Bassett Creek Watershed Management Commission

MEMO

To: BCWMC Commissioners, Alternate Commissioners, TAC Members
From: Laura Jester, Administrator
Date: January 5, 2024

RE: January 18th Watershed Management Plan Development Workshop Agenda and Materials

During the regular BCWMC meeting on January 18th, we'll hold a whole-Commission workshop to review recommendations from the Plan Steering Committee on some of the draft issue statements and goals for the 2025 Watershed Management Plan.

The watershed plan is the most important document you will help develop in your tenure as a commissioner. The plan will guide every aspect of the Commission's work for ten years 2025 – 2035. Commissioner input on the issues and goals discussed at this workshop is a critical step in the plan development process. The issues and goals provide the basis for developing the rest of the plan - where the BCWMC will prioritize its work, the policies it will set in place, and the level of time, effort, and funding that will go into implementation of projects and programs. Ultimately, implementation of the plan will result in improvements in water resources.

Attached here is an outline of the workshop agenda with materials to review ahead of time and questions to consider.

Workshop Outline (approximately 90 minutes)

1. Introduction and background information (see attached)
    - Plan process and timeline
    - Stakeholder input
    - Prioritized watershed issues

2. Small group discussions: review and discuss draft issue statements, desired future conditions, and 10-year goals. Note that these are all part of the "Waterbody & Watershed Quality" issue category (see attached starting page 6)
    - Review and discuss sections in orange:
        i. Issue Statement: Brief statement defining the problem and why it should be addressed. (Additional context about the issue will be included in the narrative of the plan.)
        ii. Desired Future Condition: This is the overarching, long-range goal related to the issue but not a goal that can necessarily be reached within the 10-year life of the plan.
        iii. 10-year Goal: This is a measurable outcome that should be attainable within the life of the plan for distinct waterbodies, resources, or watersheds.
    - Consider these questions about the 10-year goals as you review and discuss:
        i. Which goals are you most excited to get working on?
        ii. Are there any goals that make you nervous or give you pause?
        iii. What are you still curious about? Where do you need more information?
        iv. Are there any local issues or goals missing?
        v. If the goals are achieved, will they result in noticeable improvements for ecosystems and communities?
        vi. Are there any goals that you believe are likely unachievable?

    - Grayed sections won't be discussed at this workshop - they include a non-exhaustive list of potential strategies, policies, and actions that will be considered in the future when the implementation section of the plan is developed. The PSC keeps a list of these possible strategies as a placeholder for future discussions. The PSC is also finalizing issue statements and goals for the remaining Waterbody and Watershed Quality issues. These are also grayed out.

3. Whole group discussion: report out highlights, questions, key critiques

Plan Development Process

APRIL – DECEMBER 2022

Gather Initial Stakeholder Input

- Hear about issues and concerns from cities
- Get input from agencies, Hennepin County, and technical partners
- Collect input from residents and communities through events and surveys
- Prioritize issues

APRIL 2022 – APRIL 2023

Analyze More Challenging Issues

- Perform gaps analysis
- Gather data and options to address challenging issues

MAY 2023 – DECEMBER 2024

Develop Plan Content

- Define issues and priority resources
- Develop measurable 10-year goals
- Craft targeted policies, programs, and standards
- Develop 10-year implementation schedule and budget

JANUARY – SEPTEMBER 2025

Gather Feedback and Finalize Plan

- Submit draft plan for official 60-day review
- Gather feedback and respond to all comments
- Hold public hearing
- Submit plan for final agency review
- Adopt final plan – **TARGET: September 2025**

Timeline and Background

Watershed Plan documents can be found at: https://www.bassettcreekwmo.org/document/2025-plan-update

Timeline of Plan Development to Date:
April 2022: Equity in Watershed Management Workshop (materials available online)

April – December 2022: Gathered stakeholder input from member cities, review agencies, an online survey, and a public open house. Input is summarized in this document.

