Bassett Creek Watershed Management Commission

Regular Meeting & Public Hearing
Thursday, September 18, 2025
8:30 a.m.
Council Conference Room
Golden Valley City Hall
7800 Golden Valley Rd., Golden Valley MN
Listen via Zoom:
https://plymouthmn-gov.zoom.us/meeting/register/tZcodOCvrj8rHtZJzxg6hib82UqHHvF4Ift3#/registration

MEETING AGENDA

1. **CALL TO ORDER and ROLL CALL**

2. **PUBLIC FORUM ON NON-AGENDA ITEMS –** *Members of the public may address the Commission about any item not contained on the regular agenda. A maximum of 15 minutes is allowed for the Forum. If the full 15 minutes are not needed for the Forum, the Commission will continue with the agenda. The Commission will take no official action on items discussed at the Forum, except for referral to staff or a Commissions Committee for a recommendation to be brought back to the Commission for discussion/action.*

3. **APPROVAL OF AGENDA**

4. **CONSENT AGENDA (10 minutes)**
   - A. Approval of Minutes – August 21, 2025 Commission Meeting
   - B. Acceptance of September Financial Report
   - C. Approval of Payment of Invoices
     - i. Keystone Waters, LLC – August 2025 Administration
     - ii. Keystone Waters, LLC – August 2025 Administrative Expenses
     - iii. Barr Engineering – August 2025 Engineering Services
     - iv. Triple D Espresso – September Meeting Catering
     - v. City of Plymouth –August 2025 Accounting Services
     - vi. Kennedy & Graven – Legal Services
     - vii. Stantec – WOMP Services
     - viii. LB Carlson LLP – 2024 Financial Audit
     - ix. Bridge Tower Media – Public Hearing Notice
     - x. Bolton & Menk – Parkers Lake Chloride Reduction Project
     - xi. HDR – Website Maintenance and Update Project
     - xii. ECM Publishers – Public Hearing Notice

5. **PUBLIC HEARING**
   - A. Receive Comments on Double Box Culvert Repair Project (FCP-1) (15 min)

6. **BUSINESS**
   - A. Consider Approval of Resolution 25-08 Ordering 2026 Improvement (15 min)
     - i. Ordering 2026 Improvements
     - ii. Making Findings Pursuant to Minnesota Statutes Section 103B.251
     - iii. Certifying Costs to Hennepin County

B. Receive Street Sweeping Prioritization Study Results (40 min)

7. COMMUNICATIONS (15 minutes)

A. Administrator's Report
   i. Reminder of November Wednesday Meeting Date and Location
   ii. Update on Watershed Plan 60-day Review Comments
   iii. Volunteers Needed for Water Blessing Event
B. Engineer
C. Legal Counsel
D. Chair
E. Minnesota Watersheds
   i. Report on Meeting on Resolutions
F. Commissioners
G. TAC Members
   i. Update on MN Attorney General Task Force on Water
   ii. Update on Plymouth Creek Restoration Project
H. Committees

8. INFORMATION ONLY (Information online only)

A. Administrative Calendar
B. CIP Project Updates www.bassettcreekwmo.org/projects
C. Grant Tracking Summary and Spreadsheet
D. WCA Notices Plymouth, Golden Valley, Minnetonka

9. ADJOURNMENT

Upcoming Meetings & Events

- Blue Thumb Native Plant Sale: Saturday, September 20th, 10:00 a.m. – 1:00p.m., Valley Presbyterian Church, Golden Valley
- Fruen Mill Tour: Monday, September 29th, 4:00 p.m., 303 Thomas Ave N, Minneapolis
- Third Annual Ȟaȟá Wakpádaŋ Water Blessing: Monday, October 13th, 10:00 – 11:00 a.m.; West Medicine Lake Park
- BCWMC Commission Meeting: Thursday, October 16th, 8:30 a.m., Golden Valley City Hall
- Metro Watersheds Quarterly Meeting: Tuesday, October 21st, 7:00 p.m., hybrid, Zoom + Capitol Region WD, St. Paul
- BCWMC Commission Meeting: **Wednesday**, November 19th, 8:30 a.m., Plymouth City Hall

Bassett Creek Watershed Management Commission

AGENDA MEMO
Date: September 11, 2025
To: BCWMC Commissioners
From: Laura Jester, Administrator
RE: Background Information for 9/18/25 BCWMC Meeting

1. **CALL TO ORDER and ROLL CALL**
2. **PUBLIC FORUM ON NON-AGENDA ITEMS**
3. **APPROVAL OF AGENDA – ACTION ITEM with attachment**

4. **CONSENT AGENDA**
   A. Approval of Minutes – August 21, 2025 Commission Meeting- **ACTION ITEM with attachment**

   B. Acceptance of September Financial Report - **ACTION ITEM with attachment**

   C. Approval of Payment of Invoices - **ACTION ITEM attachments available upon request –** *I reviewed the following invoices and recommend payment. Commission Treasurer Polzin reviewed Keystone Waters invoices.*
      i. Keystone Waters, LLC – August 2025 Administration
      ii. Keystone Waters, LLC – August 2025 Administrative Expenses
      iii. Barr Engineering – August 2025 Engineering Services
      iv. Triple D Espresso – September Meeting Catering
      v. City of Plymouth –August 2025 Accounting Services
      vi. Kennedy & Graven – Legal Services
      vii. Stantec – WOMP Services
      viii. LB Carlson LLP – 2024 Financial Audit
      ix. Bridge Tower Media – Public Hearing Notice
      x. Bolton & Menk – Parkers Lake Chloride Reduction Project
      xi. HDR – Website Maintenance and Update Project
      xii. ECM Publishers – Public Hearing Notice

5. **PUBLIC HEARING**
   A. Receive Comments on Double Box Culvert Repair Project (FCP-1) (15 min) - **PUBLIC INPUT ITEM with attachment** - *The public hearing will be opened and the public will be asked for comments on the 2026 Double Box Culvert Repair Project. All comments will be entered into the public record and will be considered before the Commission approves the resolution in 6A below. The attached public hearing notice briefly describes the project. The Commission approved the feasibility study for this project at its June meeting.*

6. **BUSINESS**
   A. Consider Approval of Resolution 25-08 Ordering 2026 Improvement (15 min) **ACTION ITEM with attachment** - *Pending the outcome of the public hearing in 5A, the attached resolution should be considered for approval to order the project, designate the entity responsible for construction, make findings pursuant to MN Statutes 103B.25, and certify the costs of the 2025 projects to Hennepin County. Staff recommends approval of the resolution which approves the following*:
      i. Ordering 2026 Improvement
      ii. Making Findings Pursuant to Minnesota Statutes Section 103B.251

iii. Certifying Costs to Hennepin County - *The attached memo lists the estimated project costs for the 2026 projects and recommends the Commission direct staff to certify for payment by Hennepin County in 2026 a total (final) tax levy of $2,503,500*.

B. Receive Street Sweeping Prioritization Study Results (40 min) – **INFORMATION ITEM with attachment** (complete document and appendices online) – *At their meeting in October 2024, the Commission approved a scope of work for a street sweeping prioritization study to analyze opportunities to enhance and prioritize sweeping for pollution reduction to priority waters. The TAC provided information through a survey of current operations and reviewed the study results at their meeting in August. There are multiple datasets and analyses used in the study and different ways the results can be presented and considered. The executive summary in the attached report provides an overview of results and recommendations with methodology, mapping, and results by city and subwatershed presented in the main body of the report. Commission Engineers will present the results at this meeting. Commissioners should discuss how the results might be used in future programs and projects*.

7. COMMUNICATIONS (15 minutes)

A. Administrator's Report
   i. Reminder of November Wednesday Meeting Date and Location
   ii. Update on Watershed Plan 60-day Review Comments
   iii. Volunteers Needed for Water Blessing Event
B. Engineer
C. Legal Counsel
D. Chair
E. Minnesota Watersheds
   i. Report on Meeting on Resolutions
F. Commissioners
G. TAC Members
   i. Update on MN Attorney General Task Force on Water
   ii. Update on Plymouth Creek Restoration Project
H. Committees

8. INFORMATION ONLY (Information online only)

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B. CIP Project Updates www.bassettcreekwmo.org/projects
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9. ADJOURNMENT

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- BCWMC Commission Meeting: **Wednesday**, November 19th, 8:30 a.m., Plymouth City Hall

Item 4A.
BCWMC 9-18-25

Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting
Thursday, August 21, 2025
8:30 a.m.
7800 Golden Valley Road, Golden Valley MN

1. CALL TO ORDER and ROLL CALL

On August 21, 2025 at 8:32 a.m. Chair Cesnik called the Bassett Creek Watershed Management Commission (Commission) to order.

