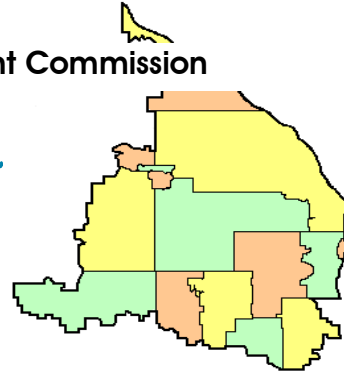


A meeting of the joint Technical Advisory Committee (TAC) of the Shingle Creek and West Mississippi Watershed Management Commissions is scheduled for 11:00 a.m., Thursday, February 13, 2020, at Edinburgh USA, 8700 Edinbrook Crossing, Brooklyn Park, MN, immediately preceding the Commissions' regular meeting.

A G E N D A

1. Call to Order.
 - a. Roll Call.
 - b. Approve Agenda.*
 - c. Approve Minutes of Last Meeting.*
2. Revised Partnership Cost Share Application – Brooks Landing.
3. 2020 CIP.*
4. MTDs.*
5. Next TAC meeting is scheduled for _____.
6. Adjournment.



MINUTES January 9, 2020

A meeting of the Technical Advisory Committee (TAC) of the Shingle Creek and West Mississippi Watershed Management Commissions was called to order by Chairman Richard McCoy at 11:10 a.m., Thursday, January 9, 2020, at Edinburgh USA, 8700 Edinbrook Crossing, Brooklyn Park, MN.

Present were: Andrew Hogg, Brooklyn Center; Mitch Robinson, Brooklyn Park; Mark Ray, Crystal; Derek Asche, Maple Grove; Shahram Missaghi, Minneapolis; Megan Hedstrom, New Hope; Ben Scharenbroich and Amy Riegel, Plymouth; Richard McCoy and Marta Roser, Robbinsdale; Ed Matthiesen, Wenck Associates, Inc.; and Judie Anderson, JASS. Not represented: Champlin and Osseo.

Also present: Steve Chesney, Brooklyn Park; Burt Orred, Jr., Crystal; Harold E. Johnson, Osseo; and Kris Guentzel, Hennepin County Environment and Energy.

I. Motion by Ray, second by Scharenbroich to **approve the agenda**.* *Motion carried unanimously.*

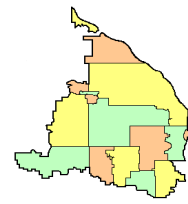
II. Motion by Ray, second by Scharenbroich to **approve the minutes*** of the November 14, 2019 meeting. *Motion carried unanimously.*

III. **Cost Share Application – Brooks Landing.**

A. The City of Brooklyn Park has submitted a Partnership Cost Share Program application* on behalf of Boisclair Corporation and Metro Blooms for improvements at Brooks Landing Senior Apartments. The various site improvements include replacing the parking lot, adding two raingardens to treat runoff from the parking lot and sidewalk, and adding some amenities such as benches and landscaping. The cost share would be applied to the rain garden portion of the project. Similar to the Autumn Ridge project, Metro Blooms will provide outreach and stewardship opportunities for residents of the development. Included in the meeting packet are the application, existing and proposed conditions, and project budget.

B. Staff internally discussed the cost-effectiveness of this proposal. The request is for \$50,000 from the program. The estimated load reduction is 1.75 pounds of TP annually, or about \$28,000 per pound of TP removed. The proposed project is in the Directly Connected Impervious Area and is a priority for treatment retrofits. Staff's maximum comfort level is about \$10,000/pound unless there are other significant benefits. For comparison, Autumn Ridge Phase 1 removed about 6 pounds/year, and Phase 2 about 2.5 pounds/year. Staff is requesting TAC discussion regarding this subject to provide guidance and clarity for this and other potential applications.