July 2022: BCWMC Workshop to Identify Issues

February 2023: Public Open House

May 2023: Plan Steering Committee (PSC) begins meeting monthly

August 2023: BCWMC Workshop to Identify and Prioritize Issues - Commissioners approved the Plan Steering Committee's recommendations on issue categories, identified issues and their priority level (see below)

December 2023: Plan TAC meeting (including review agencies and member cities) to discuss issues and goals

Issue Category	Item ID	Issue Title and Description	Priority Level
Waterbody & Watershed Quality	1	**Impaired waterbodies** – Some lakes and streams within the Bassett Creek watershed do not meet State water quality standards; some are listed as impaired for aquatic life function and recreational due to pollutants such as nutrients, chloride, bacteria, and other stressors.	High
	2	**Chloride loading** – High chloride loading from overuse of winter deicers across the Bassett Creek watershed negatively impacts lakes streams, and groundwater water quality.	High
	3	**Streambank and gully erosion** – Excessive erosion along streambanks and gullies negatively impacts stream geomorphology, water quality, aquatic habitat, and floodplain function.	Medium
	4	**Lakeshore erosion** – Erosion along lake shorelines degrades water quality and negatively impacts lake ecology.	Medium
	5	**Wetland health and restoration** – The function, value and quantity of wetlands within the Bassett Creek watershed have been negatively impacted by development and the changing climate.	Medium
	6	**Aquatic invasive species** – Aquatic invasive species (AIS) present in the Bassett Creek watershed negatively impact water quality, lake and stream ecology, and climate resiliency.	Medium
	7	**Ground-/surface water interaction** – The flow of water between groundwater and lakes, streams, and wetlands complicates the protection, restoration, and responsible management of natural resources.	Medium
	8	**Degradation of riparian areas** – Degraded riparian areas allow excess pollutant loading to lakes and streams, contribute to impairments (water quality and biological), and result in poor ecological function and habitat.	Low
	9	**Degradation/loss of upland areas** – Natural areas in uplands may be threatened by development pressure, lack of proper management, and negative impacts from climate change.	Low
	10	**Groundwater quality** – Groundwater quality impacts public health as a source of drinking water and may be threatened by infiltration of stormwater and associated pollutants.	Low

Prioritized Issues Continued

Issue Category	Item ID	Issue Title and Description	Priority Level
Climate Resiliency	11	**Impact of climate change on hydrology, water levels, and flood risk** – Increasing precipitation amounts, intensities, and drought cycles can increase flood risk and contribute to water level and flow fluctuations that may negatively impact ecology, water quality, and recreation	High
	12	**Bassett Creek Valley stormwater management** – Projects in the Bassett Creek Valley would provide an essential opportunity to reduce flood risk and promote implementation of partner-coordinated projects	High
	13	**Groundwater quantity** – Groundwater sustainability may be negatively impacted by overuse and loss of recharge	Low
Education & Outreach	14	**Insufficient outreach to and relationships with diverse communities** – Additional efforts are needed to reach communities under- represented in past BCWMC planning and projects	Medium
	15	**Protect recreation opportunities** – Minnesota Statutes 103B references WMOs' role in protecting recreation facilities	Low
Organizational Effectiveness	16	**Organizational assessment of capacity and staffing** – Current capacity may not be sufficient to achieve intended goals and execute projects and programs	High
	17	**BCWMC funding mechanisms** – Assessment of funding sources is necessary to determine if intended actions can be reasonably achieved and goals met	High
	18	**Progress assessment** –Rules 8410 require WMOs to assess progress towards measurable goals every 2 years	High
	19	**Projects and programs implemented through a DEI lens** – Additional focus is needed to ensure equity in BCWMC projects and programs.	Medium
	20	**Public ditch management** – The Plan must address management of three public ditches within BCWMC jurisdiction (per MN Statutes 103B)	Low
	21	**Carbon footprint of BCWMC projects** – Carbon released in the construction and ongoing maintenance of BCWMC projects is not currently considered and contributes to climate change	Low