Commissioners, city staff, and others present

City	Commissioner	Alternate Commissioner	Technical Advisory Committee Members (City Staff)
Crystal	Joan Hauer	*Absent*	*Absent*
Golden Valley	Paula Pentel	Wendy Weirich	Drew Chirpich
Medicine Lake	Clint Carlson	Shaun Kennedy	*Absent*
Minneapolis	Jodi Polzin	*Vacant*	Liz Stout
Minnetonka	*Vacant*	*Vacant*	Eric Eckman
New Hope	Jere Gwin-Lenth	Jen Leonardson	*Absent*
Plymouth	Catherine Cesnik	*Absent*	Talori Duckworth
Robbinsdale	*Absent*	*Vacant*	*Absent*
St. Louis Park	*Absent*	David Johnston	Erick Francis
Administrator	Laura Jester, Keystone Waters, LLC		
Engineers	Stephanie Johnson, Jessica Olson, Gabby Campagnola, Jim Herbert, Patrick Brockamp - Barr Engineering Co.		
Recording Secretary	*Vacant Position*		
Legal Counsel	Dave Anderson, Kennedy & Graven		
Guests/Public	Greg Koch, Winston Wildebush, Stu Grubb, Brett Emmons, Dan Hall, Susanna Torseth – Graffiti Mill LLC; Nick Minderman, MPLS resident; John Micevych, Minneapolis Ward 7; Eric Wojchik, Met Council; Dan Justesen, Utepils		

2. PUBLIC FORUM ON NON-AGENDA ITEMS

None

3. APPROVAL OF AGENDA

MOTION: Commissioner Gwin-Lenth moved to approve the agenda as presented. Commissioner Carlson seconded the motion. Upon a vote the motion carried 7-0. The cities of Minnetonka and Robbinsdale were absent from the vote.

4. CONSENT AGENDA

MOTION: Commissioner Carlson moved to approve the consent agenda. Commissioner Gwin-Lenth seconded the motion. Upon a vote the motion carried 7-0. The cities of Minnetonka and Robbinsdale were absent from the vote.

The following items were approved as part of the consent agenda.

- Approval of Minutes – July 17, 2025 Commission Meeting
- Acceptance of August Financial Report
- Approval of Payment of Invoices
  - Keystone Waters, LLC – July 2025 Administration
  - Keystone Waters, LLC – July 2025 Administrative Expenses
  - Barr Engineering – July 2025 Engineering Services
  - Triple D Espresso – August Meeting Catering
  - City of Plymouth – July 2025 Accounting Services and Audit Assistance
  - Kennedy & Graven – Legal Services
  - Stantec – WOMP Services
  - Bolton and Menk – Sweeney Lake AIS Early Detection Training
  - HDR, Inc. – Website Update Project
  - LB Carlson LLP – 2024 Financial Audit
- Acceptance of 2024 BCWMC Financial Audit

5. BUSINESS

A. Consider Variance Request for Fruen Mill Redevelopment Project

Administrator Jester provided a high level overview of the agenda item noting the Commission and the applicant (Graffiti Mill, LLC) entered into an agreement in March to provide reimbursement of Commission Engineer's time in discussions and preliminary reviews of the site and potential variances. She reminded commissioners about the presentation by Graffiti Mill at the June meeting which provided a vision of the project and potential challenges with floodplain requirements. She noted that the Commission rarely received requests for variances from its requirements and that the process for this development is unusual as it is being taken in two stages – first to consider variances (today's focus), and second a review of the full development at a future meeting. She noted this phased approach provides some assurance to the developer on the viability of the project.

Commission Attorney Anderson reminded commissioners that the discussion and question before the Commission at this meeting is narrow in scope, focusing solely on the request for variances from three BCWMC requirements. He noted this is not a review of the complete project at this stage. He noted there are five criteria for considering a variance as outlined in the BCWMC's "Requirements Document." He noted the Commission has discretion for some areas of the variance process due to some grey areas in the Commission's requirements. Finally, he noted that if the Commission denies the variance request, they must articulate the reasons in writing. A denial cannot be arbitrary.

Commissioner Polzin noted that if the variances are approved, it would allow a currently prohibited use in the floodplain. She asked if there might be a "hold harmless" protection for the Commission that would stay with the property if the owner sells in the future. She wondered about potential liability for the Commission in the future. Attorney Anderson responded, saying governments have legislative and discretionary immunity for property- or use-related decisions.

Commissioner Gwin-Lenth commended the level of detail in the memo from the Commission Engineer and Attorney. He noted the community support for the project and voiced his concern about setting a precedent if the variances are approved. Attorney Anderson noted that he is not concerned about setting precedent from a legal standpoint because applications should be reviewed individually and on a case-by-case basis. He also noted that today's group of commissioners cannot set precedent for a future group of commissioners.

Commission Engineer Herbert addressed the technical aspects of the variance request, noting there are two

flooding concerns – one from groundwater through seepage into the basement level, and one from surface water if the creek were to flood. He noted that some of the discussion and decisions within the variance process are related to technical aspects of the project while others are more policy-related questions. Engineer Herbert reviewed the exact requirements from which a variance is sought including Policy 29 (Minimum building elevations (lowest floor) of new and redeveloped structures, including parking garages/ramps, must be at least 2.0 feet above the 100-year flood level); Policy 34(a) (The BCWMC will allow only those land uses in the BCWMC-established floodplain that will not be damaged by floodwaters and will not increase flooding); and Policy 34(b) (Allowable types of land use that are consistent with the floodplain include recreation areas, playgrounds, surface parking lots, temporary excavation and storage areas, public utility lines, agriculture, and other open spaces.).

Engineer Herbert described the position and elevation of the buildings (and basements) in relation to the creek and the BCWMC 100-year floodplain. He reported that the applicant wishes to use the basements which are more than 9 feet below the floodplain and 5 feet below the creek. He walked through the applicant's responses to each of the variance conditions.

Condition 1: *There are special circumstances or conditions affecting the property such that the strict application of the provisions of these standards and criteria would deprive the applicant of the reasonable use of the applicant's land*. Engineer Herbert noted this is more of a policy question and that his initial recommendation was to fill the basement due to continuous groundwater intrusion. He reported the applicant has indicated that the project is not economically viable without use of the basement and that this is clearly a special circumstance due to the uniqueness of the property. As noted in the memo, whether denying the ability to redevelop the basements of the two structures for commercial uses would deprive the applicant of the reasonable use of the applicant's land is a decision that lies within the Commission's discretion.

Condition 2: *The variance is necessary for the preservation and enjoyment of a substantial property right of the applicant*. Again, Engineer Herbert noted this is a policy matter and the Commission is afforded discretion. As noted in the memo, the term "substantial property right" is not defined in the BCWMC's standards, and so the Commission should consider the inherent characteristics of the property and existing structures and whether alternative proposals that do not rely on use of the basements are possible.

Condition 3: *The granting of the variance will not be detrimental to the public welfare or injurious to the other property in the territory in which the property is situated*. Engineer Herbert stated they reviewed the applicant's proposed flood protection measures and the impacts to the 100-year flood elevation caused by operation of the dewatering system during a 100-year storm and found the increased flood elevation to be negligible. He further noted that if the project moves forward, the final development plans must demonstrate no increase in flood level at any point along the trunk system.

Condition 4: *In applications relating to a use in the 1% (100-year flood) floodplain set forth in Table 2-9 of the [Watershed] Plan, the variance shall not allow a lower degree of flood protection than the current flood protection*. Engineer Herbert acknowledged that although the applicant's variance request includes providing less than required freeboard at the site, the condition can be met if the final development plans demonstrate no increase in flood level at any point along the creek to ensure adjacent properties are not impacted by the development. Further, he reported that he believes an appropriate dewatering system is possible.

Condition 5: *The granting of the variance will not be contrary to the intent of taking all reasonable and practical steps to improve water quality within the watershed.* Engineer Herbert reported the submitted water quality data was found to be appropriate and that the data are being further reviewed by the DNR as part of the appropriation permit.

Commission Engineer Herbert went on to note that Section 4, paragraph 9 in the BCWMC Requirements Document acknowledges the use of floodproofing for non-conforming land uses.

There was considerable questions and discussion among commissioners, staff, and the developer. It was noted that stormwater runoff will be addressed with the future review of the complete site plans and that the creek has not been out of its banks in this stretch this summer, even with significant rain events (which is likely due to a flood

control structure upstream at Hwy 55). There was discussion about the size of the basements in relation to overall square footage of the buildings and the applicant's desire to use the basement to make the redevelopment economically viable. It was noted the buildings' basements were previously used during mill operation and that grain mills cannot operate with water intrusion. There was discussion about the need for redundancy in the flood proofing systems and power back up to keep the dewatering system operational in the case of power outage and how the cone of depression from the dewatering is expected to be small and should not impact the building's structure. The developer noted that the strength and integrity of both buildings is sound despite its age. There were questions about mechanical systems that might be located in the basement; city building codes will come into play for those issues. Commissioner Polzin indicated she liked the project concept but struggles with the fact that Minneapolis codes reference floodplain extents that are less stringent than BCWMC floodplain extents.

Some commissioners indicated support for the project if the basements were not planned to be used. Other commissioners and city staff noted that several buildings in Minneapolis, including University of Minnesota buildings and multiple parking ramps rely on continuous dewatering.

Greg Koch, the applicant and owner of Graffiti Mill LLC discussed his work in cleaning up and remediating the site over the last 2.5 years and spending considerable funds getting to this point. He reiterated that the project is not financially viable if the basements cannot be used and that he would likely sell the property if unable to use the basements. He noted that he is different from typical developers in that he is focused on place-making and adaptive reuse.

After additional comments from commissioners, Commission Attorney Anderson reminded commissioners that they should maintain a clear record of deficiencies to variance criteria, if they exist, and that their decision cannot be arbitrary, capricious, or based on issues unrelated to Commission requirements. He also noted the Commission cannot approve something that is not before them (such as approving a development that does not use the basements).

