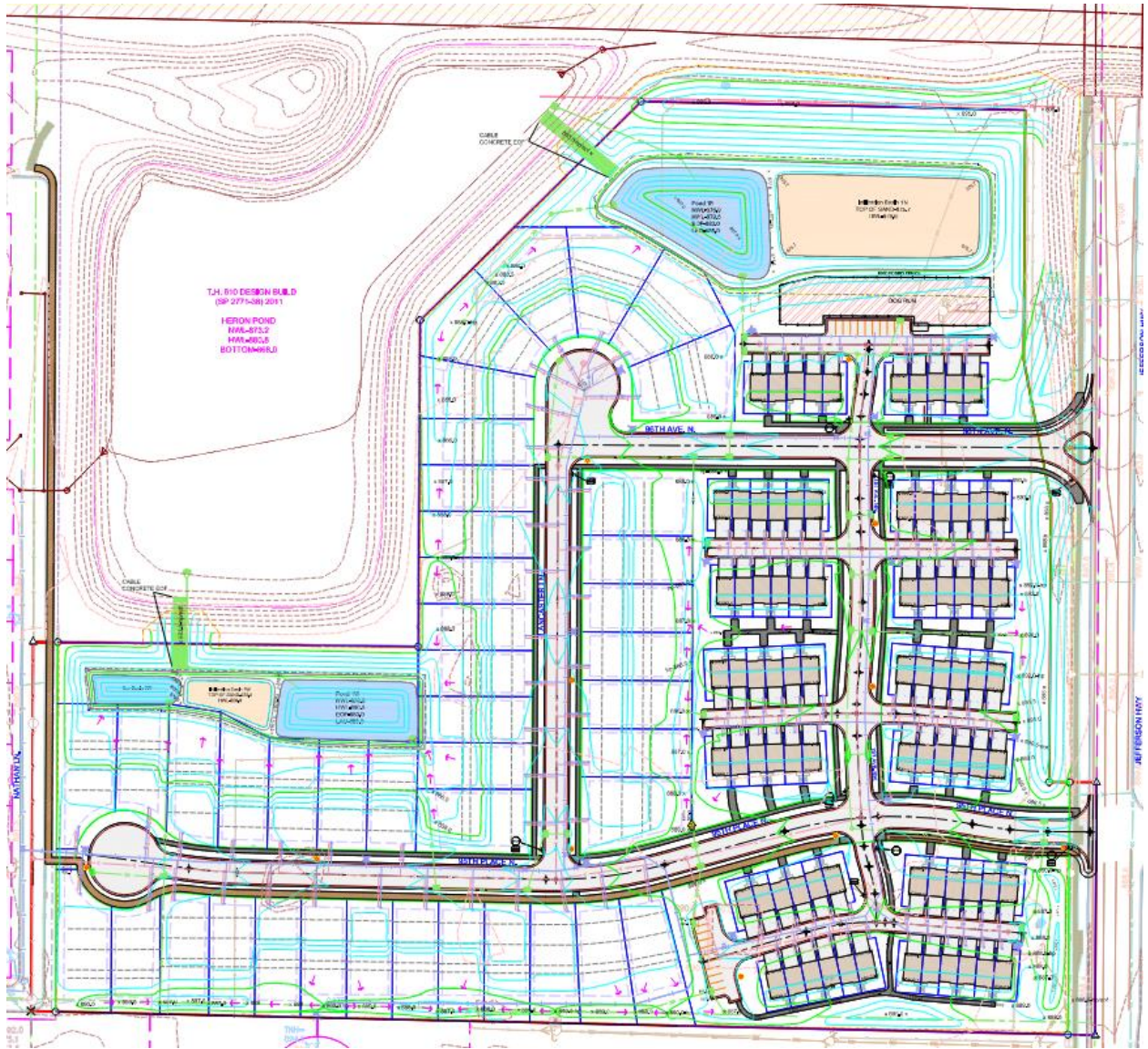
Date

SC2021-002: Avery Park

Figure 1. Site location.



Figure 2. Site grading plan.





To: Shingle Creek/West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: March 5, 2021

Subject: FY 22-23 Clean Water Fund and Policy Recommendation Report

**Recommended
Commission Action**

For information and discussion.

The State of Minnesota Clean Water Council submits a biennial report to the legislature that summarizes Clean Water Fund activities taken in the previous two years and recommendations, including funding recommendations, for the coming biennium. We thought the Commissioners would be interested in this high-level overview of water resources policy and how it can inform the work of local organizations such as the Commissions. The FY 22-23 Clean Water Fund and Policy Recommendation Report can be found at <https://www.pca.state.mn.us/sites/default/files/lr-cwc-1sy20.pdf>

Of particular interest are three policy initiatives that have newly risen to prominence, discussion of which starts on page 19 of the report:

- Reducing de-icing chloride (road salt) pollution (revised policy statement)
- Reducing chloride pollution from water softening
- Disclosure of well water quality at time of sale

While few if any households in the two watersheds still obtain their drinking water from private wells, road de-icing continues to be a major issue for Shingle Creek and other developed areas of the state. Chloride pollution from water softeners is a small but important source that has been only minimally addressed to this point. Both of these issues are also addressed in proposed legislation SF 884/HF 1660 discussed under the Hennepin County Chloride Initiative agenda item.

There is no recommended action, this item is presented for your information and background.

From: Amy Riegel <ariegel@plymouthmn.gov>

Sent: Friday, March 5, 2021 9:21 AM

To: Judie Anderson <Judie@jass.biz>; Diane Spector (dspector@wenck.com) <dspector@wenck.com>; Ed A. Matthiesen <ematthiesen@wenck.com>; Amy Juntunen <Amy@jass.biz>

Cc: Ben Scharenbroich <bscharenbroich@plymouthmn.gov>

Subject: Wild Wings Western Wetland Improvement Project

Hi Judie, Amy, Diane, and Ed,

Excavation on our [Wild Wings Western Wetland Project](#) near Bass Lake wrapped up this week, and I wanted to share some drone photos/videos with you.

https://www.dropbox.com/sh/0stxzm7vvy603rt/AADh0_nBzVzDg2JqH9Gl7ptoa?dl=0

Wild Wings Western Wetland Improvement Project



Project Overview

The City is implementing a project to improve water quality and drainage within the Wild Wings neighborhood. The project is located in the wetland north of Schmidt Lake Road, between Yorktown Lane North and Valley Forge Lane North.

This project will improve drainage through the wetland by cleaning out and reestablishing a channel through the wetland. Additional work will occur at storm sewer inlet and outlet pipes to the wetland to ensure flow rates are maintained as to minimize impacts downstream. The primary goal for this project is to reduce backyard flooding and to improve water quality in Bass Lake, which is downstream from the project area.

Sunram Construction Inc. was our contractor on this project.

Thanks,

Amy Riegel | Senior Engineering Technician
City of Plymouth

3400 Plymouth Boulevard

Plymouth, MN 55447

Phone: 763-509-5531

www.plymouthmn.gov

ariegel@plymouthmn.gov



To: Shingle Creek WMO Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: March 5, 2021

Subject: Grant Project Updates

**Recommended
Commission Action**

Authorize execution of project assurance agreements with BWSR for the Meadow Lake Management Plan and (if needed) Connections II Stream Restoration projects.