Impaired Waters – High Priority		
Issue Statement: Some lakes and streams within the Bassett Creek watershed do not meet State water quality standards; some are listed as impaired for aquatic life function and recreational use due to pollutants such as nutrients, chloride, bacteria, and other stressors.		
Desired Future Condition	**Goal (10-year)**	**POTENTIAL EXAMPLES: Strategy, Action, or Task (<u>underline</u> = new activity)** – estimated costs in 2023 dollars
Water quality in priority waterbodies meets or is better than applicable State water quality standards	Achieve State eutrophication standard in Medicine Lake (see table)	- Assess TMDL implementation status and existing conditions ($ TBD; scope being developed) - Manage curly-leaf pondweed in Medicine Lake ($14,000) - Assess feasibility/perform alum treatment to manage sediment TP load - CIP - Identify and implement stormwater treatment projects in tributary subwatersheds – CIP - <u>Provide education to lake homeowners including shoreland restoration workshops</u> – ($5,000) - <u>Encourage/fund buffers on private lakeshore property</u> – ($10,000) - Monitor Medicine Lake water quality ($14,000 every 3 years) - Review development and redevelopment projects for compliance with BCWMC standards (fee for service) - <u>Ensure compliance with BCWMC standards (enforce/inspect)</u> – ($ unknown)
	Make statistically significant improvement in water quality toward achieving State eutrophication standards (see table) in: - Northwood Lake - Lost Lake	- <u>Perform subwatershed analyses for Lost and Northwood Lakes (or cooperate on TMDL)</u> – (one time $50,000 possible estimate) - Identify and implement stormwater treatment projects in tributary subwatersheds – CIP - <u>Provide education to lake homeowners including shoreland restoration workshops</u> ($5,000) - <u>Encourage/fund buffers on private lakeshore property</u> - ($10,000)

Impaired Waters – High Priority		
Issue Statement: Some lakes and streams within the Bassett Creek watershed do not meet State water quality standards; some are listed as impaired for aquatic life function and recreational use due to pollutants such as nutrients, chloride, bacteria, and other stressors.		
Desired Future Condition	**Goal (10-year)**	**POTENTIAL EXAMPLES: Strategy, Action, or Task (<u>underline</u> = new activity)** – estimated costs in 2023 dollars
		- Monitor water quality of Lost and Northwood ($71,000 every 3 years) - Review development and redevelopment projects for compliance with BCWMC standards – fee for service - <u>Ensure compliance with BCWMC standards (enforce/inspect)</u> – ($ unknown)
	Protect current conditions or improve water quality in priority lakes currently meeting State eutrophication standards: - Cavanaugh Pond, Crane Lake, Parkers Lake, Sweeney Lake, Twin Lake, Westwood Lake, Wirth Lake,	- Monitor water quality of priority waterbodies ($30,000/lake every 1 to 3 years) - <u>Cooperate on any future TMDLs</u> – ($ unknown) - Review development and redevelopment projects for compliance with BCWMC standards – fee for service - <u>Ensure compliance with BCWMC standards (enforce/inspect)</u> – ($ unknown) - Education and outreach to watershed residents ($46,000 current education programs)
	Reduce sources of bacteria to Bassett Creek Main Stem, North Branch Bassett Creek Plymouth Creek, and Sweeney Branch Bassett Creek	- <u>Establish baseline of bacteria concentrations</u> – ($20,000 possible estimate) - <u>Identify possible sources</u> – ($20,000 possible estimate) - Install signage regarding pet waste and other best practices to reduce bacterial loading - $0 (city expense) - Identify and implement projects to improve shoreline integrity along priority streams (indirect benefit) – CIP - Continue to participate in the Metropolitan Council's watershed outlet monitoring program (WOMP) ($27,000) - Education and outreach to watershed residents ($46,000 current education programs)