Following discussion, motion by Ray, second by Riegel to recommend to the Commission that this project be funded at \$20,000. *Motion carried unanimously.*



IV. Bass Creek Stream Restoration Feasibility Study.*

The Shingle Creek CIP includes a generic “Shingle or Bass Creek Stream Restoration” that is a placeholder for potential projects. Staff have been in conversation with the City of Brooklyn Park about the potential to restore Bass Creek from Cherokee Drive to approximately the driveway into the Home Depot development. This reach flows through Bass Creek Park and is the site of the Commission’s BCP monitoring station. There is a trail along the west side of the stream.

Parts of the reach have relatively steep, wooded stream banks, other parts are fairly flat and open. The streambed is a stable sandy gravel, but the banks are incised and some tree removals and thinning are necessary. This reach is also the proposed location for the second filter for the SRP Reduction Project, as it is just downstream of the large flow-through Cherokee Wetland. Given what has already been learned as part of that project, Staff believe they can engineer an effective SRP reduction filter into the stream itself.

Similar to what was just done for the Connections II Stream Restoration Project, Staff propose to work with the City to perform field surveys and 30% design, then submit a grant application for the proposed project to the Clean Water Fund later this summer. They recommend that \$10,000 from the Closed Projects Account be allocated to fund this work. The \$10,000 would be “paid back” by including the cost of this Feasibility Study in the project cost that would be certified this fall.

Motion by Ray, second by Riegel to recommend to the Commission approval of Staff’s proposal as cited above. *Motion carried unanimously.*

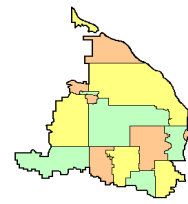
V. NPDES Draft General Permit and Rules Comparison.

The draft NPDES General Permit* is on public review through January 11, 2020. Included in the meeting packet is a table showing the major requirements for post-construction stormwater management compared to the Commissions’ current Rules and Standards. While the MPCA may review the draft Permit based on comments received during the 60-Day Review Period, it is likely that many of the proposed requirements will be promulgated in the reissued General Permit later this year. This will require revisions to the Commission Rules as well as city ordinance revisions to meet those requirements.

A. Project Thresholds. The Commissions, since they first started undertaking project reviews in the mid-1980s, have used project size (usually defined as parcel or parcels under common development) as the threshold of applicability rather than disturbed area. When the NPDES general and construction permitting requirements were enacted, the Commissions retained the size threshold on the reasoning that it was easy to understand and implement. It also is an opportunity to encourage BMPs on small sites that disturb less than one acre. The proposed Permit does not require water quality treatment unless one acre or more of impervious area is created or fully reconstructed. Projects on small lots that do not meet the threshold would not be required to treat water quality volume.

B. Water Quality. The new requirements change the paradigm of water quality treatment, which previously was performance-focused and is moving toward an infiltration and volume management-focus. Applicants must first consider volume reduction practices for water quality and sediment basins or other non-infiltration BMPs may be considered only if infiltration is prohibited or not feasible. The Commissions’ rules are performance-based and allow for a wide range of potential BMPs.

C. Water Quality Volume. The proposed requirement would redefine the infiltration standard to compute the WQV off both the new impervious and the fully reconstructed impervious.



This may have a range of implications compared to the current Rules. For example, typically neighborhood street reconstruction projects don't reach the threshold of increasing impervious by more than one acre. However, several years ago Crystal reconstructed streets and added sidewalks in a neighborhood near a school, adding more than one acre of new impervious. The Commission rules required infiltration from the volume off the new impervious. The new Permit would require 0.5" infiltration off the entire reconstructed/new area.

After discussion regarding the impact on the Commissions' current Rules and Standards of a number of revisions in the new draft permit, Staff was directed to work up some language and respond to the MPCA by the January 11, 2020 deadline.

VI. Chloride Working Group.

Riegel provided a verbal update. She reported that the group did a survey of private applicators. The survey indicated that private applicators knew how to properly apply salt without over salting. The survey also indicated that the reason private applicators over apply salt is because their clients and their clients' customers expect over-salting to feel that the parking lot is "safe." This outcome shifted the direction that the working group wants to take on education in the future from targeting private applicators to targeting their clients.

