

## MINUTES

December 9, 2021

A virtual meeting of the Technical Advisory Committee (TAC) of the Shingle Creek and West Mississippi Watershed Management Commissions was called to order by Chair Richard McCoy at 11:02 a.m., Thursday, December 9, 2021.

Present: Andrew Hogg, Brooklyn Center; Mitchell Robinson, Brooklyn Park; Mark Ray, Crystal; Derek Asche, Maple Grove; Liz Stout and Katie Kowalczyk, Minneapolis; Nick Macklem, New Hope; Amy Riegel and Ben Scharenbroich, Plymouth; Richard McCoy, Robbinsdale; Ed Matthiesen, Diane Spector, Erik Megow, Katie Kemmitt, and Todd Shoemaker, Stantec; and Amy Juntunen and Judie Anderson, JASS.

Not represented: Osseo.

Also present: Burt Orred, Jr., Crystal; and Steve Christopher, Board of Water and Soil Resources (BWSR).

- I. Motion by Ray, second by Hogg to **approve the agenda**. \* *Motion carried unanimously.*
- II. Motion by Ray, second by Riegel to **approve the minutes**\* of the October 14, 2021, meeting. *Motion carried unanimously.*

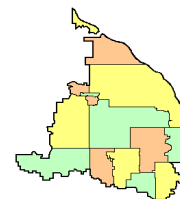
### III. Fourth Generation Watershed Management Plan.

A. As part of the 4th Generation Plan planning process members will be reviewing the Commissions' Rules and Standards and revising them as necessary to:

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

B. The following sections provide an overview of rule updates and discussion points for each of the topics listed above.

1. 2020 MS4 General Permit Updates
  - a. Impervious Surface Disturbance Definition and treatment scope
    - 1) The MS4 Permit has project size triggers based on the amount of new or reconstructed impervious surface.
    - 2) The Commission has project size triggers based on the site size; therefore, the Commission's project size classifications are more stringent. The Commission currently defines a *Site* as, "A space, parcel, or parcels of real property owned by one or more than one person which is being or is capable of being developed or redeveloped as a single project"



**b.** Threshold and Treatment Scope Comparison with MS4 General Permit (shown in Table 1 of Staff’s December 3, 2021, memo)

**1)** For detached single-family residential and other non-linear projects, the current Commission requirements meet or exceed the MS4 requirements.

**2)** For Linear projects, the current Commission requirements do not meet the MS4 requirements. The current requirements only require treatment if more than one acre of new impervious surface is constructed.

*Discussion:* Do we need to better define ‘Project Size’ or base the requirements on the amount of disturbed impervious surface to align with MS4? **Stout will share the guidance the City of Minneapolis is developing regarding linear projects.**

*Need to demonstrate that you cannot meet requirements – why you did what you did. Need an SOP on how decision was made. How much money is too much to acquire a right-of-way?*

*Cities, others, are considering setting up banking programs for linear projects. Who would track these banks? PCA is talking about watershed banking and trading. Should we wait?*

**2.** Minnesota Stormwater Manual Updates

**a.** Guidance for permitting Mechanical Treatment Devices (MTDs)

**1)** Currently MTDs are being reviewed on a case-by-case basis and Commission review relies on Engineering review and third-party testing (i.e., Washington State Technology Assessment Protocol – Ecology (TAPE) and testing from the New Jersey Department of Environmental Protection (NJDEP).

**2)** Staff recommend that the Commissions revise the Rules to rely on guidance of the MN Stormwater Manual, outlined here: [TP and TSS credits and guidance for manufactured treatment devices \(mtds\) - Minnesota Stormwater Manual \(state.mn.us\)](#)

**3)** Here is an overview of how the MTDs are credited for TP Removal, based on three tiers (See above link for Device-specific removals and additional conditions for receiving the outline credits, below):

**a)** Tier 1 - Credit: 50 percent reduction

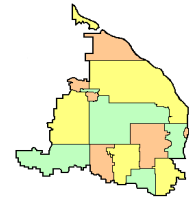
**b)** Tier 2 - Credit: based on an assessment of 95% lower confidence limits (LCLs) or the LCL for TSS.

**i.** If removal is affected by influent concentration, we calculated an LCL for all data with influent concentrations greater than 0.05 mg/L

**ii.** Compare the above value with the TAPE LCL and use the lower of the two values

**iii.** If both LCLs are less than 50%, we calculate a value for TP removal based on the LCL for TSS removal. This value equals the TSS LCL times 0.75, where 0.75 represents the assumed fraction of phosphorus that is in particulate form. If this value exceeds 50%, it is used as the Tier 2 credit.