Impaired Waters – High Priority		
Issue Statement: Some lakes and streams within the Bassett Creek watershed do not meet State water quality standards; some are listed as impaired for aquatic life function and recreational use due to pollutants such as nutrients, chloride, bacteria, and other stressors.		
Desired Future Condition	**Goal (10-year)**	**POTENTIAL EXAMPLES: Strategy, Action, or Task (<u>underline</u> = new activity)** – estimated costs in 2023 dollars
		- Promote goose management (coordinates with lakeshore management)
	Maintain or improve water quality in priority streams to achieve State eutrophication standards (see table) – Bassett Creek Main Stem, North Branch Bassett Creek, Plymouth Creek, and Sweeney Branch Bassett Creek.	- Identify and implement projects to improve shoreline integrity along priority streams - CIP - Identify and implement watershed stormwater treatment projects - CIP - Continue to participate in the Metropolitan Council's watershed outlet monitoring program (WOMP) ($27,000) - Review development and redevelopment projects for compliance with BCWMC standards – fee for service - <u>Ensure compliance with BCWMC standards (enforce/inspect)</u> – ($ unknown) - Education and outreach to watershed residents ($46,000 current education programs)
	Maintain total phosphorus loading to the Mississippi River of 0.35 lb/acre/year or less (as defined in the Lake Pepin TMDL)	- Identify and implement watershed stormwater treatment projects - CIP - Continue to participate in the Metropolitan Council's watershed outlet monitoring program (WOMP) ($27,000) - Review development and redevelopment projects for compliance with BCWMC standards - fee for service - <u>Ensure compliance with BCWMC standards (enforce/inspect)</u> – ($ unknown)
	Maintain or improve macroinvertebrate indices of biological integrity (MIBI) in priority streams (see table) – Bassett Creek Main Stem, North Branch Bassett Creek, Plymouth Creek, and Sweeney Branch Bassett Creek	- <u>Encourage/fund buffers on private riparian property</u> – ($10,000) - Identify and implement projects to stabilize degraded riparian areas – CIP/channel maintenance funds - Continue MIBI monitoring ($8,000)

Impaired Waters – High Priority		
Issue Statement: Some lakes and streams within the Bassett Creek watershed do not meet State water quality standards; some are listed as impaired for aquatic life function and recreational use due to pollutants such as nutrients, chloride, bacteria, and other stressors.		
Desired Future Condition	**Goal (10-year)**	**POTENTIAL EXAMPLES: Strategy, Action, or Task (<u>underline</u> = new activity)** – estimated costs in 2023 dollars
		- <u>Data review to identify areas/zones where specific stressors are most significant</u> – ($10,000 possible estimate) - Incorporate elements to improve in-stream habitat or address stream impairment stressors on all stream-focused BCWMC capital improvement projects - CIP - Review development and redevelopment projects for compliance with BCWMC standards – fee for service - <u>Ensure compliance with BCWMC standards (enforce/inspect)</u> – ($ unknown)
	Maintain or improve lake floristic quality indices (FQIs) and number of species towards achieving State standards for aquatic vegetation in Cavanaugh Pond, Crane Lake, Lost Lake, Medicine Lake, Northwood Lake, Parkers Lake, Sweeney Lake, Twin Lake, Westwood Lake, and Wirth Lake (see table).	- Vegetation surveys of priority lakes ($1,500) - In-lake aquatic plant management (e.g., AIS treatment) (see AIS issue below) - Education and outreach to watershed residents ($46,000 current education programs)

Summary of Priority Lake Eutrophication Data vs. State Standards

Priority Lake	State Std TP (ug/L)	Current Condition TP (ug/L)[1]	State Std Chl a (ug/L)	Current Condition Chl a (ug/L)[1]	State Std Secchi (m)	Current Condition Secchi (m)[1]
Cavanaugh Pond	60	39	20	9.1	≥1.0	1.8
Crane Lake	60	28	20	7.0	≥1.0	0.9[4]
Lost Lake	60	95	20	50	≥1.0	0.8
Medicine Lake[2]	40	54	14	30	≥1.4	1.8
Northwood Lake	60	223	20	72	≥1.0	0.7
Parkers Lake	40	27	14	11	≥1.4	2.8
Sweeney Lake[3]	40	34	14	14	≥1.4	1.6
Twin Lake	40	15	14	3.6	≥1.4	3.5
Westwood Lake	60	32	20	4.9	≥1.0	1.3
Wirth Lake	40	28	14	8.1	≥1.4	2.8