VII. Other Business.

McCoy reported that the permit application to DNR for **supplemental pumping from Crystal Lake** to better control the water level in the lake has been given temporary approval. A longer term approval will be dependent upon the development of a permanent solution in conjunction with the Commission and adjacent cities making sure that there are no adverse impacts on other properties. The temporary permit is in effect until December 31, 2021.

VIII. Next Meeting.

The next Technical Advisory Committee meeting is tentatively scheduled for 11:00 a.m. Thursday, March 12, 2020, prior to the Commissions' regular meeting.

The meeting was adjourned at 12:09 p.m.

Respectfully submitted,

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

Judie A. Anderson
Recording Secretary

01-09-2020 TAC minutes

Technical Memo



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To: Shingle Creek/West Mississippi WMC TAC

From: Ed Matthiesen, P.E.
Diane Spector

Date: February 7, 2020

Subject: Initiate 2020 CIP Process

Tables 1 and 2 below show the current status of the CIP for each watershed. As has been the case for the past several years, there are some projects on the CIP that are placeholders that need additional detail to implement or are associated with potential development or redevelopment that has not yet occurred. These usually just get rescheduled to a future year; no plan amendment is required for that action.

Typically, the TAC hears feasibility studies for proposed projects and makes a recommendation to the Commissions in April of each year as to which projects to consider for that year's CIP and whether any minor plan amendments are necessary. This all goes to the Commissions which then set the maximum levies and then forwards all that information to Hennepin County. The County then goes through its public hearing and maximum levy setting process that is usually done by the end of June. The process then goes back to the Commissions to hold public hearings on proposed projects and set a final levy.

Table 3, which assumes that many of the projects currently shown for 2020 will be rescheduled for later years, estimates a 2020 levy of \$825,000. In 2019 the Commissions amended their Management Plan to raise the annual voluntary maximum levy to \$750,000. There is also the potential to consider the Bass Creek Restoration Project in 2020, which would add anywhere from \$300,000 – 400,000 to that levy, which would then be well above the voluntary \$750,000 maximum.

Both the Cost-Share program and the Partnership Cost Share program have balances, currently about \$120,000 (plus an additional \$100,000 to be received this year) and \$150,000 (plus \$50,000) respectively. The Commission could get by without certifying levy for either of these programs in 2020 if need be.

This is on the agenda for general discussion and direction.

Table 1. Most current Shingle Creek CIP as of September 2019.

CAPITAL IMPROVEMENT PROGRAM	2018	2019	2020	2021	2022	Notes
Cost Share Program	200,000	200,000	200,000	200,000	200,000	
Commission Contribution	100,000	100,000	100,000	100,000	100,000	
Local Contribution	100,000	100,000	100,000	100,000	100,000	
Partnership Cost-Share BMP Projects	100,000	100,000	100,000	100,000	100,000	
Commission Contribution	50,000	50,000	50,000	50,000	50,000	
Local Contribution	50,000	50,000	50,000	50,000	50,000	
Lake Internal Load Improvement Project			200,000		200,000	Meadow Lake Mgmt Plan
Commission Contribution			200,000		200,000	
Local Contribution			0		0	
Bass and Pomerleau Lakes Alum Treatment	390,000					
Commission Contribution	390,000					
Local Contribution	0					
SRP Reduction Project	124,680					
Commission Contribution	124,680					
Local Contribution	0					
Becker Park Infiltration Project	2,500,000					
Commission Contribution	250,000					
Local Contribution	2,250,000					
Crystal Lake Management Plan Project		370,500				
Commission Contribution		370,500				
Local Contribution		0				
Shingle Creek Resto, Regent to Brooklyn Blvd			400,000			Connections II project
Commission Contribution			400,000			
Local Contribution			0			
Plymouth Enhanced Street Sweeper			350,000			Added by MPA
Commission Contribution			75,000			
Local Contribution			275,000			
Shingle Creek or Bass Creek Restoration Project			500,000			Bass Creek Project?
Commission Contribution			500,000			
Local Contribution			0			
Maple Grove Pond P57			648,000			Moved to 2020 per Derek
Commission Contribution			162,000			
Local Contribution			486,000			

