Bassett Creek Watershed Management Commission

Technical Advisory Committee Meeting

Wednesday December 7, 2022
10:30 – 12:00
Wirth Lake Room, Brookview

1. **CALL TO ORDER**
2. **COMMUNICATIONS**
3. **BUSINESS**

A. Options for Updating Linear Project Standards in 2025 Watershed Plan

One of the "challenging issues" included in Phase II of the Watershed Management Plan development process is revisiting the BCWMC requirements for linear projects like roads and trails. You'll recall that originally, the 2015 Bassett Creek Watershed Plan used the MIDS triggers and requirements for linear projects. The 2015 BCWMC standard:

Trigger treatment at 1 acre of new/fully reconstructed impervious.
Capture & retain the larger of 1.1 inches off the net increase in impervious – or – 0.55 inches off the new/fully reconstructed impervious.
Follow flexible treatment options if volume reduction is not feasible or not allowed.

In 2017, the BCWMC requirements were revised due to significant difficulty and expense in meeting the original requirements within the limited confines of most linear project sites. The 2017 (current) BCWMC standard:

Trigger treatment at 1 acre of net new impervious.
Capture & retain 1.1 inches off the net new impervious area.
Follow flexible treatment options if volume reduction is not feasible or not allowed.

Further, the latest MS4 permit includes new requirements for linear projects. Section 20.7 of the MS4 permit states (emphasis added in *underlined italics*):

> For linear projects, the water quality volume must be calculated as the larger of one (1) inch times the new impervious surface or one-half (0.5) inch times the sum of the new and the fully reconstructed impervious surface. Where the entire water quality volume cannot be treated within the existing right-of-way, a *reasonable attempt* to obtain additional right-of-way, easement, or other permission to treat the stormwater during the project planning process must be made. Volume reduction practices must be considered first, as described in item 20.8. Volume reduction practices are not required if the practices cannot be provided *cost effectively*. If additional right-of-way, easements, or other permission cannot be obtained, owners of construction activity must *maximize* the treatment of the water quality volume prior to discharge from the MS4. [Minn. R. 7090]

The spreadsheet (attached in email and posted online) compares the water quality treatment that would have been gained using the original 2015 BCWMC requirements (MIDS) vs. the current BCWMC standards vs. the new MS4 permit requirement (Rows 9, 10, 11) for linear projects in BCWMC since August 2017. Actual water quality treatment provided by the projects is either unknown because there was no requirement to report it, or there was little or no additional water quality treatment because the BCWMC standard applicable at the time was not triggered.

As the BCWMC considers how or if to revise linear project standards, consider that the new MS4 language is already suited to the existing BCWMC FTO flowchart (found in Appendix A in the BCWMC

Requirements Document). For linear projects, the BCWMC flowchart skips FTO #1 and defaults to FTO #2 if there is insufficient ROW available for treatment. This is similar to the above MS4 permit language. If FTO #2 is not feasible (as determined by the local authority), the flowchart moves to FTO #3. FTOs are briefly summarized below for quick reference:

FTO1 – achieve 0.55" volume reduction and remove 75% annual TP load
FTO2 – achieve volume reduction to max extent practicable and remove 60% annual TP load
FTO3 – Off-site mitigation (including banking or cash or treatment on another project) equivalent to the volume reduction performance goal

The TAC should discuss the following options and ideas:

1. The BCWMC could revise its requirements for linear projects to match the MS4 permit but should then consider developing and adopting criteria, thresholds, or definitions for "reasonable attempt" and "cost effective" to better define the MS4 permit.
2. The BCWMC FTO flowchart could be revised to include an FTO #4 option for achieving a "maximum" treatment (on- or off-site) between no treatment and treatment levels established in FTOs #2 and #3.
3. Are there other ideas to help maximize treatment gained during linear projects?

B. City of Plymouth Request to Consider Requirements for Future Four Seasons Mall Developers

Please review the attached memo from Plymouth staff regarding future development at the Four Seasons Mall site. The TAC should develop a recommendation for the Commission's consideration.

C. Review Proposed Revisions to BCWMC Requirements Document

The Commission Engineer suggests minor revisions to the Requirements Document (see tracked changes version in email and with materials online). The revisions improve clarity in some areas, provide updated information on MTDs in light of their recent addition to the MN Stormwater Manual, and add detail on bridge replacement projects.

The TAC should review and consider recommending the revisions to the Commission.

D. Next Meeting – ?? Wirth Lake Room, Brookview

4. **ADJOURN**

City of Plymouth

MEMORANDUM

To: Bassett Creek Watershed Management Commission Technical Advisory Committee (TAC)
From: City of Plymouth
Subject: Four Seasons Area Water Quality Project (NL-2)
Date: November 28, 2022

Background

The above referenced project was originally developed and conditionally approved by the Commission in 2013 but based on neighborhood feedback and site challenges with redeveloping the former mall the project has not moved forward to-date. In 2021 the City of Plymouth purchased the Four Seasons Mall site and is in the process of making improvements to the site. The first step is to demolish the existing building and remove the existing parking lot pavement which is currently underway. The city also intends to make stormwater quality improvements including the creation of pond(s) along Rockford Road, and restoration of the existing wetland south of the site through which the North Branch of Bassett Creek flows. The two stormwater management components are very similar to those already approved through the previous redevelopment plans and will be designed to treat 100 pounds of total phosphorus. Similar to a typical CIP implementation process, the City would build the stormwater management features and be reimbursed by the Commission with available CIP funds. (Approximately $800,000 remain in the CIP fund for this project.)