There was further discussion about the project, including from the Minneapolis TAC member Stout who noted the city of Minneapolis supports this project and hopes for economic development in this area. Alternate Commissioner Kennedy noted the Commission is reviewing this at the beginning of a long process and that the developer is seeking permission to continue and prove they can develop the property as desired. Commissioner Polzin questioned whether prohibiting use of the basement truly creates a hardship. In a response to a question from commissioners, Mr. Koch discussed the reason he is not seeking historical designation. Attorney Anderson explained that should a conditional variance be granted, it would be tied to this particular applicant and application and not to the property.

[Chair Cesnik called a 5-minute break.]

Commission Engineer Herbert reviewed the conditions, noted within the memo, that are recommended by staff if the Commission decides to approve the variance request. Chair Cesnik wished to add a condition that an operations and maintenance plan be filed with the city and that proposed condition #3 be modified to include a requirement for some type of backup to ensure resiliency for the pump system (for example, backup generators) to ensure the basements stay dry. Further, she requested the conditions be more explicit about the requirement for floodproofing designs in future submittals to be completed to the satisfaction of the Commission Engineer.

MOTION: Commissioner Polzin moved to conditionally approve the variance request with conditions outlined in the memo and the additions voiced by Chair Cesnik. Commissioner Carlson seconded the motion. A vote was taken by roll call:

Crystal: No
Golden Valley: Yes
Medicine Lake: Yes
Minneapolis: Yes
Minnetonka: Absent
New Hope: Yes
Plymouth: Yes
Robbinsdale: Absent
St. Louis Park: Yes

The motion carried 6-1 with the cities of Minnetonka and Robbinsdale absent from the vote.

B. Review Cost Estimates and Implementation Options for Main Stem Bassett Creek Restoration Project

Administrator Jester reminded commissioners that at the meeting last month, the Commission reviewed the 50% designs for this CIP project and learned that estimated construction costs are considerably higher than originally included in the feasibility study completed over two years ago. She noted higher costs are due to a few factors including inflation, additional or expanded areas of erosion needing restoration, and a potential to expand vegetation restoration on public and private riparian areas and floodplains.

Commission Engineer Olson presented information including maps showing the additional 1,200 feet of erosion, maps showing the expanded areas of vegetation restoration, and updated costs and pollutant removal figures. She reported the eroding areas originally presented as part of the feasibility study were re-prioritized to include the new areas of erosion. She presented the base cost for vegetation restoration (in areas with restoration) and costs for add-on #1 (vegetation restoration on publicly owned land) and add-on #2 (restoration on privately owned land).

Administrator Jester reviewed options for additional funding, noting grant opportunities are limited aside from the next round of Watershed Based Implementation Funds which would be about $183,000. She reported that the 2027 levy has "space" for a $1M project because Golden Valley is not ready to move forward with a CIP project currently slated for 2027 and has asked to move it to 2028 at the earliest.

Commissioner Polzin asked if the City of Golden Valley could provide additional funding toward the project. Golden Valley TAC member Chirpich indicated he wasn't sure. Commissioner Pentel voices support for stabilizing erosion in all high, medium, and low priority areas and noted residents are excited about the project. She also noted that vegetation restoration adds more value to the project.

Commissioner Polzin agreed with Commissioner Pentel but also noted concern about spending public money restoring vegetation on private properties. It was noted the draft watershed management plan includes a potential small grant program for homeowners to install buffers and raingardens and that improving private lands still improves the creek. TAC member Chirpich confirmed that it would be the responsibility of each homeowner to maintain any restored vegetation after the 3-year warranty period and that he and the design team were working to incorporate vegetation that is not easily removed by homeowners. It was also noted this project protects the Lagoon Dredging Project just downstream.

MOTION: Commissioner Pentel moved to approve moving forward with Alternative 3 + add-ons 1 and 2, and directing the Commission Engineer to continue to 90% designs. Commissioner Hauer seconded the motion.

DISCUSSION: There was discussion about posting add-ons 1 and 2 as alternate bids to be priced separately. Commission Engineer Johnson noted that may impact bids as it adds uncertainty for bidders. It was noted that for now those costs can be tracked separately for review again at 90% plans. There was confirmation that the motion implies a project budget amendment to $2,592,000.

VOTE: Upon a vote the motion carried 6-1. Commissioner Polzin voted against; all others voted in favor. The cities of Minnetonka and Robbinsdale were absent from the vote.

C. Consider Approving Scope of Work for Feasibility Study for Phase II Bassett Creek Lagoon Dredging Project

Administrator Jester reminded commissioners that in the winter of 2022/2023 Lagoons D, E, and F in Theodore Wirth Regional Park were dredged as part of the Main Stem Lagoon Dredging CIP Project. The project was not completed to specifications. She noted that at their meeting in April the Commission approved a TAC recommendation on the 5-year CIP to include the Main Stem Bassett Creek Lagoon Dredging, Wirth Park (BC-7) project to dredge lagoons (either Lagoons D, E, and F, or Lagoon G). She indicated that with construction slated for 2027, a feasibility study should get started soon.

Commission Engineer Johnson reviewed the scope of work for a feasibility study, which will use much of the information obtained during the original project. She noted the new project will incorporate the lessons learned from the original project and she highlighted the need for additional public engagement as part of this next phase. She reviewed the proposed schedule and budget for the study.

[Commissioner Hauer and Alternate Commissioner Weirich leave the meeting.]

Commissioner Pentel indicated she does not see the viability of going back to dredge additional material from Lagoons D, E, and F and wondered why the study couldn't simply focus on dredging in Lagoon G. Commission Engineer Brockamp noted that there is significant water quality benefits to additional dredging in D, E, and F and that a contractor might consider non-mechanical dredging. He noted the TAC recommended a study of both scenarios. Commissioner Polzin agreed it makes sense to study both options. Administrator Jester noted there may be some opposition and/or negative ecological impacts resulting from dredging in Lagoon G because the stream channel has reclaimed its path through the area and much of what once was open water is now riparian/floodplain habitat.

MOTION: Commissioner Polzin moved to approve the scope and budget for the Phase II Bassett Creek Lagoon Dredging Project. Alternate Commissioner Johnston seconded the motion. Upon a vote the motion carried 7-0 with the cities of Minnetonka and Robbinsdale absent from the vote.

D. Consider Budget Committee Recommendations on 2026 Operating Budget

Budget Committee Chair Polzin reported that the committee reviewed the 2024 audit and status of the 2025 operating budget. She noted that the audit shows a higher 2024 year-end balance than previously calculated which means the Commission came into the current fiscal year with more funds than expected. She noted this has implications on spending and city assessments in 2026 and that in simple terms, there is about $259,000 "additional" funding available for 2026 than originally calculated. Committee Chair Polzin reviewed the committee's recommendations for the 2026 operating budget including increasing spending on some line items and decreasing city assessments so they are only 1.5% higher, on average, than this year's assessments.

MOTION: Commissioner Carlson moved to approve the 2026 Operating Budget as recommended by the Budget Committee. Commissioner Gwin-Lenth seconded the motion.

DISCUSSION: Commissioners voiced continued concerns about the overall economy and Hennepin County budgets.

VOTE: Upon a vote the motion carried 7-0 with the cities of Minnetonka and Robbinsdale absent from the vote.

E. Provide Input on Minnesota Watersheds Resolutions

Administrator Jester reminded commissioners that at the meeting in July, the Commission appointed delegates (Alt. Commissioner Kennedy and Commissioner Hauer) and an alternate delegate (Commissioner Pentel) to the MN Watersheds August 25th meeting on legislative resolutions where resolutions will be voted on by the MN Watersheds membership. She indicated that this meeting is an opportunity for commissioners to provide input to the delegates on the resolutions which could be used as they consider how to vote during the meeting. She reported the TAC reviewed the resolutions and indicated their support of all three and that they specifically noted that clarity on State permitting requirements would be beneficial to both cities and the BCWMC. Alternate Commissioner Kennedy noted that the priority of resolutions will be set at a future MN Watersheds meeting.

There were no comments from commissioners.

6. COMMUNICATIONS

A. Administrator's Report

i. November Meeting Location – Reported that the Golden Valley Council Conference room is not available for the Wednesday meeting. She will likely book a room at Plymouth City Hall.

ii. Update on Watershed Plan 60-day Review Outreach – Draft plan went out to all review agencies, partners, interested residents and groups, lake groups, MPLS neighborhoods, adjacent watersheds, and member cities. A press release was drafted and submitted to the Sun Post and Sun Sailor.

iii. Report on National Night Out Event – Administrator Jester attended the Wesley Commons event, an HOA right on Bassett Creek in Golden Valley. She had good conversations with many residents.

iv. Invitation to Table at Canines for Clean Water Event – Looking for volunteers for this event in Minneapolis on August 28th.

v. Update on West Metro Water Alliance Strategic Planning – Administrator Jester has been participating in a subcommittee of WMWA working to develop more structure for the organization and planning for the future.

B. Engineer – Engineers may have an alternate approach to Schaper Pond monitoring. They determined samples collected earlier in the year were not tainted by the manhole issue.

C. Legal Counsel – None

D. Chair – Groups around Medicine Lake are considering getting involved with BCWMC.

E. Minnesota Watersheds

F. Commissioners

i. Report on Golden Valley Sustainability Fair – Commissioner Pentel tabled; very hot day but she talked with many people and there was good feedback on the watershed map

ii. Commissioner Polzin reported that an alternate commissioner from Minneapolis, Nick Minderman, will be appointed soon.