CAPITAL IMPROVEMENT PROGRAM	2018	2019	2020	2021	2022	Notes
Maple Grove Pond P33			574,000			Moved to 2020 per Derek
Commission Contribution			143,500			
Local Contribution			430,500			
Shingle Creek Bdale Park Habitat Enhancement			150,000			Nothing pending
Commission Contribution			150,000			
Local Contribution			0			
Minneapolis Webber Park Stream Restoration			500,000			Nothing pending
Commission Contribution			500,000			
Local Contribution			0			
Minneapolis Flood Area 5 Water Quality Projects			6,000,000			Nothing pending
Commission Contribution			250,000			
Local Contribution			5,750,000			
Maple Grove Pond P55			855,000			Moved to 2020 per Derek
Commission Contribution			213,800			
Local Contribution			641,200			
Palmer Creek Estates Bass Creek Restoration				450,000		Added by MPA
Commission Contribution				112,500		Review for addl Comm contr
Local Contribution				337,500		
TOTAL PROJECT COST	3,314,680	670,500	10,477,000	750,000	500,000	
TOTAL COMMISSION SHARE	914,680	520,500	2,744,300	262,500	350,000	
TOTAL CITY SHARE	2,400,000	150,000	7,732,700	487,500	150,000	

Table 2. Most current West Mississippi CIP as of September 2019

CAPITAL IMPROVEMENT PROGRAM	2018	2019	2020	2021	2022	Notes
Cost Share Program	100,000	100,000	100,000	100,000	100,000	
Commission Contribution	50,000	50,000	50,000	50,000	50,000	
Local Contribution	50,000	50,000	50,000	50,000	50,000	
River Park Stormwater Improvements			485,000			Added by MPA 10/19
Commission Contribution			121,250			
Local Contribution			363,750			
Miss Crossings Phase B Infiltration Vault			200,000			
Commission Contribution			50,000			
Local Contribution			150,000			
Champlin Woods Trail Rain Gardens			180,000			
Commission Contribution			45,000			
Local Contribution			135,000			
Wetland Restoration Project			250,000			Nothing pending
Commission Contribution			62,500			
Local Contribution			187,500			
TOTAL PROJECT COST	100,000	100,000	1,215,000	100,000	100,000	
TOTAL COMMISSION SHARE	50,000	50,000	328,750	50,000	50,000	
TOTAL CITY SHARE	50,000	50,000	886,250	50,000	50,000	

Table 3. Likely 2020 Shingle Creek CIP.

CAPITAL IMPROVEMENT PROGRAM	2020	2021	2022
Cost Share Program	200,000	200,000	200,000
Commission Contribution	100,000	100,000	100,000
Local Contribution	100,000	100,000	100,000
Partnership Cost-Share BMP Projects	100,000	100,000	100,000
Commission Contribution	50,000	50,000	50,000
Local Contribution	50,000	50,000	50,000
Lake Internal Load Improvement Project	200,000		200,000
Commission Contribution	200,000		200,000
Local Contribution	0		0
Shingle Creek Restoration, Regent to Brooklyn Blvd	400,000		
Commission Contribution	400,000		
Local Contribution	0		
Plymouth Enhanced Street Sweeper	350,000		
Commission Contribution	75,000		
Local Contribution	275,000		
Shingle Creek or Bass Creek Restoration Project		500,000	
Commission Contribution		500,000	
Local Contribution		0	
Maple Grove Pond P57		648,000	
Commission Contribution		162,000	
Local Contribution		486,000	
Maple Grove Pond P33		574,000	
Commission Contribution		143,500	
Local Contribution		430,500	
Shingle Creek Brookdale Park Habitat Enhancement		150,000	
Commission Contribution		150,000	
Local Contribution		0	
Minneapolis Webber Park Stream Restoration		500,000	
Commission Contribution		500,000	
Local Contribution		0	
Minneapolis Flood Area 5 Water Quality Projects		6,000,000	
Commission Contribution		250,000	
Local Contribution		5,750,000	
Maple Grove Pond P55		855,000	
Commission Contribution		213,800	
Local Contribution		641,200	
Palmer Creek Estates Bass Creek Restoration		450,000	
Commission Contribution		112,500	
Local Contribution		337,500	
TOTAL PROJECT COST	\$1,250,000	\$9,977,000	\$500,000
TOTAL COMMISSION SHARE	825,000	2,181,800	350,000
TOTAL CITY SHARE	425,000	7,795,200	150,000