We will have a verbal update on the status of the grant projects at the March 11 meeting.

As a final step in processing the Meadow Lake Management Plan and Connections II Stream Restoration Clean Water Fund grants, the Board of Water and Soil Resources (BWSR) requires that a Project Assurance Agreement be completed. Essentially, this agreement states that the Commission as the grantee commits to ongoing monitoring to assure project outcomes are met and sustained for at least 20 years, and if that outcome does not last for 20 years, the Commission agrees to see that additional actions are taken using Commission or local funds. The Commission executed a similar agreement for the Bass and Pomerleau Lakes Alum Treatment Project a few years ago.

Attached is the proposed agreement for Meadow Lake. It is the same as the Commission's attorney drafted for Bass and Pomerleau Lakes, modified for Meadow Lake. It is recommended for approval.

We have not yet received guidance from BWSR whether a formal agreement is necessary for the Connections II project or whether that assurance can simply be made in the grant workplan. If so, staff will work with the attorney to have a draft agreement for the Connections II project ready for consideration at the March 11 meeting. That assurance must commit to provide financial assurance from local sources for repairs and maintenance. In this (and the Meadow Lake) case, the Commission levied for the full cost of the project, more than what is necessary for the required grant match. Those excess levy funds would be deposited into the Commission's Closed Projects account and would be available to fund future projects, including any maintenance beyond routine maintenance expected of cities. Details of maintenance responsibilities will be negotiated with the cities and included in the cooperative agreement ordering the project.

CLEAN WATER GRANT PROJECT AGREEMENT
(Meadow Lake Alum Treatment)

This Clean Water Grant Project 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 Board of Water and Soil Resources, a Minnesota municipal corporation (“**BWSR**”). The Commission and the BWSR may hereinafter be referred to individually as a “party” or collectively as the “parties.”

RECITALS

- A. The internal nutrient loading of phosphorus in the waters within the Commission’s watershed is a serious concern and is within the scope of what the Commission may address as part of its Third Generation Watershed Management Plan the Commission adopted in April 2013;
- B. The Commission conducted a feasibility study dated August 17, 2020 called “Meadow Lake Management Plan Feasibility and Cost Estimate” and attached hereto as Exhibit A (“**Feasibility Study**”);
- C. The Commission sought grant funds from BWSR to undertake alum treatment of Meadow Lake as explained in the Project and Practices Application attached hereto as Exhibit B (collectively, the “**Project**”);
- D. BWSR awarded the Commission the requested grant in the amount of \$153,510 (“**CWF Grant**”) with a local match by the Commission in the amount of \$38,400;
- E. As a condition of release of the CWF Grant funds, BWSR requires statements of technical and project assurance that the Project will be effective at reducing internal loading in Meadow Lake for at least 20 years in accordance with the CWF Grant application; and
- F. The Commission agrees to carry out the Project in accordance with the terms and conditions of this Agreement.

AGREEMENT

In consideration of the mutual promises and covenants contained herein, the parties hereby agree as follows:

1. Project. The Commission agrees to use the CWF Grant to undertake the Project in accordance with the application attached hereto as Exhibit A and the following:
 - (a) To perform the lake alum dosing calculations, design and oversee implementation of the Project the Commission has engaged the services of Stantec, a global engineering firm that employs engineers, lake ecologists and limnologists, and soil geochemistry scientists experienced in dosing, designing and inspecting lake alum treatment projects,

including Ed Matthiesen, P.E.; Jeff Strom, M.S. Water Resources; and Katie Kemmitt, M.S. Water Resources.

- (b) The alum treatment in Meadow Lake shall occur in 2022 and 2023.
 - (c) The Commission shall comply with all applicable contracting laws in hiring contractors to conduct the Project.
 - (d) The Commission shall be responsible for ensuring any required permits or permission required to complete the Project are obtained.
 - (e) The Commission will take sediment cores from the lake at the conclusion of the Project and have them analyzed for sediment phosphorus release rate to verify the calculated alum dosing and release rates have been achieved.
 - (f) The Commission will conduct at least biannual monitoring of the lake to track the effectiveness of the alum treatment in reducing sediment release of phosphorus as per the management objectives of the TMDL and CWF Grant. The Commission shall make the monitoring information available to BWSR upon request.
 - (g) Lake response modeling completed for the grant application estimated that the Project will reduce internal phosphorus loading by 110 pounds P/year. If monitoring indicates that the lake does not meet the respective reduction for three out of any consecutive five years for 20 years after the date of this CWF Grant agreement, the Commission agrees to undertake additional internal and external TP load reduction actions to ensure those goal concentrations are achieved.
2. Audit. All Commission books, records, documents, and accounting procedures related to the Project are subject to examination by BWSR.
 3. Data Practices. The Commission shall retain and make available data related to the letting of contracts and the conducting of the Project in accordance with the Minnesota Government Data Practices Act.
 4. Term. This Agreement shall be in effect as of the date first written above and shall terminate upon the completion of the alum treatment and the follow up testing and other actions as contemplated herein.
 5. Entire Agreement. This Agreement, including the recitals and the exhibits which are incorporated in and made part hereof, constitutes the entire understanding between the parties regarding the Assessment. No modifications to this Agreement shall be valid unless reduced to writing and signed by both parties.

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

Date: _____

BOARD OF WATER AND SOIL RESOURCES

By: _____

Its: _____

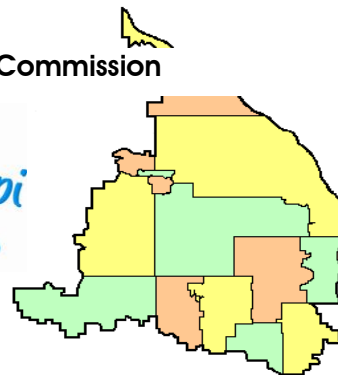
Date: _____

EXHIBIT A
Feasibility Study

(attached hereto)

EXHIBIT B
Project and Practices Application

(attached hereto)



3235 Fernbrook Lane N • Plymouth, MN 55447
 Tel: 763.553.1144 • Fax: 763.553.9326
 Email: judie@jass.biz • Website: www.shinglecreek.org

National Pollutant Discharge Elimination System (NPDES) Phase II Education and Public Outreach Program **DRAFT** 2020 Annual Report **DRAFT**

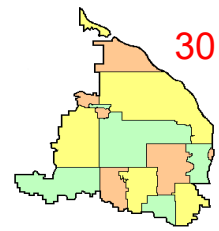
The Shingle Creek and West Mississippi Watershed Management Commissions conducted education and public outreach activities in 2020 in fulfillment of their Third Generation Watershed Management Plan Watershed Education and Public Outreach Program goals. However, due to the COVID-19 pandemic, many of these activities were modified to meet in-person guidelines, conducted virtually, or curtailed altogether.

EDUCATION AND PUBLIC OUTREACH PROGRAM GOALS

1. All members of the community become knowledgeable about the water resources in the watersheds and take positive action to protect and improve them.
2. All members of the community have a general understanding of watersheds and water resources and the organizations that manage them.
3. All members of the community have a general understanding of the Impaired Waters in the watersheds and take positive actions to implement TMDL requirements.