As a reminder, the TAC made recommendations on the city's implementation of site BMPs prior to development at their July 29, 2021 meeting and the Commission approved their recommendations at their August 19, 2021 meeting (page 7-8). These included the following:

1. The Commission enter an agreement with the city of Plymouth to construct the previously approved BMPs, provide CIP-fund reimbursement for construction of structures that capture the first 100 pounds of TP, and allow future redevelopment to utilize any TP removals above 100 pounds to meet BWCMC water quality treatment requirement.
2. No BCWMC funding should be used to create storage or water quality benefits that would be required of any proposed development.
3. The current impervious surface area of 11.93 acres be set as the "existing condition" upon which future stormwater management requirements would be based, with a sunset clause of 20 years.

The plans for the CIP stormwater quality improvements are currently under review by the watershed engineer. City staff had anticipated that a development proposal would be under review by the City Council and potentially commission by this point, but due to external conditions no formal review is in process.

Because of the uncertainty of the development timeline and the risks associated with using the two primary stormwater management sites for the removal of the 100-lbs of phosphorus per project NL-2, the City is further requesting that the TAC consider recommending to the Commission that the current

redevelopment standards be utilized for future redevelopment, with a sunset clause of 10 years. Below is a draft list of the existing conditions and current regulation standards for the site:

1. Existing Conditions.

    a. The existing building is 71' – 4" from the delineated wetland at its closest point.
    b. Surface and subsurface conditions based on the Geotechnical Evaluation Report for the Four Seasons Development – Multi Family Buildings, Braun Intertec Corporation, September 18, 2019.
    c. The Commission watershed model adopted as of 12/15/2022 including:
        i. 2-year Atlas 14 high water elevation: <Insert from new model>
        ii. 10-year Atlas 14 high water elevation: <Insert from new model>
        iii. 100-year Atlas 14 high water elevation: 892.5

    d. Drainage patterns, discharge rates, Atlas 14 rainfall intensities, and discharge volumes per the Commission approved Stormwater Management Report, Loucks Engineering, May 27, 2020. These include values in the table below:

EXISTING RUNOFF - INCLUDING OFF SITE

	Area	2-Yr Storm Event		10-Yr Storm Event		100-Yr Storm Event	
Drainage Area	(Ac.)	Rate (cfs)	Volume (cu.ft.)	Rate (cfs)	Volume (cu.ft.)	Rate (cfs)	Volume (cu.ft.)
C-Wetland	9.216	28.85	1.769	45.05	2.793	80.87	5.086
CR1-Creek	6.52	19.01	1.156	30.42	1.862	55.87	3.463
W-Lancaster	1.564	3.44	0.201	6.12	0.356	12.33	0.723
CR	532.03	30.52	48.667	55.59	88.638	121.82	193.525
1NP	189.81	21.4	24.131	38.31	42.874	78.59	87.402
WSP	38.11	2.2	5.052	3.81	8.733	7.59	17.382
SP	44.98	9.05	6.854	15.26	11.512	29.67	22.312
WT	18.105	15.26	1.524	31.4	2.913	74.01	6.566
Creek Total	538.55	**30.52**	49.823	**55.59**	90.5	**121.82**	196.989
Lancaster North Total	191.374	**21.42**	24.332	**38.35**	43.229	**78.66**	88.125
Total To Wetland	840.335	**60.54**	**89.354**	**101.11**	**159.681**	**198.06**	**336.459**

2. Existing Regulations.

    a. Commission Requirements for Improvements and Development Proposals (Revised February 2021).
        i. Minimum building elevations (lowest floor) including parking garages/ramps, must be 2.0 feet above the 100-year flood level in the model.

ii. Stormwater must be managed such that peak flow rates leaving the site are equal to or less than existing rate leaving he site for the 2-, 10-. 100-year events based on Atlas 14 precipitations amounts and using a nested 24-hours rainfall distribution.
iii. Trails, sidewalks, and miscellaneous disconnected impervious surfaces (concrete/bituminous pads, etc.) are exempt from the rate control policies.
iv. Buffer widths from the priority streams must be provided. This is 10 feet or 25 percent of the distance between the ordinary high-water level and the nearest existing structure. Based on existing conditions this would relate to 892.9, which is the OHW of the North Arm)

b. Minimum Impact Design Standards must be used and Flexible Treatment Option 2 has been approved for the site. The required amount of treatment for the development must be equal to or greater than: 60% on-site reduction of phosphorus generated from the new or reconstructed impervious (e.g. 12.65 lbs for 9.86 new acres in Dominium Plan).