Technical Memo



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To: Shingle Creek/West Mississippi WMC TAC

From: Ed Matthiesen, P.E.
Diane Spector

Date: February 7, 2020

Subject: Ongoing Discussion of MTDs

There has been ongoing discussion between representatives of various WMOs and cities in the Metro and the MPCA regarding Manufactured Treatment Devices (MTDs). WMOs and cities would like the MPCA to establish design standards and allowable performance efficiencies in the Stormwater Manual similar to other BMPs so there is some uniformity of analysis when doing project and permit reviews.

This small group - led by Bassett, Nine Mile, Shingle, and Riley Purgatory Creeks and Ramsey-Washington requested that the MPCA "Cooperate with and support the implementation of the Water Environment Federation's (WEF) Stormwater Testing and Evaluation of Products and Practices (STEPP) verification program, currently under development. We prefer this option because the STEPP verification program is already well along in its development, it will be a nationwide program, and we understand that MPCA staff are already engaged in the program. Once implemented, the STEPP verification program would validate MTD performance; it would be up to the states (e.g., the MPCA) to certify the MTDs.

Subsequently Mike Trojan at the MPCA held a wider listening session to hear from more entities about how MTDs are being used and how they are being credited. Attached are the notes from that meeting. Note that the Seth Brown who is called out is the STEPP coordinator at WEF. TAPE which is referenced is the Washington state Technology Assessment Protocol - Ecology program, which maintains a series of guidance documents.

This is presented for your information. If anyone is interested in being a part of any work group, you can contact Mike Trojan directly or us and we can forward that info. Otherwise we will simply keep up to date as to progress and will keep you apprised.

Email from Mike Trojan to the group at large:

Below are some notes from the meeting on manufactured treatment devices. I heard back from Seth Brown and his response is at the bottom.

Below are three things we need to do, but feel free to add/edit.

1. I can revise the letter of support for STEPP to reflect what we intend on doing. I think there is value in a letter coming from multiple organizations and will draft the letter based on that assumption. I'll circulate the letter for review.
2. Arrange a time to meet with Seth Brown. I can check with him to see if the afternoon of March 12 works for him, since he'll be at SAFL that morning. Maybe tentatively mark your calendars for that day. Since the SAFL folks typically go to lunch after the presentation, we'd probably meet at 2 PM, most likely here at the MPCA.
3. Form a workgroup – see item 6.b.ii below. I know it is short notice, but the group should meet prior to meeting with Seth. So **please indicate in the next week if you are interested in being on the work group** and I'll then schedule a meeting for the last week of Feb or first week of March.