The Commissions identified the following general education and outreach strategies in the Third Generation Watershed Management Plan. More detailed educational goals by stakeholder groups may be found in Appendix E of that Plan.

- Maintain an active Education and Outreach Committee (EPOC) with representatives from all member cities to advise the Commissions and to assist in program development and implementation
- Participate in the West Metro Water Alliance (WMWA) to promote interagency cooperation and collaboration, pool resources to undertake activities in a cost-effective manner, and promote consistency of messages
- Use the Commissions', member cities', and educational partners' websites and newsletters, and local newspapers and cable TV to share useful information to stakeholders on ways to improve water quality
- Prominently display the Commissions' logos on information and outreach items, project and interpretive signs, and other locations to increase visibility
- Provide opportunities for the public to learn about and participate in water quality activities
- Provide cost-share funding to assist in the installation of small BMPs and demonstration projects
- Educate elected and appointed officials and other decision-makers
- Enhance education opportunities for youth
- Each year review and modify or develop and prioritize education and outreach activities and strategies for the coming two years



PROGRAM: WATERSHED PREP (PROTECTION, RESTORATION, EDUCATION, AND PREVENTION)

Audience: Fourth grade students, educators, families, the general public

Program Goals:

- a. Engage elementary students in hands-on learning about the water cycle and how the built environment influences stormwater runoff and downstream water quality.
- b. Provide general watershed and water quality education to citizens, lake associations, other civic organizations, youth groups, etc.

Educational Goals:

- a. Have a general understanding of watersheds, water resources and the organizations that manage them.
- b. Understand the connection between actions and water quality and water quantity.

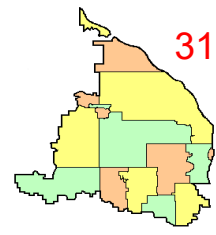
Specific Activities to Reach Goals:

Watershed PREP is a program of the West Metro Water Alliance (WMWA), a consortium of four WMOs including the Shingle Creek and West Mississippi WMOs, and stands for Protection, Restoration, Education, and Prevention. 2020 was the seventh year of the program. Individuals with science education backgrounds serve as contract educators to be shared between the member WMOs. The focus of the program is two-fold - to present water resource-based classes to fourth grade students and to provide education and outreach to citizens, lake associations, civic organizations, youth groups, etc.

Table 1. Watershed PREP Program participation.

Year	# Classrooms	# Students	# and Type of Schools
Lesson 1			
2013	63	1,679	13 in six districts; one charter school; one parochial school
2014	116	3,469	30 in seven districts; one magnet school; one parochial school
2015	122	3,183	36 in nine districts; two charter schools; five parochial schools
2016	107	2,850	29 in seven districts, one charter school, 5 parochial schools
2017	121	3,249	12 in seven districts, one charter school, one parochial school
2018	143	3,593	32 in seven districts, one charter school, 2 parochial schools
2019	103	2,681	27 in six districts, two magnet schools; one parochial school
2020*	20	572	6 in four districts, two magnet schools
Lesson 2			
2013	14	390	Three in three districts; one charter school; one parochial school
2014	22	645	Five in three districts
2015	27	859	Six in five districts
2016	20	524	Five in three districts, one parochial school
2017	38	1,072	Seven in three districts, one parochial school
2018	69	1,755	16 in five districts, one parochial school
2019	58	1,516	16 in five districts, one magnet school
2020*	7	172	2 in two districts

*In 2020, Watershed PREP classes were limited by the constraints of the COVID-19 pandemic that closed schools. In some cases, Watershed PREP classes were conducted virtually.



Fourth Grade Program. Three individual classes meeting State of Minnesota education standards have been developed. **Lesson 1, *What is a Watershed and Why do we care?***, provides an overview of the watershed concept and is specific to each school's watershed. It describes threats to the watershed. **Lesson 2, *The Incredible Journey***, describes the movement and status of water as it travels through the water cycle. **Lesson 3, *Stormwater Walk***, investigates movement of surface water on school grounds.

Table 2. 2020 schools and students participating in Lesson 1: What is a Watershed?

Date	School	School District	City	Watershed	Classes	Students
1/9	Neill Elementary	Robbinsdale	Crystal	Bassett	3	60
3/4	Hassan	Elk River	Rogers	Elm	4	112
3/13	Sunset Hill	Wayzata	Plymouth	Bassett	4	110
10/4-5	Weaver Lake	Osseo	Maple Grove	Elm	6	90
12/8	SEA Magnet	Robbinsdale	Golden Valley	Bassett	3	80
12/9	Immersion	Robbinsdale	New Hope	Bassett		120
				Total	20	572

Table 3. 2020 schools and students participating in Lesson 2: The Incredible Journey

Date	School	School District	City	Watershed	Classes	Students
1/8	Neill Elementary	Robbinsdale	Crystal	Bassett	3	61
3/3	Hassan	Elk River	Rogers	Elm	4	111
				Total	7	172

One of the WMWA educators, has converted classroom Lesson #1 into a virtual, on-line learning experience. The lesson is posted to the WMWA website and to YouTube where it is available to educators, students, and the general public. She also sent out a link to the video to the teachers that she and the other educators have worked with in the classroom. The video can be viewed at westmetrowateralliance.org/.

The ultimate goal is to make this program available to all fourth graders in the four WMWA watersheds (Shingle Creek, West Mississippi, Bassett Creek, and Elm Creek), and to other schools as contracted. The program is offered to public, private, parochial, magnet and charter schools.

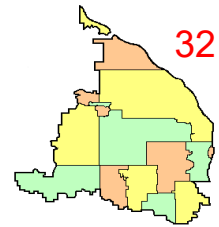
Community Education and Outreach. The PREP educators provide outreach at community and school events. Because of the nature of these events, it is usually difficult to keep a tally of the number of contacts made and citizens engaged. Scheduled events were cancelled in 2020.

Evaluation:

The educators evaluate the success of the Fourth Grade Program by surveying students and teachers about the quality of the program, the learning that was observed, and the performance of the educators. Much of the feedback occurs during and right after the presentations in spontaneous comments.

PROGRAM: DISTRIBUTE EDUCATIONAL MATERIALS

Audience: Multiple



Program Goals:

- a. Inform various stakeholders about the watershed organizations and their programs.
- b. Provide useful information to a variety of stakeholders on priority topics.
- c. Engage stakeholders and encourage positive, water-friendly behaviors.

Educational Goals:

- a. Property owners maintain properties and best management practices (BMPs) to protect water resources.
- b. Property owners adopt practices that protect water resources.
- c. Stakeholders support and engage in protection and restoration efforts.

Specific Activities to Reach Goals:

Maintain Your Property the Watershed Friendly Way

This handbook is targeted to small businesses, multi-family housing properties, and common ownership communities such as homeowners' associations. It contains tips for specifying and hiring turf and snow maintenance contractors and includes checklists for BMP inspections. Electronic copies have been provided to Shingle Creek and West Mississippi cities for their use and to be displayed on their websites. The handbook also appears on the WMWA website. Print copies are available for distribution.