TP = total phosphorus; Chl a = chlorophyll a; SD = Secchi disc transparency
Red = does not meet standard/goal
(1) Based on summer average data collected 2013-2022
(2) Main basin
(3) North basin
(4) Crane Lake Secchi disc depth is limited due to dense aquatic plant growth impeding travel of the Secchi disc

Summary of Priority Stream Water Quality Data vs. State Standards

Priority Stream	State Std TP (ug/L)	Current Condition TP (ug/L)[1]	State Std TSS (mg/L)	Current Condition TSS (mg/L)	State Std E. coli (#/100 mL)[2]	Current Condition (#/100 mL)
Bassett Creek Main Stem	100	195	30	19.7	126	168
North Branch Bassett Creek	100	91	30	73	126	--
Plymouth Creek	100	227	30	23.8	126	853
Sweeney Branch Bassett Creek	100	101	30	21.4	126	257

TP = total phosphorus; TSS = total suspended solids; E. coli = Escherichia coli
Current condition is based on data collected from: 2013-2022 for Main Stem Bassett Creek, 2018 for North Branch Bassett Creek, 2020 for Sweeney Branch Bassett Creek, and 2022 for Plymouth Creek
Red = does not meet standard/goal
(1) based on summer average values (June through September)
(2) 126 organisms per 100 mL as a geometric mean of not less than five samples within any month, nor shall more than 10% of all samples within a month exceed 1,260 organisms per 100 mL (note that BCWMC monitoring is limited to fewer than 5 samples per month)
(3) A stream is considered impaired if two or more measurements exceed the chronic criterion (230 mg/L) within a 3-year period or if one measurement exceeds the acute criterion (860 mg/L)

Summary of Priority Stream Macroinvertebrate Data vs. State Standards

Priority Stream	Location	State Std MIBI	Current Condition MIBI[1]	Years of Current MIBI
Bassett Creek Main Stem	East of Brookridge	≥37	22.9	2015, 2018
Bassett Creek Main Stem	Irving Avenue	≥37	22.0	2015, 2018
Bassett Creek Main Stem	Rhode Island Avenue	≥37	17.6	2015, 2018
North Branch Bassett Creek	34th Street	≥37	23.0	2015, 2018
Plymouth Creek	Industrial Park Blvd	≥37	15.9	2015, 2022
Sweeney Branch Bassett Creek	Woodstock Avenue	≥43	45.5	2015, 2020

MIBI = Macroinvertebrate Index of Biological Integrity
State MIBI standards are based on "general use" category for Class 5 southern high-gradient streams (MIBI = 37) or Class 6 southern forest low-gradient stream (MIBI = 43)
Red = does not meet standard/goal
(1) based on average of listed years

Summary of Priority Lake Floristic Quality Index (FQI) and Species Richness vs. State Standards

Priority Lake	State Std FQI	Most Recent FQI[1]	10-year Average FQI[2]	State Std Species Richness	Most Recent Species Richness[1]	10-year Average Species Richness[2]	Year of Most Recent Data	Years of Average Data
Cavanaugh Pond	>17.8	25.0	25.0	11	19	19	2019	2019
Crane Lake	>17.8	18.6	18.8	11	13.5	14	2021	2016, 2021
Lost Lake	>17.8	20.6	11.8	11	8.0	14.5	2022	2017, 2022
Medicine Lake	>18.6	27.6	25.3	12	21	23.5	2020	2016, 2020
Northwood Lake	>17.8	14.1	14.5	11	11.2	11	2022	2016, 2019, 2022
Parkers Lake	>18.6	19.5	18.9	12	13	13	2021	2018, 2021
Sweeney Lake	>18.6	25.2	21.7	12	15.3	19.5	2020	2014, 2017, 2019, 2020
Twin Lake	>18.6	28.3	24.7	12	19	23	2020	2014, 2017, 2019, 2020
Westwood Lake	>17.8	20.1	19.0	11	13.7	15.5	2021	2015, 2018, 2021
Wirth Lake	>17.8	--	--	11	--	--	--	--

FQI = Floristic Quality Index; FQI is a measure of the quality of aquatic vegetation
Red = does not meet standard/goal based on 10-year average FQI
(1) Reflects the average of June and August measurements during the most recent monitoring year
(2) Reflects average of all measurements in the 10-year period from 2014-2023