**c)** Tier 3 – Credit based on monitoring using appropriate monitoring protocols



i. If a device has a known mechanism for removing dissolved phosphorus, the credit assumes that 40% of the DP is removed, PP is 75% of TP, and the LCL for TP removal is equal to or greater than the Tier 3 value.

Discussion: Are cities seeing a lot of small (>5 ac) projects utilizing MTDs?

- For filtration, we currently allow a 1:1 credit for volume control. Based on 50% removals, do we want to continue to provide 1:1 credit for filtration practices?
- This discussion will likely need to consider how we manage our water quality requirements.
- Are there any other MN Stormwater Manual updates that affect how Cities are handling/reviewing stormwater projects?

### 3. Project Elements Needing Additional Clarity

- a. Water Quality Requirements. Currently, must remove 60% TP and 85% TSS from stormwater prior to discharge through BMPs or infiltrating 1.3" of runoff
- b. Rate control: Currently, rate control calculations are required for 2-, 10-, and 100-year 24-hour storm events using Atlas 14 depths (MSE3 distribution). These storm events are consistent with Bassett Creek and Elm Creek WMOs.

Discussion:

**Water Quality** – Should the Commission update its Water Quality requirements to align with MS4 or adjacent WMO (Bassett Creek and Elm Creek) requirements?

- MS4 – Water quality is met with volume control of 1.0".
- Bassett Creek – Water quality is met with volume control of 1.1," or 0.55" and 75% TP Removal.
- Elm Creek – Water quality is met with infiltration of 1.1," or no net increase of TP and TSS.

### Rate Control – Resiliency

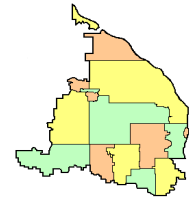
- For projects that include the conveyance of public waters or within floodplains and floodways, should we require a Mid-century (Upper 90<sup>th</sup> percentile 100-year or 500-year, Atlas 14 storm event?)
- Should we also require rate control for the 100-year, 10-day storm event?

**Standard Operating Procedures (SOPs):** Do we need to formalize SOPs to include requirements for:

- Modeling and requirements for turf fields
- Witness testing for infiltration basins
- Water storage and re-use

Should we consider **abstraction credits** for:

- Preservation/planting of trees to align with Hennepin County Climate Action Plan (HC CAP) Goals
- Use of biochar to promote carbon sequestration to align with HC CAP
- Wetland, stream, floodplain conservation easements



C. Anything else that should be considered for revision/clarification in the Rules and Standards?

**IV. Maintenance and Resiliency Policy.\***

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

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

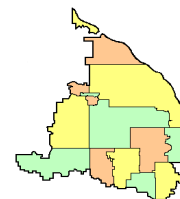
However, the need still remains. Staff still believes that the magnitude of annual potential need is in the \$30,000 - \$50,000 range. If the TAC and Commissions agree to pursue this, it will be necessary to craft a policy that clearly defines what kinds of maintenance expenses would be funded, and what would be the member cities’ responsibilities.

Some activities clearly would fall under the Commission category – maintenance of a BMP that was installed by the Commission that the City would not have chosen to do themselves, such as repair or replacement of a carp barrier or an iron-enhanced sand filter. There are also activities that are clearly City responsibilities – pond dredging, operating a street sweeper, or removing invasive vegetation.

However, there is the “muddy middle” that needs further discussion. Who is responsible for removing a tree that falls into a stream where the Commission has undertaken a stream restoration project? What if a 500-year storm comes through and takes out a whole section of restored stream? The following is a partial list Staff has been discussing:

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

Following brief discussion, it was a consensus to direct Staff to begin to craft a potential policy. The earliest a levy could be considered would be fall 2022 for collection in 2023.



## **B. Resiliency Grant.\***

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

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

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

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

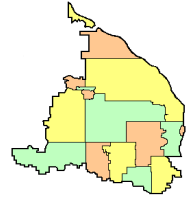
Staff estimate a cost of about \$25,000 to complete this work. The grant program requires a 10% match, so the Commission’s investment would be about \$2,500. Funding would be available in spring 2022 and run through June 2023.

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

Motion by Ray, second by Riegel to recommend to the Shingle Creek Commission that this application be made to the MPCA, with the Commission’s share coming from the Cost Share fund. *Motion carried unanimously.*

## **V. Other Business.**

Matthiesen recapped the bid-openings for the Meadow Lake drawdown and Connections II projects. Both projects received bids under the anticipated costs.



**VI.** There being no further business, the meeting was adjourned at 12:35 p.m.

Respectfully submitted,

A handwritten signature in black ink that reads "Judie A. Anderson". The signature is written in a cursive, flowing style.

Judie A. Anderson  
Recording Secretary  
JAA:tim

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