10 Things You Can Do

In 2019 the Commissions partnered with WMWA to revise and refresh the popular brochure *10 Things You Can Do to protect Minnesota's lakes, rivers, and streams*. New emphasis was placed on salting sparingly and on conserving water.

Roots Displays

In 2020 WMWA partnered with other groups to design and commission fabrication of a new, lighter-weight version of a popular interactive display highlighting native plants, comparing their long roots to the shorter-rooted turf grasses. The new displays have been completed and delivered to the various groups that joined in on WMWA's order.

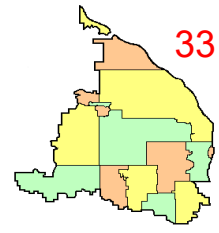
Press Releases and Newspaper Articles

Northwest Community Television currently provides services as CCX Media. CCX Media provides a Connected Community Experience for the northwest Hennepin County suburbs, offering daily televised news, and coverage of city council meetings, local events, and high school sports. CCX News aired televised coverage of the following stories:

- Announcement about Crystal Lake Management Plan grant award
- Initiation of carp management on Crystal Lake
- Curly-leaf pondweed treatment on Bass Lake
- New Hope approves Meadow Lake drawdown project

Web Site

The Commissions maintained a joint web site, shinglecreek.org, which includes information about the watersheds, the Commissions, and the water resources in the watersheds. From January 1 – December



7, 2020, there were 9,233 page views, of which 7,383 were unique views. The difference between the two is this: if a user lands on the home page, then jumps to a content page, then back to the home page, that would count as three page views, but only two unique page views. The behavior flow chart shows the most common landing page was the home page, followed by the meeting minutes, where the notice of availability includes a direct link to the page. Other popular landing pages were the Twin Lake Carp and the Biochar Filters projects, both of which were promoted on social media. The TAC meeting page with 115 direct clicks as well as clicks on other pages are lumped together in the grouping (57 more pages). So, while the website is used mainly to access meeting and application materials, it is a good forum for sharing specific project information and gets decent traffic on other more general interest pages.

Social Media

The Commission established a Facebook page in 2016. *Facebook Impressions* is the number of times a post came up in a person's feed; *reach* is the number of times a post was viewed in a feed; and *engagement* is an action – a click, comment, share, or reaction. The site gained 56 new followers in 2020. The most engaging post was a repost of a CCX news story on the upcoming Crystal Lake improvements. This post was shared to the Birdtown Club page, an interest group focused on happenings in Robbinsdale.

Evaluation:

Evaluation measures are as noted above: number of brochures and handbooks distributed; number of website hits; social media engagement. The new website uses Google Analytics to better track page views and unique visitors.

Program: Public Outreach

Audience: Residents, youth

Program Goals:

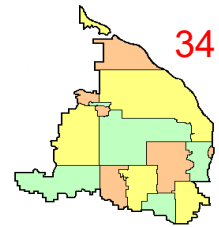
- a. Provide opportunities for people of all ages to participate in hands-on activities to protect and improve waters.
- b. Provide opportunities for people to learn about ways they can protect and improve waters.

Educational Goals:

- a. Maintain their properties and best management practices (BMPs) to protect water resources.
- b. Adopt practices that protect water resources.
- c. Support and engage in protection and restoration efforts.
- d. Participate in volunteer activities.

Specific Activities to Reach Goals:

The *Pledge to Plant Campaign* was developed by Metro Blooms/Blue Thumb to encourage residents to replace impervious surface and turf grass with native plantings to benefit clean water by reducing stormwater runoff. The project includes the additional benefit of creating habitat for pollinators. In past years, the project was promoted in the Blue Thumb space at the State Fair where the public voted to name the campaign, *Pledge to Plant for Clean Water and Pollinators*.



Phase two of the project included a roll out of the Pledge campaign on the Metro Blooms and WMWA websites where citizens entered the square footage of their new plantings, creation of a *Pledge to Plant* banner to be displayed at events, and a social media campaign that began in 2016. In 2020, COVID-19 limited in-person engagement, cancelling the State Fair and other area events.

At year-end 2018, over 630 people had submitted the Pledge online covering over 417 acres. The total includes a handful of larger prairie restoration projects; the median pledge covers 250 square feet. Most of the Pledges came from the metro area, but Pledges have been received from more than 20 states. The *Pledge to Plant* campaign was also promoted during the Watershed PREP classes. Pledges were not tallied in 2019 or 2020.

Rain Garden Workshops

The Commissions partnered with WMWA to sponsor one Rain Garden workshop through Metro Blooms in 2020. Metro Blooms is a non-profit organization whose mission is to promote and celebrate gardening, to beautify our communities and help heal and protect our environment.

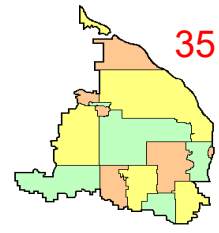
The City of Champlin hosted a Resilient Yard/Turf Alternatives Workshop on April 14, 2020. The workshop introduced the audience to the four planting types promoted through the Lawns to Legumes Program. Due to the pandemic, content was presented through an online platform. While only five Champlin residents participated in this virtual workshop, 32 residents from across the metro area also participated. It is the City's intention to continue replaying the workshop on QCTV for Champlin residents. Attendees rated this new format as "above-average" or "excellent." Eighty percent indicated they are likely to install pollinator habitat within a year; 39% responded that they are likely/very likely to install a raingarden within two years; and 93% indicated they were likely/very likely to install native plants in their yards this year.

Hennepin County Chloride Initiative (HCCI)

The eleven WMOs in Hennepin County elected to set aside 10 percent (\$101,800) of the BWSR Watershed-Based Funding from the 2018 Pilot Program specifically for joint, countywide chloride reduction initiatives. The HCCI is comprised of one representative designated by each WMO. Ben Scharenbroich from the City of Plymouth represents Shingle Creek and Andrew Hogg from the City of Brooklyn Center represents West Mississippi.

The HCCI has been primarily engaged in better understanding barriers to chloride reduction BMPs and assessing training needs. The group has been partnering with the Minnesota Pollution Control Agency (MPCA) on one of the identified training needs – outreach and training opportunities for property managers. A training workshop has been developed and an accompanying handbook has been made available on the MPCA's website at: <https://www.pca.state.mn.us/water/salt-applicators>. The handbook is intended to accompany the workshop, not replace it. The MPCA will be translating manuals and training materials into Spanish and may make other languages available if there is demand.

One potential demonstration project, currently in the initial stages of discussion, is the Parkers Lake Chloride Reduction Project, a partnership with Bassett Creek and the City of Plymouth. That project would take a commercial/industrial area and search for willing partners to implement chloride reduction BMPs to see what it would take to make a measurable reduction in chloride in runoff.



Shingle Creek Cleanup

The 20th Annual Great Shingle Creek Cleanup was scheduled to be held the week of April 19-25. Each city sponsors its own cleanup. While some cities cancelled the event in 2020, others held abbreviated versions to limit in-person contact.

Volunteer Monitoring

The Commissions provide opportunities for high school students and adults to gain hands-on experience monitoring lakes, streams, and wetlands.