Chloride Loading – High Priority		
Issue Statement: High chloride loading from overuse of winter deicers across the Bassett Creek watershed negatively impacts lakes streams, and groundwater water quality.		
Desired Future Condition	**Goal (10-year)**	**Strategy, Action, or Task (some potential examples; <u>underline</u> = new activity)**
Priority waterbodies meet applicable State chloride standards	Reduce chloride loading to and concentrations in lakes and streams at risk of chloride impairment and those not meeting State standards.	- <u>Perform subwatershed analyses for chloride-impaired lakes to identify pollution hotspots and to target implementation</u> – ($75,000 possible estimate) - <u>Aside from the above, identify waterbodies and/or subwatersheds at greatest risk to chloride pollution or impairment (overlays?)</u> – ($10,000 possible estimate) - <u>Incentivize/require Smart Salt training</u> – ($2,000) - <u>Require winter maintenance plans for applicable projects/locations</u> –$0 - <u>Develop/identify/require(?) design strategies to minimize salt use</u> –($10,000 possible estimate) - <u>Update development and redevelopment standards (watershed-wide or select areas?)</u> – ($ unknown; could do during plan development) - <u>Develop plans for priority waterbodies similar to Parkers Lake Chloride Reduction Study</u> – ($45,000 per lake) - <u>Education targeted to private applicators</u> – ($10,000) - Monitor chlorides in priority waterbodies ($ included with monitoring budgets) - <u>Provide or improve methods for residents to report oversalting</u> –
	Reduce average chloride concentrations in Bassett Creek by 10% at the Watershed Outlet Monitoring Program (WOMP) station.	- *All action items from goal above*

Summary of Priority Lake Chloride Data vs. State Standards

Priority Waterbody	State Chronic Std Chloride (mg/L)	Current Condition Average Chloride[1] (mg/L)	State Acute Std Chloride (mg/L)	Current Condition Maximum Chloride[2] (mg/L)	Number of Observations
Cavanaugh Pond	230	59	860	70	12
Crane Lake[4]	230	718	860	820	6
Lost Lake	230	31	860	33	12
Medicine Lake	230	162	860	375	318
Northwood Lake	230	104	860	274	12
Parkers Lake[4]	230	257	860	716	103
Sweeney Lake[4]	230	276	860	371	48
Twin Lake	230	117	860	139	26
Westwood Lake	230	81	860	99	12
Wirth Lake	230	200	860	512	306
Bassett Creek Main Stem[3,4]	230	165	860	664	259
North Branch Bassett Creek	230	88	860	219	12
Plymouth Creek	230	180	860	382	25
Sweeney Branch Bassett Creek	230	218	860	348	18

Red = does not meet standard/goal

(1) Based on all measurements 2013-2022

(2) Based on maximum concentration observed between 2013-2022

(3) As measured at watershed outlet monitoring program (WOMP) location

(4) A stream is considered impaired if two or more measurements exceed the chronic criterion within a 3-year period or if one measurement exceeds the acute criterion

Streambank and Gully Erosion – Medium Priority		
Issue Statement: Excessive erosion along streambanks and gullies negatively impacts stream geomorphology, water quality, aquatic habitat, and floodplain function.		
Desired Future Condition	**Goal (10-year)**	**Strategy, Action, or Task (some potential examples; underline = new activity)**
Streambanks and gullies throughout the watershed are naturally stable with no excessive erosion that negatively impact the beneficial functions of waterbodies or infrastructure.	Achieve stable streambanks along all priority streams (Bassett Creek Main Stem, North Branch Bassett Creek, Plymouth Creek, and Sweeney Branch Bassett Creek) such that streambanks are not contributing to pollution downstream nor threatening infrastructure or public health. Stabilize gullies that most significantly contribute to reduced water quality downstream.	- Monitor and evaluate stream habitat and macroinvertebrate communities. ($8,000/creek) - Biennially assess the condition of streambanks along BCWMC priority streams and prioritize areas for action – ($25,000 possible estimate) - Monitor and evaluate impact of eroding streambanks and gullies on water quality in downstream impaired waters including lakes and streams partially new activity ($ unknown) - Identify and implement streambank restoration projects to stabilize banks, limit erosion, and improve ecological health - CIP - Continue setting aside funds in Channel Maintenance Fund – ($25,000) - Require vegetated buffers adjacent to priority streams for projects triggering BCWMC review (ensure enforcement of existing stream buffer standards) $0