G. TAC Members

i. Update on MN Attorney General Task Force on Water – TAC member Francis is on the task force but had already left this meeting. No September TAC meeting

H. Committees

i. Report from Education Committee – Committee Chair Leonardson reported the committee is working on website updates and signage (with incorporation of Native artwork).

7. INFORMATION ONLY (Information online only)

A. Administrative Calendar

B. CIP Project Updates www.bassettcreekwmo.org/projects

C. Grant Tracking Summary and Spreadsheet

D. WCA Notices Plymouth and Golden Valley

E. MN Watersheds July Newsletter

7. **ADJOURNMENT –** The meeting adjourned at 12:07 p.m.

DRAFT

Bassett Creek Watershed Management Commission

MEMO

To: BCWMC Commissioners
From: Administrator Jester
Date: September 11, 2025

RE: Invoices for September 18th BCWMC Meeting

I have reviewed the invoices below and attached here and I recommend payment by the Bassett Creek Watershed Management Commission at the September 18, 2025 regular meeting.

	Vendor	Service	Amount
1	Keystone Waters, LLC	August 2025 Administration	$6,103.50
2	Keystone Waters, LLC	August 2025 Administrative Expenses	$186.92
3	Barr Engineering	August 2025 Engineering Services	$106,544.75
4	Triple D Espresso	September Meeting Catering	$197.53
5	City of Plymouth	August Accounting Services	$1,374.00
6	Kennedy & Graven	Legal Services	$1,659.60
7	Stantec	WOMP Services	$2,858.13
8	LB Carlson LLP	2024 Financial Audit	$6,765.00
9	Bridge Tower Media	Public Hearing Notice	$68.64
10	Bolton and Menk	Parkers Lake Chloride Reduction Project	$717.50
11	HDR, Inc.	Website Maintenance and Update Project	$2,485.93
12	ECM Publishers – Public Hearing Notice	Public Hearing Notice	$182.00

Bassett Creek Watershed Management Commission			
Statement of Financial Position as of 8/31/2025			
Unaudited	400	100	
	Capital Improvement Projects	General Fund	TOTAL
ASSETS			
Current Assets			
Checking/Savings			
· 102 · 4MP Fund Investment	3,501,986.62	544,663.53	4,046,650.15
· 103 · 4M Fund Investment	5,313,872.92	920,759.50	6,234,632.42
104 · US Bank Checking	0.00	-197.53	-197.53
Total Checking/Savings	8,815,859.54	1,465,225.50	10,281,085.04
Accounts Receivable			
· 111 · Accounts Receivable	0.00	0.00	0.00
· 112 · Due from Other Governments	0.00	0.00	0.00
· 113 · Delinquent Taxes Receivable	20,785.08	0.00	20,785.08
Total Accounts Receivable	20,785.08	0.00	20,785.08
Other Current Assets			
· 114 · Prepaids	0.00	3,910.00	3,910.00
· 116 · Undeposited Funds	0.00	0.00	0.00
Total Other Current Assets	0.00	3,910.00	3,910.00
Total Current Assets	8,836,644.62	1,469,135.50	10,305,780.12
TOTAL ASSETS	8,836,644.62	1,469,135.50	10,305,780.12
LIABILITIES & EQUITY			
Liabilities			
Current Liabilities			
Accounts Payable			
· 211 · Accounts Payable	56,039.80	73,103.70	129,143.50
Total Accounts Payable	56,039.80	73,103.70	129,143.50
Other Current Liabilities			
· 212 · Unearned Revenue	200,000.00	0.00	200,000.00
· 251 · Unavailable Rev - property tax	20,785.08	0.00	20,785.08
Total Other Current Liabilities	220,785.08	0.00	220,785.08
Total Current Liabilities	276,824.88	73,103.70	349,928.58
Total Liabilities	276,824.88	73,103.70	349,928.58
Equity			
· 311 · Nonspendable prepaids	0.00	3,910.00	3,910.00
· 312 · Restricted for improvements	4,562,582.00	0.00	4,562,582.00
· 315 · Unassigned Funds	0.00	406,219.07	406,219.07
· 32000 · Retained Earnings	3,285,157.91	620,746.98	3,905,904.89
Net Income	712,079.83	365,155.75	1,077,235.58
Total Equity	8,559,819.74	1,396,031.80	9,955,851.54
TOTAL LIABILITIES & EQUITY	8,836,644.62	1,469,135.50	10,305,780.12

Bassett Creek Watershed Management Commission
Statement of Revenues, Expenditures, and changes in Fund Balance - General Fund
8/31/2025
Unaudited

	Annual Budget	August	September	Year to Date	Budget Balance
Ordinary Income/Expense					
Income					
411 · Assessments to Cities	662,888.00	0.00	0.00	662,887.00	1.00
412 · Project Review Fees	70,600.00	19,219.00	0.00	35,992.50	34,607.50
413 · WOMP Reimbursement	5,000.00	0.00	0.00	4,500.00	500.00
414 · Grants	0.00	0.00	0.00	0.00	0.00
415 · Investment earnings	44,000.00	37,159.53	0.00	239,403.04	-195,403.04
416 · Transfer from CIP and LT Accounts	50,570.00	0.00	0.00	0.00	50,570.00
Total Income	833,058.00	56,378.53	0.00	942,782.54	-109,724.54
Expense					
1000 · Engineering					
1010 · Technical Services	133,000.00	8,503.50	11,017.00	82,603.00	50,397.00
1020 · Development/Project Reviews	82,500.00	6,758.00	14,410.00	46,696.50	35,803.50
1030 · Non-fee and Preliminary Reviews	23,000.00	2,544.00	1,186.00	12,562.00	10,438.00
1040 · Commission and TAC Meetings	10,700.00	709.50	2,679.90	11,755.30	-1,055.30
1050 · Surveys and Studies	7,000.00	0.00	0.00	0.00	7,000.00
1060 · Water Quality / Monitoring	133,500.00	18,112.01	16,928.05	93,705.06	39,794.94
1070 · Water Quantity	8,250.00	687.00	0.00	5,300.60	2,949.40
1080 · Annual Flood Control Inspection	45,000.00	2,081.50	3,838.50	16,319.50	28,680.50
1090 · Municipal Plan Review	2,000.00	0.00	0.00	0.00	2,000.00
1100 · Watershed Outlet Monitoring Program	29,300.00	3,212.10	2,858.13	19,609.60	9,690.40
1110 · Annual XP-SWMM Model Updates	0.00	0.00	0.00	0.00	0.00
1120 · APM/AIS Work	40,000.00	2,150.00	0.00	2,150.00	37,850.00
Total 1000 · Engineering	514,250.00	44,757.61	52,917.58	290,701.56	223,548.44
2000 · Plan Development					
2010 · Next Gen Plan Development	75,000.00	11,903.00	465.00	64,450.50	10,549.50
Total 2000 · Plan Development	75,000.00	11,903.00	465.00	64,450.50	10,549.50
3000 · Administration					
3010 · Administrator	75,088.00	5,167.50	5,694.00	39,307.63	35,780.37
3015 · Additional Staff	10,000.00	0.00	0.00	0.00	10,000.00
3020 · MAWD Dues	7,500.00	0.00	0.00	7,500.00	0.00
3030 · Legal	24,300.00	1,185.60	1,659.60	13,540.20	10,759.80
3040 · Financial Management	18,150.00	5,169.44	1,374.00	13,677.28	4,472.72
3050 · Audit, Insurance & Bond	22,000.00	3,475.00	6,765.00	23,074.00	-1,074.00
3060 · Meeting Catering	2,200.00	197.53	197.53	1,580.24	619.76
3070 · Administrative Services	4,015.00	285.92	186.92	1,583.99	2,431.01
Total 3000 · Administration	163,253.00	15,480.99	15,877.05	100,263.34	62,989.66
4000 · Education					
4010 · Publications / Annual Report	1,300.00	0.00	0.00	929.50	370.50
4020 · Website	12,000.00	3,715.87	2,485.93	6,201.80	5,798.20
4030 · Watershed Education Partnership	14,850.00	0.00	0.00	3,850.00	11,000.00
4040 · Education and Public Outreach	27,000.00	0.00	0.00	16,487.45	10,512.55
4050 · Public Communications	1,200.00	0.00	250.64	250.64	949.36
Total 4000 · Education	56,350.00	3,715.87	2,736.57	27,719.39	28,630.61
5000 · Maintenance					
5010 · Channel Maintenance Fund	25,000.00	0.00	0.00	0.00	25,000.00
5020 · Flood Control Project Long-Term Maint	35,000.00	0.00	0.00	0.00	35,000.00
Total 5000 · Maintenance	60,000.00	0.00	0.00	0.00	60,000.00
6000 · Special Projects					
6010 · Medicine Lake TMDL Assess	31,033.00	0.00	0.00	30,981.50	51.50
6020 · Street Sweeping Prioritization Project	48,494.00	786.00	0.00	39,692.00	8,802.00
6030 · Bassett Creek Valley Floodplain Study	85,400.00	193.50	344.00	4,458.50	80,941.50
6040 · Northwood & Lost Lake TMDL Assistan	39,500.00	1,640.00	763.50	19,360.00	20,140.00
Total 6000 · Special Projects	204,427.00	2,619.50	1,107.50	94,492.00	109,935.00
Total Expense	1,073,280.00	78,476.97	73,103.70	577,626.79	495,653.21