Lakes. Volunteer lake monitoring is performed through the Met Council's Citizen Assisted Lake Monitoring Program (CAMP). The Met Council provides the monitoring equipment and the laboratory work and data analysis while the Shingle Creek Commission staff recruit and train volunteers to perform sampling, collect the volunteers' water quality samples, and get them to the Met Council. Twin, Ryan, Meadow, and Success lakes were monitored by volunteers in 2020.

Streams. Routine stream macroinvertebrate monitoring in both watersheds is conducted by volunteers through Hennepin County's RiverWatch program. This program was initiated in 1995 to provide hands-on environmental education for high school and college students, promote river stewardship, and obtain water quality information on the streams in Hennepin County. Hennepin County coordinates student and adult volunteers who use the RiverWatch protocols to collect physical, chemical, and biological data to help determine the health of streams in the watershed. No sites on Shingle Creek were monitored as part of RiverWatch in 2020 due to COVID-19.

Wetlands. Two sites in the Shingle Creek watershed and two sites in the West Mississippi watershed were monitored through the Hennepin County Environmental Services' Wetland Health Evaluation Program (WHEP). WHEP uses trained adult volunteers to monitor and assess wetland plant and animal communities in order to score monitored wetlands on an Index of Biological Integrity for macro-invertebrates and vegetation. No sites were monitored in 2020 due to COVID-19.

Evaluation:

Evaluation of these programs is based on participation.

Program: Collaborative Efforts

Audience: Multiple

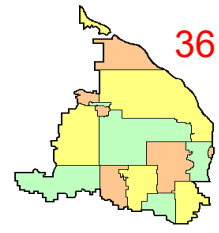
Program Goals:

- a. Promote interagency cooperation and collaboration, pool resources to undertake activities in a cost-effective manner, and promote consistency of messages.
- b. Share information and ideas with other partners.

Educational Goals:

- a. All people have a general understanding of watersheds, water resources and the organizations that manage them.
- b. All people understand the connection between actions and water quality and water quantity.

Specific Activities to Reach Goals:



WMWA

The Commissions partner with the Bassett Creek WMO and the Elm Creek WMO and other interested parties as the West Metro Water Alliance (WMWA). Other participating parties have included the Freshwater Society, Hennepin County Environment and Energy, and Three Rivers Park District. The Mississippi WMO also participates but is not a formal member. Each member watershed organization contributes funds to WMWA, which sponsors programs such as Watershed PREP, standardized brochures and booklets, and the *Planting for Clean Water Program*. WMWA publishes an annual report on its activities.

The very popular *10 things you can do to protect Minnesota's lakes, rivers, and streams* brochure was revised and updated in 2019 and was printed at no cost to WMWA members by the Hennepin County Department of Environment and Energy. It can also be downloaded from the WMWA website.

Other Partnerships

The Commissions are also members of:

- WaterShed Partners, a coalition of agencies, educational institutions, WMOs, Watershed Districts, and Soil and Water Conservation Districts that coordinate water resources education and public outreach planning in the Metro area;
- BlueThumb, a consortium of agencies and vendors partnering to increase outreach and awareness; and
- NEMO (Nonpoint Education for Municipal Officials), a program that provides educational and skill-building programming to elected and appointed officials and community leaders to increase their knowledge of the connection of land use and management decisions to water quality and natural resources. NEMO was inactive in 2020.

Evaluation:

No specific evaluation of this programing has been completed.

Program: Continuing Education

Audience: Commissioners, Technical Advisory Committee (TAC)

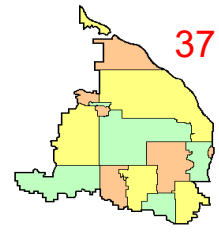
Program Goals:

- a. Effectively and efficiently manage the water resources in the watershed.
- b. Increase awareness and knowledge of broader water resources issues and trends.

Educational Goals:

- a. Commissioners and TAC understand watershed management, water quality and quantity conditions and issues in the watershed, regulatory requirements and the current standards and practices.
- b. Commissioners and TAC aware of broader water management issues and trends in Minnesota and elsewhere.

Specific Activities to Reach Goals:



Staff Presentations

All of the Staff presentations were project-related, none were for “Commissioner education.”

Guest Speakers

ReNae Bowman, Master Water Steward Appointee, presented her **Capstone Project**. Her project includes evaluating and revitalizing Crystal’s current 125 raingardens and offering alternative runoff abatement methods to those without raingardens.

Dr. Richard Kiesling from the United States Geological Survey (USGS) spoke about **Advanced BMPs for Emerging Contaminants**. He provided information on the effectiveness of iron/sand filters on the removal of PFA’s, bacteria, caffeine and other surface water pollutants associated with urban runoff.

Professor John Chapman presented, "**What can we learn from urban stormwater manhole sumps?**" Using inspection and clean-out records for 150 structures in the Twin Cities and 19 structures in St. Cloud from 2009 to 2019, his team was able to determine that inspection and clean-out twice/year allowed for a greater chance of full sediment capture. When modeling, a PSD coarser than NURP50 may be needed to represent an urban site. A sediment concentration of 400 mg/l may also better represent urban sites. Chapman is an Assistant Research Professor for the University of Minnesota Department of Bioproducts and Biosystems Engineering and the Director of the Erosion and Stormwater Management Certification Program.

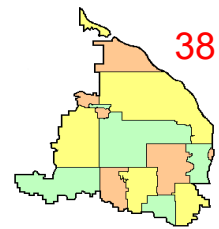
Other Presentations

The City of Brooklyn Park submitted a Partnership Cost Share Program application on behalf of Boisclair Corporation and Metro Blooms for improvements at **Brooks Landing Senior Apartments**. Improvements include replacing the parking lot, adding two raingardens to treat runoff from the parking lot and sidewalk, and adding amenities such as benches and landscaping. The Shingle Creek Commission approved funding of \$30,000 for this project. This site was awarded a Lawns to Legumes demonstration site and funding from that grant will also be applied to the raingardens. Representatives from Metro Blooms returned in late fall to provide an update of the progress of this project.

The City of Brooklyn Park submitted a Cost Share Program application in the amount of \$50,000 to assist in the cost of designing the upcoming **River Park Stormwater Improvements**. This project will provide treatment for 250 acres of land that currently discharge untreated into the Mississippi River. \$35,422 from Watershed Based Funding was approved by the West Mississippi Commission for this project.

The City of Crystal submitted a City Cost Share Program application for its **West Broadway Stormwater Infiltration Project** at 5747 West Broadway. This project was initially identified in the Crystal Shopping Center Subwatershed Assessment (SWA) and will infiltrate runoff that is currently discharged untreated into the Bass Lake Road trunk system that flows to Upper Twin Lake. Based on modeling completed for the SWA, the system will infiltrate an estimated 4.8 acre-feet of runoff per year and reduce TP load by 4.3 pounds per year. Funding of \$50,000 was approved by the Shingle Creek Commission for this project.

Stephen Mastey, Landscape Architecture, Inc., presented the **Twin Lake North Condominium parking lot BMP project** which was paid in part with Shingle Creek Commission cost-share funds. The project moved the existing parking lot, which drained untreated directly into Twin Creek, out of the floodplain and restored the area with a diverse native plant community. The project featured a Tire Derived Aggregate (TDA) infiltration system and reduced the amount of impervious on-site by .39 acres.