Lakeshore Erosion – Medium Priority		
Issue Statement: Erosion along lake shorelines degrades water quality and negatively impacts lake ecology.		
Desired Future Condition	**Goal (10-year)**	**Strategy, Action, or Task (some potential examples; underline = new activity)**
Shorelines along priority lakes have buffers with native vegetation and no excessive erosion.	Establish a baseline of lakeshore conditions along all priority lakes. Increase percentage of properties with native buffers on nutrient impaired lakes.	- Inventory lakeshore conditions in priority lakes – ($10,000/lake) - Education to lake homeowners w/ shoreland restoration workshops – ($5,000) - Encourage/fund buffers on public or private lakeshore property – ($10,000) - Sponsor vegetated buffer project for purpose of public education for shoreland property owners and general public (need more info) - Support existing city/partner programs to stabilize shorelines

Wetland Health and Restoration – Medium Priority		
Issue Statement: The function, value and quantity of wetlands within the Bassett Creek watershed have been negatively impacted by development and the changing climate.		
Desired Future Condition	**Goal (10-year)**	**Strategy, Action, or Task (some potential examples; <u>underline</u> = new activity)**
Wetland function and values are sustained and enhanced, and no additional wetland acres are lost to development.	Establish baseline wetland conditions through watershed wide wetland inventory and assessment; identify priority wetlands	- Inventory wetlands and their conditions throughout watershed - Require vegetated buffers adjacent to wetlands for projects triggering BCWMC review $0 - <u>Ensure enforcement of existing wetland buffer standard</u> – ($ unknown) - Assist partners with education to residents on wetland health and native buffers – ($46,000 current education programs)
	Restore or enhance priority wetlands as opportunities arise or adjacent CIP projects are planned	- Work with cities to create list of priority wetlands in need of restoration - Encourage cities to restore or enhance wetlands during city projects or through development processes - $0 - Identify opportunities for wetland restoration and enhancement through BCWMC CIP projects

Aquatic Invasive Species – Medium Priority

Issue Statement: Aquatic invasive species (AIS) present in the Bassett Creek watershed negatively impact water quality, lake and stream ecology, and climate resiliency.

Desired Future Condition	Goal (10-year)	Strategy, Action, or Task (some potential examples; <u>underline</u> = new activity)	
No new AIS infestations in lakes or creeks. Existing AIS are eradicated or well under control.	Prevent new AIS infestations in lakes or creeks throughout the watershed.	- Implement BCWMC's aquatic plant management/aquatic invasive species (APM/AIS) policies ($40,000) - Assist TRPD, Hennepin County, and others with AIS inspection programs ($5,000) - Work with partners and agencies to identify and track emerging AIS threats – ($ unknown) - Work with Hennepin County, member cities, and other partners to provide signage, education, and early detection training to residents, boaters, anglers, and lakeshore landowners ($46,000 current education programs)	
	Mitigate the impact of existing AIS infestations through application of BCWMC policies.	- Implement BCWMC's aquatic plant management/ aquatic invasive species (APM/AIS) policies ($40,000) - Work with TRPD and MnDNR to manage and assess curly-leaf pondweed, starry stonewort, and zebra mussels in Medicine Lake (included in $40,000 above) - Follow AIS Rapid Response Plan when needed - $ unknown	

Groundwater – Surface Water Interactions – Medium Priority

Issue Statement: The flow of water between groundwater and lakes, streams, and wetlands complicates the protection, restoration, and responsible management of natural resources.