Bassett Creek Watershed Management Commission

Statement of Revenues, Expenditures, and changes in Fund Balance - Construction Fund

8/31/2025

Unaudited

	Project Budget	August	September	Year to Date	Inception to Date Expense	Remaining Budget
Expense						
· 1000 · Engineering	0.00	0.00	0.00	0.00	0.00	0.00
· 2024CR-M · CIP-BS Main Stem Restore	1,941,000.00	48,909.40	43,563.00	214,388.80	312,568.19	1,628,431.81
· 2026CR-P · Plymouth Creek Restor Dunk 38th	2,600,000.00	1,319.50	158.50	1,478.00	109,739.58	2,490,260.42
· BC-12 · CIP-CostShare Pur High Eff St S	150,000.00	0.00	0.00	0.00	2,500.00	147,500.00
· BC-14 · CIP-Sochacki Pk Wter Quality Im	600,000.00	0.00	0.00	0.00	7,500.00	592,500.00
· BC-238 · CIP-DeCola Ponds B&C	1,600,000.00	0.00	0.00	19,473.61	1,527,458.92	72,541.08
· BC-2381 · CIP-DeCola Ponds/Wildwood Pk	1,300,000.00	0.00	0.00	0.00	84,049.39	1,215,950.61
· BC-5 · CIP-Bryn Mawr Meadows	1,835,000.00	0.00	0.00	0.00	755,689.56	1,079,310.44
· BC-7 · CIP-Main Stem Lagoon Dredging	2,759,000.00	2,745.00	3,993.50	6,738.50	1,596,271.84	1,162,728.16
· BCP-2 · CIP- Basset Cr Pk & Winnetka	1,123,351.00	0.00	0.00	0.00	1,075,698.32	47,652.68
· ML-12 · CIP-Medley Park Stormwater	1,500,000.00	0.00	0.00	118,890.48	1,358,137.20	141,862.80
· ML-21 · CIP-Jevne Park Stormwater Mgmt	500,000.00	0.00	0.00	0.00	56,390.75	443,609.25
· ML-22 · CIP-Ponderosa Wood Strm Restora	352,000.00	0.00	0.00	0.00	72,657.31	279,342.69
· NL-2 · CIP-Four Seasons Mall	990,000.00	0.00	0.00	0.00	209,680.56	780,319.44
· PL-7 · CIP-Parkers Lake Stream Restore	485,000.00	0.00	717.50	7,350.00	244,916.62	240,083.38
· SL-3 · CIP-Schaper Pond	612,000.00	6,658.90	6,035.20	28,324.40	566,854.36	45,145.64
· SL-8 · CIP-Sweeney Lake WQ Improvement	568,080.00	0.00	0.00	0.00	568,064.13	15.87
· TW-2 · CIP-Twin Lake Alum Treatment	163,000.00	0.00	0.00	0.00	91,037.82	71,962.18
· CL-4 · CIP-Crane Lake Chloride Reduction Pro	0.00	1,095.70	1,572.10	11,373.60	63,144.04	-63,144.04
· FCP-1 · CIP-Flood Control Project Double Box	0.00	0.00	0.00	44,914.02	44,914.02	-44,914.02
Total Expense	19,078,431.00	60,728.50	56,039.80	452,931.41	8,747,272.61	10,331,158.39

Bassett Creek Watershed Management Commission									
Long Term Accounts - General Fund									
Unaudited			Total			Year		Inception	
			Project Alloc.	August	September	to-Date	Prior Years	to Date	Remaining Project Funds
Income	·	Fld1 · Flood Control Long Term Maint		0.00	0.00	0.00	224,421.90	224,421.90	
Expense	·	Fld2 · Flood Control Long Term Exp	699,980.00	0.00	0.00	0.00	503,776.41	503,776.41	
Total			699,980.00	0.00	0.00	0.00	-279,354.51	-279,354.51	420,625.49
Income	·	Flood1 · Emergency FCP Income		0.00	0.00	0.00	-	0.00	
Expense	·	Flood2 · Emergency FCP Expense	500,000.00	0.00	0.00	0.00	-	0.00	
Total			500,000.00	0.00	0.00	0.00	-	0.00	500,000.00
Income	·	Gen · Next gen Plan Development Income		0.00	0.00	0.00	38,000.00	38,000.00	
Expense	·	Gen1 · Next gen Plan Development Exp	0.00	0.00	0.00	0.00	38,000.00	38,000.00	
Total			0.00	0.00	0.00	0.00	0.00	0.00	0.00
Income	·	Qual · Channel Maintenance Fund		0.00	0.00	0.00	595,000.00	595,000.00	
Expense	·	Qual1 · Channel Maintenance Expense	0.00	0.00	0.00	0.00	265,837.70	265,837.70	
Total			0.00	0.00	0.00	0.00	329,162.30	329,162.30	329,162.30
Income	·	410 · Special Projects Fund	0.00	37,159.53	0.00	239,403.04	726,989.69	966,392.73	
Expense	·	410 · Special Projects Fund	248,427.00	2,619.50	1,107.50	94,492.00	61,554.55	156,046.55	
Total			-248,427.00	34,540.03	-1,107.50	144,911.04	665,435.14	810,346.18	810,346.18

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

NOTICE OF PUBLIC HEARING

Proposed Improvements Contained in the

Bassett Creek Watershed Management Commission's *2015 Watershed Management Plan*

NOTICE IS HEREBY GIVEN that the Bassett Creek Watershed Management Commission (BCWMC) will hold a public hearing during its regular meeting on

Thursday, September 18, 2025 at 8:30 a.m.

Golden Valley City Hall; 7800 Golden Valley Road

Interested persons are invited to attend. The purpose of the hearing is to hear testimony and comments from the public and cities regarding a capital improvement project to make repairs to the Bassett Creek Flood Control Project Double Box Culvert in Minneapolis.

This project addresses needed repairs and updates to access in the Double Box Culvert section of the Bassett Creek Tunnel. Inspection reports in 2019 and 2024 identified both structural and operation and maintenance defects within this 5,600-foot-long section of the tunnel. Repairs are needed to ensure the ongoing structural integrity of the tunnel which runs under downtown Minneapolis. The complete feasibility study can be found here. The total estimated project cost is $1,504,000 which will come from BCWMC's Capital Improvement Program through 2026 - 2027 ad valorem property taxes collected by Hennepin County on property in the Bassett Creek Watershed.

Contact BCWMC Administrator, Laura Jester, for additional information at (952) 270-1990 or laura.jester@keystonewaters.com.

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION
RESOLUTION NO. 25-08

A RESOLUTION ORDERING THE 2026 IMPROVEMENT, DESIGNATING ENTITY RESPONSIBLE FOR CONSTRUCTION, MAKING FINDINGS PURSUANT TO MINNESOTA STATUTES, SECTION 103B.251, AND CERTIFYING COSTS TO HENNEPIN COUNTY

WHEREAS, on September 17, 2015, the Bassett Creek Watershed Management Commission ("Commission") adopted the *Bassett Creek Watershed Management Commission, Water Management Plan, September 2015* (the "Plan");

WHEREAS, the Plan, as amended since its adoption, includes a capital improvement program ("CIP") listing capital projects in Table 5-3 of the Plan; and

WHEREAS, the CIP includes the following capital project for the year 2026: Flood Control Project Double Box Culvert Repair Project (FCP-1) ("2026 Project"); and

WHEREAS, the Plan specifies a county tax levy under Minnesota Statutes, section 103B.251 as a source of funding for the 2026 Project and two previously ordered projects: Bassett Creek Main Stem Restoration Project - Regent Ave to Golden Valley Rd (2024-CRM) and Plymouth Creek Restoration Project: Dunkirk Lane to 38th Ave. N. (2025CR-P); and

WHEREAS, on September 18, 2025, following published and mailed notice in accordance with the Commission's Joint Power Agreement and Minnesota Statutes, section 103B.251, the Commission conducted a public hearing on the 2026 Project; and

WHEREAS, the 2026 Project will be conducive to the public health, promote the general welfare and is in compliance with Minnesota Statutes, sections 103B.205 to 103B.255 (the "Act") and with the Plan as adopted and amended in accordance with the Act.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Commissioners of the Bassett Creek Watershed Management Commission as follows:

1. The Flood Control Project Double Box Culvert Repair Project (FCP-1) is hereby ordered.

2. The total estimated cost for the Flood Control Project Double Box Culvert Repair Project is $1,504,000. Of this amount, $950,000 will be paid from funds received from a county tax levy pursuant to Minnesota Statutes, section 103B.251 levied in 2025 for collection in 2026. Additional funds of approximately $554,000 will be paid from funds received from a county tax levy pursuant to Minnesota Statutes, section 103B.251, levied in 2026 for collection in 2027.

3. The cost of the Bassett Creek Main Stem Restoration Project - Regent Ave to Golden Valley Rd Project was partially paid from a county tax levy collected in 2024 and 2025 totaling $1,087,500. Another $500,000 will come from the City of Golden Valley and BCWMC closed project funds. Of the remaining estimated cost, $653,500 will be paid from funds received from a county tax levy pursuant to Minnesota Statutes, section 103B.251 levied in 2025 for collection in 2026.