Mastey applied for a \$50,000 cost-share grant to create a play area at the **Crescent Cove Children’s Hospice Facility** that is mostly within the 100-year floodplain and convert the adjacent existing non-native landscape to a diverse native plant community that creates an ecologically appropriate wetland buffer. Under a portion of the play area, additional storage beyond the watershed requirements will be created by using a TDA Infiltration System similar to the product used across the street at the Twin Lake North Townhomes Parking Lot Renovation Project. Work was scheduled to begin in late summer of 2020 with completion projected for early spring 2021. Funding of \$50,000 was approved by the Shingle Creek Commission for this project.

Richard McCoy, Robbinsdale TAC representative, presented on the topic of **Ryan Lake and Supplemental Pumping from Crystal Lake**. He related the needs for remedial action to reduce/better control high water levels in Crystal Lake. Crystal Lake has no natural outlet and increasing pumping into Minneapolis using the existing discharge pipe is limited by downstream capacity. During extended periods of very high water in Crystal Lake groundwater/lake water inundates the low-lying areas and infiltrates residents’ basements. McCoy identified the two apparent options: 1) reduce the water coming into the lake and/or 2) increase the water going out of the lake. In addressing the first option, the City of Robbinsdale has been building raingardens and underground storage as opportunities arise and is looking to the City of Minneapolis to assist with infrastructure in their jurisdiction. With the second option, the City cannot increase pumping using the existing discharge point. The Twin Lake/Ryan Lake system is the only viable short-term option. McCoy’s presentation showed the “temporary” route used in 2019 to re-direct the water into Twin Lake, avoiding disruption to local traffic. It also showed the “permanent” route employed in 2020. With the more direct route, this alternative reduced the high water issues on Twin Lake by discharging the water to Ryan Lake directly. It is the intention to maintain this route for 2021 and beyond.

A Staff presentation described the significant flood mitigation benefits realized from the **Becker Park and Kentucky Avenue underground infiltration projects** undertaken in the City of Crystal. The analysis used a two-dimensional computer model to predict street flooding depth surrounding the Bass Lake Road and Broadway Ave intersection. The model was calibrated to monitoring data recorded in the Becker Park system. Improving water quality within Twin Lake was the primary motivation for both projects, but modeling shows the two projects also reduce street flooding.

Other

- The Commissions made contributions to fund the 2020 Annual Road Salt Symposium presented by Fortin Consulting.
- Commission Staff created a two-page informational flier on filamentous algae for the public. It is posted to the Commission’s website.
- Included an Enhanced Street Sweeper as a capital project on the Shingle Creek CIP.

Evaluation:

No specific evaluation of this programming has been completed

To: Shingle Creek/West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: March 5, 2021

Subject: Hennepin County Chloride Initiative Update

**Recommended
Commission Action**

For information.

The Commissioners will recall that the eleven WMOs in Hennepin County elected to set aside 10 percent of the BWSR Watershed Based Funding from the 2018 Pilot Program, or \$101,800, specifically for joint, countywide chloride reduction initiatives. The Hennepin County Chloride Initiative is comprised of one representative designated by each WMO. Ben Scharenbroich represents Shingle Creek and Andrew Hogg represents West Mississippi. The Riley-Purgatory-Bluff Creek Watershed District serves as coordinator and fiscal agent for the Hennepin County Chloride Initiative (HCCI).

Initiatives. At its meeting on March 3, the group elected to proceed with two initiatives:

1. The group has contracted with Fortin Consulting to prepare Winter Maintenance Chloride Management Plan templates for private applicators and property managers. The templates will help those users to contract for and implement Smart Salting techniques. Fortin with the help of HCCI is assembling a focus group of property managers and applicators to be sure the templates are usable and useful. Those templates are expected to be complete in time to use for next winter.
2. The City of Plymouth and Bassett Creek WMC are partnering to intensively study a subwatershed upstream of Parker's Lake, which is impaired for excess chloride concentration. The intent is to implement the best, most effective BMPs in this subwatershed to significantly decrease chloride (road salt) export to Parkers Lake. The HCCI agreed to cost share in the first phase, which is an intensive study and data gathering phase. The partners will work with Young Environmental to bring together a diverse group of stakeholders and knowledgeable professionals to better understand the sources of chloride and the structural and nonstructural BMPs that are likely to have the most impact. The outcome will be a written implementation plan.

Other. The group discussed pending legislation regarding the proposal for limited liability for state certified salt applicators. This legislation had previously been received favorably by several committees in the state legislature but did not make it into a final bill. The legislation has been broadened to include other provisions, so it needs to go through the committee process again. The two bills are [SF 884](#) and its companion [HF 1660](#). The bill includes additional provisions beyond those relating to salt; the applicable sections are shown on the attached.

The advocacy group Stop Over Salting has been lobbying in support of the legislation, as they did last session. They do periodically ask for help contacting key legislators to help them understand the importance of the bill in helping protect our surface and groundwater and in meeting our obligations to reduce chloride load to Impaired Waters, and we in turn pass that along to Commissioners/alternates in districts of key legislators as the bills pass through the various committees.

SF 884 Draft as of 3/5/21

A bill for an act relating to environment; establishing program to certify salt applicators; limiting liability; prohibiting water softeners that cause excessive chloride pollution; requiring report on process to adopt and amend water quality standards; appropriating money for water quality programs; proposing coding for new law in Minnesota Statutes, chapters 116; 325F.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

SECTION 1.**[116.2025] SALT APPLICATORS; VOLUNTARY CERTIFICATION PROGRAM.****SUBDIVISION 1. DEFINITIONS.**

For purposes of this section, the following terms have the meanings given:

- (1) "certified commercial applicator" means an individual who applies deicer, completed training on snow and ice removal and deicer application approved by the commissioner, and passed an examination after completing the training;
- (2) "commercial applicator" means an individual who applies deicer for hire, but does not include a municipal, state, or other government employee;
- (3) "deicer" means any substance used to melt snow and ice, or used for its anti-icing effects, on privately owned surfaces traveled by pedestrians and vehicles; and
- (4) "owner" means a person that owns or leases real estate and that enters into a written contract with a certified commercial applicator for snow and ice removal and deicer application.

SUBD. 2. VOLUNTARY CERTIFICATION PROGRAM; BEST MANAGEMENT PRACTICES.

- (a) The commissioner of the Pollution Control Agency must develop a training program that promotes best management practices for snow and ice removal and deicer application and allows commercial applicators to obtain certification as a water-friendly applicator. The commissioner must certify a commercial applicator as a water-friendly applicator if the applicator successfully completes the program and passes the examination.
- (b) The commissioner must provide additional training under this section for certified commercial applicators renewing their certification after their initial training and certification.
- (c) The commissioner must provide the training and testing module at locations statewide and may make the recertification training available online.
- (d) The commissioner must annually post the best management practices and a list of certified commercial applicators on the agency's website.
- (e) The commissioner may charge a fee of up to \$350 per certified applicator for the training or recertification under this section.

SUBD. 3. LIABILITY.