Desired Future Condition	Goal (10-year)	Strategy, Action, or Task (some potential examples; <u>underline</u> = new activity)	
Areas with groundwater – surface interaction are identified and negative impacts due to interaction are minimized. Hennepin County develops and implements county groundwater plan.	Evaluate the groundwater-surface water interaction characteristics of BCWMC priority waterbodies.	- <u>Work with Met Council or other agencies to map groundwatersheds and evaluate groundwater-surface water interactions</u> – ($50,000 possible estimate) - <u>Lobby Hennepin County to develop county-wide groundwater management plan (similar to Dakota and Washington Counties)</u> - $0	
	Consider and mitigate negative impacts of groundwater-surface water interactions during development and project implementation.	- <u>Assist with development of regional or statewide policies regarding infiltration of stormwater</u> – ($5,000 possible estimate) - Through BCWMC Requirements Document: maintain requirements detailing circumstances where stormwater infiltration is limited or prohibited for the protection of groundwater resources (consistent with the MPCA Construction Stormwater General Permit) – fee for service - Consider updating BWCMC requirements so infiltration is also consistent with MDH guidance	

Degradation of Riparian Areas – Low Priority

Issue Statement: Degraded riparian areas allow excess pollutant loading to lakes and streams, contribute to impairments (water quality and biological), and result in poor ecological function and habitat.

Desired Future Condition	Goal (10-year)	Strategy, Action, or Task (some potential examples; underline = new activity))	
Riparian areas throughout the watershed are ecologically healthy with well established, diverse native vegetation.	Establish and maintain vegetated stream buffers where required.	- Require vegetated buffers adjacent to priority streams for projects triggering BCWMC review (ensure enforcement of existing stream buffer standard –$ unknown) - Provide education to creek homeowners including riparian protection/ restoration workshops –($5,000)	
	Restore degraded riparian areas along BCWMC CIP projects.	- Assess the condition of riparian areas on BCWMC priority streams and lakes and prioritize areas for action – ($ included in activities under other issues) [*determine where this activity would apply – along all waters or only where CIP projects are proposed?*] - Incorporate elements to improve riparian areas on all stream-focused and lake-adjacent BCWMC capital improvement projects. - CIP	

Degradation of Upland Areas – Low Priority

Issue Statement: Natural areas in uplands may be threatened by development pressure, lack of proper management, and negative impacts from climate change.

Desired Future Condition	Goal (10-year)	Strategy, Action, or Task (some potential examples; <u>underline</u> = new activity)	
Natural areas throughout the watershed are well managed, ecologically healthy, and accessible to the public, where possible. High quality uplands are not lost or negatively impacted by development projects.	Consider protection or enhancement of upland natural areas during BCWMC planning and projects.	- Evaluate aesthetics, habitat, and accessibility during CIP project selection and prioritization - CIP - Encourage and support public and private landowners to maintain, preserve or restore open space and native habitats ($46,000 current education programs) - Member cities shall consider opportunities to maintain, enhance, or provide new open spaces and/or habitat. $0 - Cooperate with the MDNR and other entities, as requested, to protect rare and endangered species under the State's Endangered Species Statute. The BCWMC will review the Natural Heritage Information System during the design phase of Commission projects - CIP - Incorporate trails, parks, and natural areas into BCWMC watershed map. (to be included with current map update)	

Groundwater Quality – Low Priority

Issue Statement: Groundwater quality impacts public health as a source of drinking water and may be threatened by infiltration of stormwater and associated pollutants.

Desired Future Condition	Goal (10-year)	Strategy, Action, or Task (some potential examples; <u>underline</u> = new activity)
Groundwater is safe to drink, meets all drinking water standards, and is not adversely impacted by elevated chloride levels.	Prevent negative impacts to groundwater quality from proposed projects reviewed by the BCWMC.	- Through BCWMC Requirements Document: maintain requirements detailing circumstances where stormwater infiltration is limited or prohibited for the protection of groundwater resources (consisted with the MPCA Construction Stormwater General Permit) – fee for service - Review all MDNR groundwater appropriation permit applications in the BCWMC excluding applications for temporary appropriations permits - $3,000
	Prevent negative impacts to groundwater quality from BCWMC projects.	- CIP projects are evaluated for potential impacts to groundwater before implementation. - CIP