4. The cost of the Plymouth Creek Restoration Project: Dunkirk Lane to 38th Ave. N. Project was partially paid from a county tax levy collected in 2025 totaling $1,300,000. The remaining estimated cost of the project is $1,300,000. Of this amount, $400,000 will come from a Clean Water Fund Grant from the State of Minnesota. The final $900,000 will be paid from funds received from a county tax levy pursuant to Minnesota Statutes, section 103B.251 levied in 2025 for collection in 2026.

5. In light of the above, the total amount certified to Hennepin County for the 2026 Project and the two previously ordered projects referenced above is $2,503,500 for payment by the County in accordance with Minnesota Statutes, section 103B.251, subdivision 6.

6. The Commission has received, accepted, and approved the feasibility report for the Flood Control Project Double Box Culvert Repair Project (FCP-1).

7. The costs of the aforementioned projects will be paid by the Commission up to the amount specified in paragraphs 2 - 4 above from proceeds received from Hennepin County pursuant to Minnesota Statutes, section 103B.251 and grant funding, if awarded. Additional costs may be paid by the city constructing the particular project, but no additional costs will be charged to the Commission or other members of the Commission.

8. The Commission is the entity responsible for contracting for the construction of the Flood Control Project Double Box Culvert Repair Project (FCP-1). Contracts for construction shall be let in accordance with the requirements of law applicable to the Commission.

Adopted by the Board of Commission of the Bassett Creek Watershed Management Commission the 18th day of September 2025.

_____
Chair

ATTEST: _____
Secretary

Bassett Creek Watershed Management Commission

MEMO

To: BCWMC Commissioners
From: Laura Jester, Administrator
Date: September 11, 2025

RE: Item 6Aiii Certifying Costs to Hennepin County:

Recommendation: Direct staff to certify for payment by Hennepin County in 2026 a total tax levy of $2,503,500 as shown in Resolution 25-08 and in the table on the following page.

Background
At their meeting in June 2025, the Commission set a maximum 2026 levy of $2,503,500 for the projects below. I recommend certifying the same amount to the County for the final 2026 levy.

- 2026 portion of the Bassett Cr Main Stem Restoration Project - Regent Ave to Golden Valley Rd (2024-CRM) (project split among 2024, 2025, and 2026 levies)
- 2026 portion of the Plymouth Creek Restoration Project: Dunkirk Lane to 38th Ave. N. (2025CR-P) (project split among 2025 and 2026 levies)
- 2026 portion of the Flood Control Project Double Box Culvert Repair Project (FCP-1) (project split between 2026 and 2027 levies)

2026 Final Levy Request

Project Name	Project Number	Current 2025 Levy	Recommended 2026 Levy	Projected 2027 Levy	TOTAL
Dredging accumulated sediment in Main Stem Bassett Creek Lagoons, Wirth Park	Golden Valley/MPLS BC-7			$200,000	Additional funding in future years
Crane Lk Chloride Reduction Demonstration Project at Ridgedale Mall	Minnetonka CL-4			$300,000	
Fernbrook Regional Stormwater Improvements	Plymouth PC-1			$500,000	
Bassett Creek Main Stem Restoration - Regent Ave to Golden Valley Rd	Golden Valley 2024-CR-M	$953,500	$653,500	$1,000,000	$3,241,000 (includes $634,000 in 2024)
Plymouth Creek Restoration Project Dunkirk Lane to Plym Ice Center	Plymouth 2025 CR-P	$1,300,000	$1,300,000		$2,600,000
Flood Control Project Double Box Culvert Repairs	Minneapolis FCP-1		$950,000	$554,000	$1,504,000
SUB TOTAL		$2,603,500	$2,903,500	2,554,000	
City and Grant Funding		$300,000[1]	$400,000[2]	$0	
TOTAL LEVY		**$2,303,500**	**$2,503,500**	**$2,554,000**	

[1] $300,000 from City of Golden Valley for 2024-CR-M
[2] $400,000 Clean Water Fund Grant for 2025 CR-P

Item 6B.
BCWMC 9-18-25
Appendices online

Bassett Creek Watershed Management Commission Street Sweeping Prioritization Study

Prepared for
Bassett Creek Watershed Management Commission

September 2025

4300 MarketPointe Drive, Suite 200
Minneapolis, MN 55435
952.832.2600

barr.com





Bassett Creek Watershed Management Commission Street Sweeping Prioritization Study

September 2025

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Executive Summary

At their meeting in October 2024, the Commission approved a scope of work and directed the Commission Engineer to perform a street sweeping prioritization study to guide the most effective use of enhanced street sweeping to improve water quality in the watershed. The project began by collecting information on current sweeping operations in each city and Hennepin County (Table 2-3). Sweeping by cities varies widely across the watershed, ranging from only one sweep per year in Minnetonka to seven sweeps per year in Robbinsdale. Data gathering and modeling also included mapping tree canopy cover and use of the Commission's water quality model (P8) to understand where stormwater treatment is already in place.

The study evaluated the relative effectiveness of different street sweeping scenarios in terms of:

- Recovery: stormwater pollutants recovered/collected by sweepers.
- Reduction: pollution reduction to downstream waterbodies when existing best management practices (BMPs) are taken into account.
- Cost-benefit: calculated on a seasonal basis.

A Baseline Sweeping Scenario of one spring, one summer, and two fall sweeps was agreed upon by the Commission's Technical Advisory Committee (TAC) for the purposes of this project and used as a comparison to actual sweeping operations.

Results from this analysis indicate that if the Baseline Scenario was used across the whole watershed, an estimated additional 114 pounds of total phosphorus (TP) and 4,528 pounds of total suspended solids (TSS) would be prevented from reaching priority waterbodies each year (Table 3.2).

Results included in Table 3-3 and Table 3-4 present the estimated increase in pollutant removal benefits of moving to the Baseline Scenario by major subwatershed and by city. The Plymouth Creek East subwatershed receives the highest rank in terms of expected benefits in pollutant reduction to a receiving priority waterbody by subwatershed, while the City of Plymouth receives the highest rank in terms of pollutant reduction by city. Another way to analyze the data is to normalize it by curb mile (which removes the factor of subwatershed/city size and street area). Results normalized by curb mile, presented in Appendix C, indicate that the Lost Lake subwatershed ranks highest for pollutant reduction by subwatershed and the City of Medicine Lake ranks highest for pollutant reduction by city.

Cost-benefit analysis in this study supports the conclusion that street sweeping is a highly cost-effective BMP for phosphorus reduction (Hobbie et al, 2020; EOR, 2022), especially in highly developed watersheds with limited opportunities for structural BMP implementation. Conclusions include:

- Cost effectiveness of fall sweeping: The first sweep within a season results in the highest recovery value (per Kalinosky et al., 2015), and recovery decreases with each subsequent sweeping each season. Table 3-5 shows that the first fall sweeping has the most favorable cost-benefit and that even though the 2nd fall sweeping has a less favorable cost-benefit than the first fall sweeping, it is still similar to the first sweeping of the spring season. These results highlight the degree to which fall sweeping is more cost-effective than sweeping in the spring or summer.

- Cost efficiency: Table 3-5 shows a cost-benefit range of $170 to $830 per pound of TP recovery per year, generally increasing (i.e., becoming less efficient) as more seasonal sweeping is being conducted.

In addition to evaluating the water quality benefits of street sweeping toward reducing TSS and TP, the Commission also wanted to understand the potential for street sweeping to reduce chloride loading to downstream waterbodies. A literature review of current research on the subject, a survey of current de-icing practices in the watershed, and relevant TMDL findings were used to evaluate chloride reduction through sweeping. Based on the available data the study concludes that while street sweeping can be an important component of a city's larger effort for addressing chlorides and collecting excess salt before it's transported downstream to receiving waters, it is not an effective overall strategy for managing chloride loading. Under current practices, it's estimated that less than 0.01% of the chloride applied annually is removed through current sweeping practices in the BCWMC area. Further, while increasing winter sweeping could increase chloride reduction, there are challenges associated with this activity including difficulties sweeping during icy conditions, ineffectiveness of filters during wet conditions, and concerns about equipment corrosion.

Recommendations resulting from this study were developed based on coordination and review of key project results (e.g., cost-benefit analysis, prioritization results, etc.), discussion with BCWMC and member city staff, and from research and outreach activities conducted to develop the tools utilized in this and other similar studies.

- Mapping of prioritized street sweeping areas (Figure 3-1 and Figure 3-2) and tabular summaries comparing and ranking the relative effectiveness of evaluated sweeping scenarios (Table 3-3 and Table 3-4) could be used to develop enhanced street sweeping programs and policies in the BCWMC. Goals outlined in the BCWMC's draft 2026-2035 Watershed Management Plan should also be reviewed and considered when prioritizing enhanced sweeping efforts.

- BCWMC may consider review of their Capital Equipment Cost Share Policy to incorporate findings from this study. For example, to ensure that Commission funds are being allocated toward activities and priority areas that are anticipated to be most beneficial toward improving water quality within their priority waterbodies (Section 3.2, Table 3-4).

- Individual cities may use the study results to improve their own street sweeping efforts. For example, cities may review the relative ranking by city (Section 3.2, Table 3-3) to determine the value in increasing the number of seasonal street sweeping operations performed. They may also consider sharing cost-benefit information (Section 3.3) to internal stakeholders to demonstrate the value of enhanced street sweeping as a BMP for water quality improvement and/or achieving progress towards waste load allocation goals established by regional TMDLs.