Thanks

Mike

Meeting Notes

1. How are MTDs being used
 - a. Cap Region (CRWD) to meet WD goals; Contech Phosphosorb to reduce nutrient loading to L McCarron's (MIDS); may use for TMDLs in the future
 - b. Bassett Creek to meet 60% P reduction goal
 - c. Middle St. Croix to meet MIDS
 - d. Riley-Purg in areas where infiltration is not feasible
2. How are MTDs being credited
 - a. Riley-Purg uses on-site monitoring, relying on manufacturer and TAPE information to develop the credit, then require monitoring of 2-year duration, grab samples of influent and effluent; only one entity has pushed back on monitoring; bypass is monitored; mirror Bassett Creek guidance
 - b. Bassett Creek (BCWMO) – if TAPE testing shows > 50% reduction, may take the higher number; must have a General Use Determination; avoid monitoring due to inconsistencies and complications with field and lab data
 - c. CRWD uses TAPE data and generates a local credit; assume 10% bypass, then takes the average of the data
 - d. Particulate:dissolved P ratio is important. CRWD's typical DP:PP ratio is 76% PP. MIDS is 55% PP - if a MTD gets no DP, then can't meet 60% removal for TP.
 - e. TAPE has little or no data on dissolved P removal
3. Locations where MTDs are being used
 - a. BCWMO: 1-4 acre drainage with 70% impervious
 - b. Middle St. Croix: 1 acre or less with 80-95% impervious
 - c. Riley Purg: < 1 acre, often < 0.5 acre; 3 were downstream of another BMP

4. Maintenance

- a. TAPE does not specify a level of maintenance
- b. TAPE testing may differ from the manufacturers recommendation
- c. CRWD will eventually have maintenance requirements
- d. BCWMO defaults to the manufacturer but has maintenance agreements
- e. CRWD observed that tracking private maintenance is difficult
- f. Inspection and access are important considerations; since these devices do not have drawdown, need to consider what is being inspected
- g. Can we get maintenance information from manufacturers at flagship sites?
- h. We can also check with other entities that may have O&M information, such as Philadelphia
- i. Requiring submittals on O&M would be useful to begin gathering information on these devices
- j. Riley-Purg noted that sometimes TAPE records show that MTD systems used for data submission were maintained more frequently than mfc. recommended, e.g., replacing cartridges/cleanouts every couple of weeks. This can make the effectiveness/safety of mcf. rec'd O&M fuzzy, i.e., would the performance be significantly impacted if one were to follow the exact mfc. guidelines. This is really what TAPE should be approving, but it's a "gap"
- k. include maintenance schedules and protocol; perhaps survey or 3rd party contract
- l. CRWD ties maintenance to 48 hour drawdown requirement
- m. Riley-Purg requires annual inspections; mixed performance, with better performance from public compared to private entities

5. Other notes

- a. Sometimes pretreatment is used, even when the device has pretreatment built in; sumps, baffles, snout
- b. Randy check with cities
- c. CRWD has upstream storage for the devices
- d. Barr has done continuous P8 modeling using the 10 most recent years of data; bypass is observed; SWMM would be preferred
- e. Detention would help decrease the amount of bypass; size detention to meet the water quality volume (1.1 inches for MIDS); possibly also provide some rate control
- f. Develop a catalog of these practices, including maintenance records
- g. Pressure increasing to use more devices, mostly manufacturers, some applicants
- h. Instantaneous volume requirement in CSW permit is problematic for these flow-through treatment devices due to their very high flow rates

6. Next steps

- a. Letter of support for STEPP – single or joint letter?
- b. Communicate with STEPP
 - i. STEPP is interested in hearing from MN (see below)
 - ii. Pull a work group together that includes consultants and manufacturer's; identify what MN wants, needs, what MN can provide in the way of support for STEPP, what we are doing - provide this to the STEPP folks
 - iii. Meet with Seth when he is in town for the SAFL lecture to get an update and further discuss if the evaluation processes the watersheds are implementing in

the interim will have value for addressing any of STEPPs milestones for completing a nation wide program for these particular devices.

Response from Seth Brown:

This is a welcomed and wonderful update on the view of STEPP from MPCA and MN cities and watershed districts. I absolutely would love to meet with you and other stakeholders to discuss how STEPP could be valuable for MN. As you may already be aware, I am planning on making a presentation in MN as part of the SAFL seminar series on March 12 - happy to add a day on the front or back end of this trip to address you and your group. Any thoughts on some times/dates around that time?

Regarding your letter of support, I welcome this support. Please let me know if you have any questions regarding this support.

Many thanks for your interest in STEPP.