- (a) A certified commercial applicator or an owner is not liable for damages arising from hazards resulting from the accumulation of snow and ice on any real estate maintained by the certified commercial applicator when the hazard is solely caused by snow or ice and the certified commercial applicator used the best management practices for snow and ice removal and deicing approved by the commissioner.
- (b) Nothing in paragraph (a) prevents or limits the liability of a certified commercial applicator or owner if the certified commercial applicator or owner:
 - (1) commits an act or omission that constitutes negligence or willful or wanton disregard for the safety of entrants onto real estate of the owner that is maintained by the certified commercial applicator and that act or omission proximately causes injury, damage, or death;
 - (2) has actual knowledge or reasonably should have known of a dangerous condition on the real estate of the owner maintained by the certified commercial applicator;
 - (3) intentionally injures an entrant on real estate of the owner that is maintained by the certified applicator; or
 - (4) fails to comply with the best management practices for snow and ice removal and deicer application approved by the commissioner.

(c) The liability of a commercial applicator who applies deicer but is not certified under this section may not be determined under the standards provided in this subdivision.

SUBD. 4. RECORD KEEPING.

A certified commercial applicator must maintain the following records as part of the best management practices approved by the commissioner:

- (1) a copy of the applicator's certification approved by the commissioner and any recertification;
- (2) evidence of passing the examination approved by the commissioner;
- (3) copies of the winter maintenance assessment tool requirements developed by the commissioner; and
- (4) a written record describing the road, parking lot, and property maintenance practices used. The written record must include the type and rate of application of deicer used, the dates of treatment, and the weather conditions for each event requiring deicing. The records must be kept for a minimum of six years.

SUBD. 5. PENALTY.

The commissioner may revoke or decline to renew the certification of a commercial applicator who violates this section or rules adopted under this section.

SUBD. 6. RELATION TO OTHER LAW.

Nothing in this section affects municipal liability under section 466.03.

EFFECTIVE DATE.

This section is effective August 1, 2021, and applies to claims arising on or after that date.

SEC. 2.

[325F.995] WATER SOFTENERS CAUSING EXCESSIVE CHLORIDE POLLUTION.

Beginning August 1, 2023, a person must not manufacture, sell, distribute, or install within this state a water softener that causes excessive chloride pollution. For purposes of this section:

- (1) a water softener causes excessive chloride pollution if the amount of chloride-containing chemicals the softener uses is determined by something other than the amount of water that has actually been softened; and
- (2) a water softener does not cause excessive chloride pollution if the softener uses chloride-containing chemicals only when directed to do so by the softener operator.

Z:\Shingle Creek\Chloride - Statewide\M-mar HCCI update.docx



To: Shingle Creek/West Mississippi WMO Commissioners

From: Ed Matthiesen, P.E.
Diane Spector

Date: March 5, 2021

Subject: Proposed Hennepin County Climate Action Plan

**Recommended
Commission Action**

For information and discussion. Direct staff to forward any comments you may have to County staff.

Hennepin County has prepared and submitted for public input a Climate Action Plan (<https://www.hennepin.us/-/media/hennepinus/your-government/projects-initiatives/documents/hennepin-county-draft-climate-action-plan.pdf>). Prepared in consultation with county departments, cities, watershed and park districts and public partners, the county also held a series of sessions with community groups, youth and the newly formed Race Equity Advisory Council. More than 2,300 residents responded to a survey.

In the plan the most important values to residents and community partners in creating a climate-friendly future are:

- Ensuring a healthy environment for future generations
- Protecting the most vulnerable people and reducing racial disparities
- Protecting wildlife and nature
- Responsibly using resources and minimizing wastefulness

To accomplish this, the plan includes "...initiatives to reduce greenhouse gas emissions and strategies to adapt to the changing climate in ways that reduce vulnerabilities and ensure a more equitable and resilient Hennepin County. This plan serves as the foundation for a coordinated approach to planning, policy development, and responses to climate change."

Of particular interest to the Commissions are strategies identified to prepare for and respond to extreme weather events, flooding, stormwater volumes and landslides, and to extreme heat and cold that are discussed in pages 25-35. The strategies target infrastructure such as roads, highways, and bridges; storm drainage systems; and natural resources.

There is no recommended action, this item is presented for your information and background. While the public input period extended through March 3, the County would still be appreciative of any comments you may have. We'd also encourage you to review the related work done in preparation for the climate action plan, which can be found at: <https://www.hennepin.us/your-government/projects-initiatives/climate-action>

Judie Anderson

From: Judie Anderson
Sent: Tuesday, March 2, 2021 11:01 AM
To: Rebecca Carlson
Cc: Amy Juntunen; Holtman@smithpartners.com
Subject: RE: MAWD request for Contacting BWSR Leadership

Rebecca and Mr. Holtman, please keep us apprised as things move forward. Thank you.

- Judie

Judie A. Anderson
 WATERSHED ADMINISTRATOR | JASS | 3235 FERNBROOK LANE PLYMOUTH MN 55447
judie@jass.biz | D 763.553.1144 | F 763.553.9326
 Representing Elm Creek, Shingle Creek, West Mississippi, and Pioneer-Sarah Creek WMOs
 and Clearwater River WD
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From: Rebecca Carlson <Rebecca@resilience-resources.com>
Sent: Tuesday, March 2, 2021 10:56 AM
To: Judie Anderson <Judie@jass.biz>
Cc: Amy Juntunen <Amy@jass.biz>
Subject: FW: MAWD request for Contacting BWSR Leadership

From: Chuck Holtman <Holtman@smithpartners.com>
Sent: Tuesday, March 2, 2021 10:52 AM
To: Rebecca Carlson <Rebecca@resilience-resources.com>
Subject: RE: MAWD request for Contacting BWSR Leadership

Thank you, Rebecca.

You in turn may be interested in this bill concerning a study to merge WDs and SWCDs. Of course many bills are just introduced nonsense, but Rep. Torkelson carries a good deal of weight and credibility in the area. I'm not yet aware of whence this bill derives.

Torkelson introduced:

[H. F. 1586](#), A bill for an act relating to water; appropriating money for a feasibility study for merging soil and water conservation districts and watershed districts.

The bill was read for the first time and referred to the Committee on Environment and Natural Resources Finance and Policy.

I also know that a couple of my WDs involved in One Watershed One Plan are frustrated at what they see as BWSR's insufficient insistence on watershed-based assessment and prioritization of projects, and its acquiescence in county/SWCD (non-watershed-based) directing of 1W1P plans/work.

So it looks like there's a cluster of WD/SWCD relational issues heating up.

Chuck

Charles B. Holtman

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From: Rebecca Carlson <Rebecca@resilience-resources.com>

Sent: Tuesday, March 2, 2021 10:05 AM

To: Chuck Holtman <Holtman@smithpartners.com>

Subject: FW: MAWD request for Contacting BWSR Leadership

Hi Chuck,

No action needed, I just thought you and your crew may find this interesting. It seems to me like this march towards SWCDs and away from watershed districts has been in play for some time now- not sure what's driving MAWD to act now. Would be interesting to get your take on it at some point.

R

This Document can be made available
in alternative formats upon request

State of Minnesota
HOUSE OF REPRESENTATIVES

NINETY-SECOND SESSION

H. F. No. 1586

02/25/2021 Authored by Torkelson

The bill was read for the first time and referred to the Committee on Environment and Natural Resources Finance and Policy

1.1 A bill for an act
1.2 relating to water; appropriating money for a feasibility study for merging soil and
1.3 water conservation districts and watershed districts.