1 Introduction and Project Background

Street sweeping is a critical non-structural best management practice (BMP) employed by cities throughout Minnesota for the purposes of maintaining road surfaces, improving public safety through clearing of walking lanes and trash removal, and improving water quality through the removal of accumulated sediment, bacteria, excess chlorides, and vegetation detritus (e.g., grass clippings and leaf litter). The water quality impact of street sweeping is a topic of emerging research in Minnesota; recent studies promote the practice as a highly cost-effective BMP for phosphorus reduction to downstream waterbodies (Hobbie et al, 2020; EOR, 2022). Many cities and other transportation authorities are considering ways to enhance their existing street sweeping efforts to improve water quality benefits.

The Bassett Creek Watershed Management Commission's (BCWMC) draft 2026-2035 Watershed Management Plan (BCWMC, 2025) identifies several goals related to reducing pollution from stormwater including achieving nutrient standards in Medicine Lake, significantly improving water quality in Lost and Northwood Lakes, and maintaining or improving water quality in all other priority lakes and streams.

In consideration of recent research and alignment with the goals outlined in their draft Watershed Management Plan, the BCWMC conducted a study to evaluate the potential benefits of implementing enhanced street sweeping within the Bassett Creek Watershed. The study included conducting a survey to better understand existing street sweeping programs throughout the BCWMC, developing a methodology to rank and prioritize areas for enhanced sweeping, and estimating the benefits of additional sweeping within the watershed. Specific objectives of this street sweeping study are outlined below:

- Evaluate pollutant recovery and reduction accomplished by existing street sweeping programs throughout the BCWMC (Section 2)
- Evaluate potential pollutant reduction through new street sweeping scenarios identified by the Commission (Section 3)
- Evaluate the cost-benefit of seasonal street sweeping operations (Section 3.3)
- Evaluate the effectiveness of street sweeping as a chloride reduction practice (Section 4)
- Provide a summary of general guidance and recommendations for enhanced street sweeping within the watershed (Section 5)

The following technical report summarizes the methodology used to evaluate and prioritize street sweeping efforts, evaluate the effectiveness and cost-benefit of various street sweeping scenarios for total phosphorus (TP), total suspended sediment (TSS), and chloride management, and outlines general recommendations regarding street sweeping implementation and best practices.

2 Watershed-Wide Evaluation of Street Sweeping: Existing Conditions

Before evaluating opportunities and estimating the pollutant removal benefits of enhanced street sweeping, which includes prioritizing street sweeping areas, it was critical to first develop a methodology

to evaluate the effectiveness of existing street sweeping operations within the BCWMC. The following subsections outline the methodology used to evaluate (a) pollutant loading from stormwater runoff within the Bassett Creek Watershed, (b) street sweeping pollutant recovery based on existing sweeping operations, and (c) street sweeping pollutant reduction to receiving waterbodies. A high-level overview of the models and calculations used to evaluate existing street sweeping performance is included below:

1) Barr Engineering Company's (Barr) GIS-based water quality model (GIS WQM) was used to evaluate (a) pollutant loading from stormwater runoff throughout the BCWMC and (b) street sweeping recovery based on existing street sweeping operations (Section 2.3).

2) The BCWMC's existing P8 water quality models were used to estimate the cumulative pollutant load reduction from existing water quality BMPs in all modeled subwatersheds included within this study (Section 2.4).

3) Results from the GIS WQM and P8 models were combined to estimate the pollutant load recovery and pollutant load reduction throughout the BCWMC (Section 2.5).

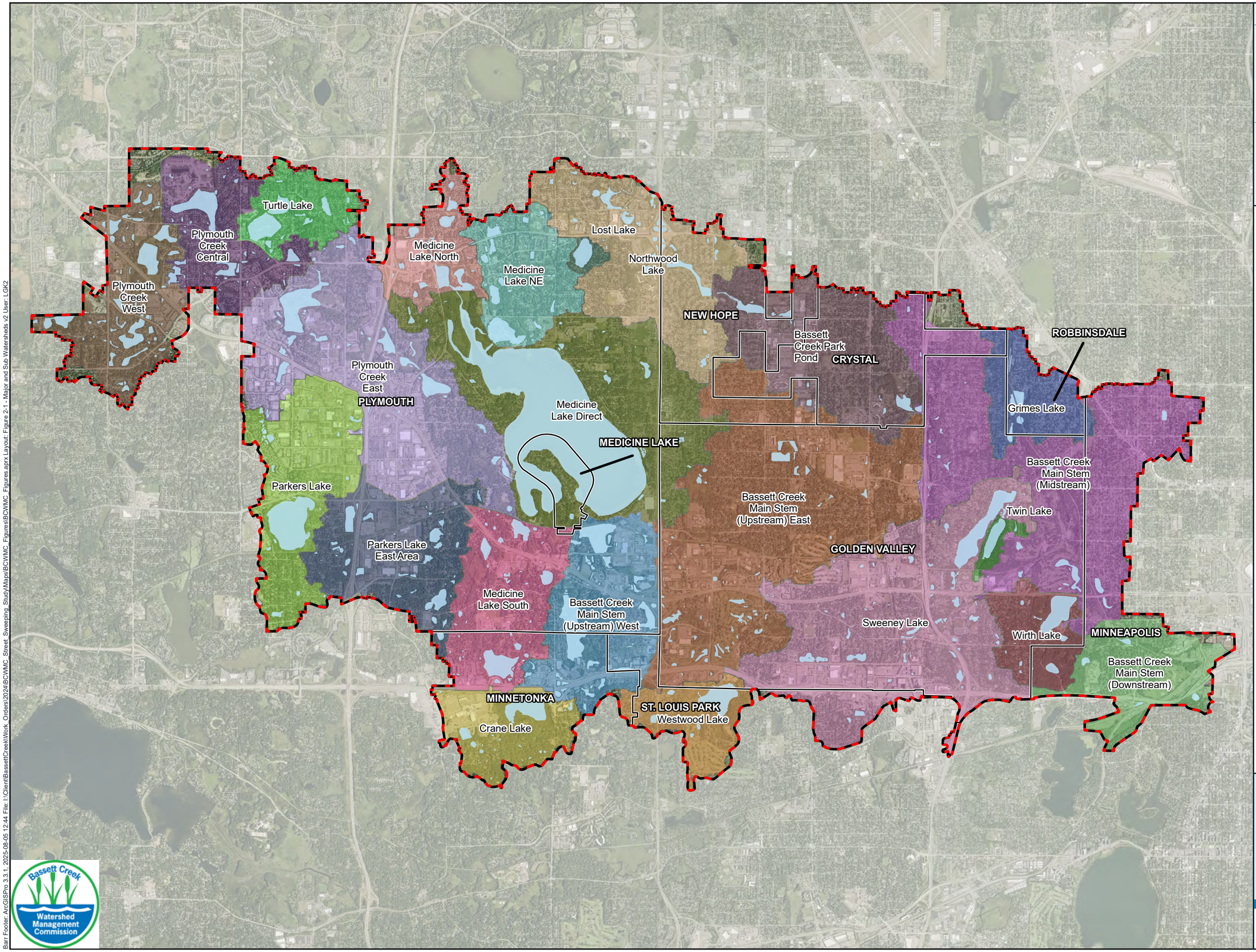
Information in the following subsections describes model development and methodology used to evaluate the effectiveness of street sweeping operations. Throughout this report, results are summarized watershed-wide, but also by municipality and by major subwatershed. This is done to allow for comparison of existing street sweeping operations within each city, comparison of street sweeping effectiveness within major subwatersheds, and estimation of street sweeping recovery and reduction to receiving waterbodies. Table 2-1, Table 2-2, and Figure 2-1 provide a summary of the municipal and major subwatershed area boundaries utilized in this study. As shown in Table 2-1, "Curb Length" equates to the length of street curb miles (accounting separately for each side of the street) within each of the member cities, within the boundaries of the BCWMC. "Road Area" is the proportion of each municipality that is covered in roadway, and "Average Canopy Cover over Roads" is the average amount of the roadway area within each of the municipalities that is covered by overhanging tree canopy. Similarly, within Table 2-2, these factors are summarized by major subwatershed.