1.4 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

1.5 Section 1. **FEASIBILITY STUDY FOR MERGING SOIL AND WATER**
1.6 **CONSERVATION DISTRICTS AND WATERSHED DISTRICTS;**
1.7 **APPROPRIATION.**

1.8 \$..... in fiscal year 2022 is appropriated from the general fund to the Board of Water
1.9 and Soil Resources to prepare, in consultation with soil and water conservation districts,
1.10 watershed districts, and other local units of government, a feasibility study on voluntarily
1.11 merging soil and water conservation districts and watershed districts that have completed
1.12 a plan under Minnesota Statutes, section 103B.801. By January 15, 2023, the board must
1.13 submit a report to the chairs and ranking minority members of the house of representatives
1.14 and senate committees and divisions with jurisdiction over environment and natural resources
1.15 policy and finance with the study and any recommendations for legislation necessary for
1.16 implementation. This is a onetime appropriation and is available until June 30, 2023.

From: Emily Javens <emily@mnwatershed.org>
Sent: Monday, March 1, 2021 11:59 AM
To: Emily Javens <emily@mnwatershed.org>
Subject: MAWD request for Contacting BWSR Leadership

MAWD Board and Administrators,

Will you please send a note to BWSR Executive Director John Jaschke, BWSR Chair Gerry Van Amburg, and our watershed reps (Joe Collins and Jill Crafton) letting them know it is not acceptable to have a monthly newsletter that focuses only on SWCD programs and neglecting the work done by watershed districts... especially when the stories are associated with drainage and the Red River Valley. Those stories can't be told without the role watershed districts play, but somehow they have once again made it all about SWCDs. It is also not acceptable to produce a fact sheet on legislation that would increase water storage and focus on the work SWCDs do and not mention work WDs specialize in. (See attached.) I hate that we need to keep talking about the "us vs. them" argument, and pointing out the "haves and the have nots." It can't be argued that SWCDs don't have more access to programs and funding than we do. But, please know there are reasons this happens in most cases and it often isn't up to BWSR to make those resource decisions. Many of the inequities are directed by the legislature or are linked to funding opportunities that come with NRCS dollars (which ties to SWCDs.) Please also know that MAWD is advocating for simple ways some of those programs can be expanded at a low cost to include us. What I have a problem with here is that even on items completely under BWSR's control, they have a pattern that still strongly favors SWCDs. I know this is frustrating for all of us. That frustration is not getting understood when we point it out though. We need more voices and we need louder voices. We deserve better service delivery from the State. So even though BWSR does not have complete control over who gets financial and technical resources, they DO have control over whose work gets promoted in their newsletters or fact sheets.

Let me be very clear. We need ALL local governments to be represented and supported and to have adequate funding capacity to do their jobs. We need to support each other and they (our LGU partners) need and do support us. But, our state agency is not doing an adequate job for us. They are not called the MN Board of SWCDs, and it is time they stop acting like it.

Also – If you have stories that can be told about the great work I know you are doing, please contact Mary Juhl, BWSR Communications Coordinator, so that she can make sure our stories have a shot at getting written up, too.

Here are the email addresses you will need:

- John Jaschke – john.jaschke@state.mn.us
- Gerry Van Amburg – vanambur@cord.edu
- Joe Collins – jpcollins534@centurylink.com
- Jill Crafton – jillgreatlakesike@gmail.com
- Mary Juhl – mary.juhl@state.mn.us

Thank you,
Emily

Emily Javens, PE | Executive Director
 MN Association of Watershed Districts (MAWD)
 595 Aldine Street | St. Paul, MN 55104
 (651) 440-9407 office | (320) 979-0084 mobile
www.mnwatershed.org | emily@mnwatershed.org

Water Storage and Treatment

Establishes a program to provide financial assistance for water storage projects to protect streams, rivers, lakes and infrastructure from extreme weather events and related climate change impacts.

Challenges on the landscape

Minnesota is experiencing larger and more frequent and intense rainfall events, resulting in negative impacts to agriculture and infrastructure, significant erosion along riverbanks and declining water quality.

What is water storage and treatment?

Water storage projects are engineered to slow down or temporarily hold back water from reentering a stream or river. For example, during a storm, water is directed into a wetland, holding basin, or soil in a farm field and then is slowly released downstream. This action provides water quality treatment by allowing sediment to settle out. It also reduces the water volume and speed leaving our landscape, which in turn reduces erosion along river banks and the amount of sediment entering Minnesota's streams, lakes and rivers.



L to R: water and sediment control basin in crop field is empty in dry conditions but holds water temporarily after heavy rains; landowners pose by construction of storage basin in Pope county ag field; grass back sediment control basin slows runoff.

Protecting Minnesota Landscapes

Water storage provides the following benefits:

- reducing runoff which decreases erosion and nutrient loss from working lands
- mitigating climate change impacts by slowing flowing water from severe weather events
- protecting infrastructure from flood damage
- preparing agricultural lands to withstand more intense rainfall events
- improving downstream water quality

2021 Budget Proposal (HF932/SF1037)

Governor Walz recommends \$3 million to develop a statewide program that leverages local, federal, and private sector funds to address two important needs: water quality and climate resiliency. Putting more water storage on our landscape will address these needs and create a more resilient landscape for Minnesota's future.

Contact

John Jaschke, BWSR Executive Director
john.jaschke@state.mn.us
(651) 296-0878

Angie Becker Kudelka, BWSR Assistant Director
angie.beckerkudelka@state.mn.us
(612) 616-5112

Building Healthy Soils

A long-term strategy will foster more productive and profitable farms, improve water quality, and create better resilience during extreme weather events.

What is soil health?

It is the soil's ability to sustain agricultural crop productivity without resulting in soil degradation or otherwise harming the environment.

One of the best ways to improve soil health is to keep farmland covered with vegetation for much of the year. Practices such as cover crops, reduced tillage, and planting perennial vegetation (known as continuous living cover) help to increase the organic matter and build healthier soils.

Accelerating the implementation of cover crops

Cover crops are plants grown with the primary purpose to build soil health (rather than a commodity). They help landowners build resilient landscapes by:

- holding more water in the soil (which reduces runoff)
- increasing water available for crops, reducing need for supplemental irrigation
- reducing nutrient losses into surface and groundwater
- allowing reduced fertilizer/pesticide use without negative impacts for crop production
- storing carbon in the soil

Challenges of cover crop adoption

Farm census data indicates that approximately 2% of Minnesota's ag land includes cover crops. Some common hurdles to implementation include: the time it takes to establish, lack of information specific to northern climates, access to equipment and support, and funding to sufficiently offset risk until the crop is established.

2021 Budget Proposal (HF936/SF1036)

Governor Walz recommends \$5.5 million to accelerate the use of cover crops on Minnesota's farmlands. With the technical expertise of Soil and Water Conservation Districts and other local partners, these resources will help farmers with establishment costs that help offset risk.

Contact

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Top: Cover crop mix growing under corn near Faribault, MN. Bottom: Rye cover crop growing after harvest of no-till corn in Rice County. Photo credit: Rice SWCD