Table 2-1 Municipal Area Summary

Municipality	Area Summary within BCWMC Hydrologic Boundary				
	Area (acres)	Area (% of study area)	Curb Length (miles)	Road Area (%)	Avg. Canopy Cover over Roads (%)
Plymouth	11,625	46%	398	8%	5%
Golden Valley	6,664	26%	295	10%	5%
Minneapolis	1,838	7%	105	12%	15%
Crystal	1,272	5%	68	11%	4%
New Hope	1,233	5%	59	9%	2%
Minnetonka	1,217	5%	48	10%	13%
St. Louis Park	791	3%	36	11%	6%
Robbinsdale	348	1%	23	13%	12%
Medicine Lake	237	1%	3	2%	23%

Table 2-2 Major SubWatershed Area Summary

Major SubWatershed	Area (acres)	Curb Length (miles)	Road Area (%)	Avg. Canopy Cover over Roads (%)
Bassett Creek Main Stem (Downstream)	794	36	11.4%	7.9%
Bassett Creek Main Stem (Midstream)	2416	134	11.6%	11.9%
Bassett Creek Main Stem (Upstream) East	2852	123	9.9%	3.3%
Bassett Creek Main Stem (Upstream) West	1064	39	9.9%	5.5%
Bassett Creek Park Pond	1254	59	9.8%	4.5%
Crane Lake	566	20	7.9%	22.0%
Grimes Lake	499	30	11.7%	11.9%
Lost Lake	55	2	5.8%	19.3%
Medicine Lake Direct	2506	71	6.3%	7.1%
Medicine Lake NE	665	26	7.6%	4.8%
Medicine Lake North	490	19	9.5%	2.0%
Medicine Lake South	934	31	8.4%	9.8%
Northwood Lake	1324	62	10.2%	2.8%
Parkers Lake	1065	32	6.5%	5.6%
Parkers Lake East Area	1059	39	8.8%	8.3%
Plymouth Creek Central	801	33	8.6%	2.2%
Plymouth Creek East	2045	69	8.8%	3.9%
Plymouth Creek West	1059	40	8.7%	1.6%
Sweeney Lake	2400	125	13.1%	4.6%
Turtle Lake	416	17	8.1%	2.9%
Twin Lake	77	2	3.7%	16.5%
Westwood Lake	449	11	5.2%	10.9%
Wirth Lake	434	16	8.7%	17.7%



BCWMC Jurisdictional Boundary
Municipal Boundaries
Waterbodies

Major Watershed Boundaries

- Bassett Creek Main Stem (Downstream)
- Bassett Creek Main Stem (Midstream)
- Bassett Creek Main Stem (Upstream) East
- Bassett Creek Main Stem (Upstream) West
- Bassett Creek Park Pond
- Crane Lake
- Grimes Lake
- Lost Lake
- Medicine Lake Direct
- Medicine Lake NE
- Medicine Lake North
- Medicine Lake South
- Northwood Lake
- Parkers Lake
- Parkers Lake East Area
- Plymouth Creek Central
- Plymouth Creek East
- Plymouth Creek West
- Sweeney Lake
- Turtle Lake
- Twin Lake
- Westwood Lake
- Wirth Lake

N

0 2,000 4,000
US Feet

BCWMC Major Watersheds and Municipalities
Bassett Creek Watershed Management Commission

FIGURE 2-1

BARR

Barr Footer: ArcGISPro 3.3.1, 2025-08-05 12:44 File: I:\Client\BassettCreek\Work_Orders\2024\BCWMC_Street_Sweeping_Study\Maps\BCWMC_Figures\BCWMC_Figures.aprx Layout: Figure 2-1 - Major and Sub Watersheds v2 User: LGK2

2.1 Summary of existing street sweeping operations

As a first step, it was critical to understand existing street sweeping operations throughout the BCWMC. The BCWMC contains roadways that are owned and maintained by its member cities as well as other transportation authorities - Hennepin County and the State of Minnesota (through the MN Department of Transportation). In the winter of 2024, Barr and Commission staff developed a draft list of survey questions to obtain more information on existing street sweeping operations within the BCWMC. The draft survey was reviewed and updated based on comments from a technical advisory group consisting of staff from the City of Plymouth and City of Golden Valley. The final survey was distributed to member cities, Hennepin County, and MnDOT in January 2025. Ten of the eleven organizations that were requested to complete the BCWMC street sweeping survey provided information. The MnDOT did not complete the survey. A complete record of all survey responses is included in **Appendix A**. Key questions from the survey and a summary of general responses to each are provided in Table 2-3:

Table 2-3 Municipal Street Sweeping Survey Response Summary

Organization	Question: How many routine street sweeping events are conducted per year and when does sweeping usually occur?	Question: What type and how many sweepers are used?	Question: Are certain areas swept more frequently than others?	Sweepings per season assumptions for modeling (#/season)			Question: What are your biggest barriers to street sweeping?
				Spring	Summer	Fall	
Minneapolis	Two comprehensive sweeps in the spring and fall, entertainment and event areas 7-day cycles, chain of lakes, parkways on a 15-day cycle through the summer. Commercial node and AD50 area 30-day cycle, and residential neighborhoods 3-5 times a summer.	Eleven mechanical, 5 regenerative and two small vacuum sweepers for bike lanes.	Yes, due to location to water bodies, economic, commercial activity, and the number of people using the area.	1	4	1	On-street parking and sweep transfer points for handling materials
St Louis Park	Typically early spring, late spring, summer, and fall.	We have two mechanical sweepers. We also hire additional sweepers in the spring to sweep the entire city within a few days.	We have priority areas that are swept first and they are determined by traffic volumes, street slopes, and proximity to water bodies.	2	1	1	Typically seasonal conditions in the fall and spring; can't sweep the ice.
Minnetonka	One citywide sweep in the spring, and one specialized sweeping area in a subwatershed in the fall in the Nine Mile Creek Watershed.	Three Elgin Pelican mechanical sweepers are used.	One subwatershed area is swept in the fall as part of a water quality improvement project (Nine Mile Creek Watershed).	1	0	0	No significant barriers during sweeping operations. The frequency of sweeping is limited by available staff.
Golden Valley	Three full sweeping events: spring, summer, and fall.	Mechanical Sweepers, Toolcats, loaders, trackless, dump trucks, a total of 12 pieces of equipment are used	No. We do start in priority areas that drain directly to the creek.	1	1	1	Weather, staff time, and budget
Hennepin County	We do a complete sweeping every spring and fall, with spot sweeping done throughout the year as needed.	Mechanical	--	1	0	1	On-street parking
Plymouth[1]	Sweep at least 3 times a year (spring, early summer and late summer/early fall) and try to get a 4th if possible. Sweep main roads that don't have residential properties off of them to collect leaves/debris. We do not sweep roads in residential areas in the fall for leaves, due to storage limitations of that debris. Also do special event/main roads, etc. but we didn't account for that.	2 mechanical pelicans, 1 regenerative Tymco	Yes, we typically sweep some trouble spots after heavier rain events. Most are around Medicine Lake.	1	2	1	Garbage cans placed in the streets. We try to schedule not to sweep in garbage zones for that day.
New Hope[2]	The city completes one city-wide sweeping in the spring, and one city-wide sweeping in the fall. We sweep both the Meadow Lake and Northwood Lake areas at least once per month. If we have a big storm event that drops leaves/debris, we will sweep these areas again, so that would be the "or more" situation.	The city owns one dustless vacuum sweeper that is used by city staff throughout the year. Multiple mechanical sweepers are used during the two contracted city-wide sweepings in the spring and fall.	Aside from these city-wide contracted sweepings, the city operates one sweeper that sweeps Meadow Lake and Northwood Lake subwatersheds on a routine basis (monthly or more).	1	0	1	Staff availability and budget
Robbinsdale	Streets – These are swept 2 times in the spring, then approx. once each month after that until freeze. Usually twice in the fall. So, depending on spring melt, April-November, 7 to 9 times annually.	One mechanical sweeper.	Yes, heavy traffic areas, mostly State Aid roads and streets near the lakes.	2	3	2	Staffing (it is hard to dedicate one person to this all the time as we have other work demands), on-street parking is also a challenge for us. Screening and disposal is time consuming and expensive. (We just ordered a screener so this might get better?)
Crystal	We typically sweep once in the spring and summer and two to three times in the fall, weather permitting.	One mechanical and one regenerative air.	We have an area by the lake that has become a priority area	1	1	2	Time and budget
Medicine Lake[3]	1 time in the spring; 1 time in the fall	--	--	1	0	1	--
MnDOT[4]	*No response provided to street sweeping survey*	*No response provided to street sweeping survey*	*No response provided to street sweeping survey*	0	0	0	*No response provided to street sweeping survey*

[1] Number of sweeps per season pertains to non-residential roads in the City of Plymouth. Residential roads are not swept in the fall.
[2] Areas around Northwood and Meadow Lake were given a sweeping frequency of 4-4-4.
[3] Responses for Medicine Lake were provided by the City of Plymouth who is responsible for Medicine Lake's street sweeping.
[4] For the baseline sweeping analysis, it was assumed that MnDOT does not routinely sweep state-owned highways and interstates within the BCWMC. This assumption was made to be most conservative for the baseline scenario and given no response was provided by MnDOT on the sweeping survey.

2.2 Street sweeping: Pollutant recovery vs reduction

Recent street sweeping studies have made a distinction between pollutant "recovery" versus pollutant "reduction" (EOR, 2022). Within this study, the terms are defined as follows:

- **Pollutant recovery**: the mass of pollutants collected from the swept surface during street sweeping operations.
- **Pollutant reduction**: the mass of pollutants prevented from reaching downstream waterbodies.

Results from research conducted on this topic have been utilized to develop street sweeping recovery "calculators" to estimate pollutant load recovery associated with street sweeping operations (Kalinosky et al., 2015; Hobbie et al, 2020), including the recently published MPCA Street Sweeping Calculator. While the estimation of pollutant mass recovery is critical to evaluating the performance of street sweeping operations, it is important to acknowledge that not every pound of pollutant "recovered" via street sweeping equates to a pound of pollutant "reduced" to downstream receiving waterbodies. Examples of processes impacting the relationship between recovery and reduction include:

- **Downstream water quality treatment**: If there are BMPs downstream of street sweeping operations, material removed via street sweeping may have instead been removed by the downstream BMP, such as a stormwater pond, in the absence of sweeping.
- **Bioavailability**: Total phosphorus held in leaf litter and other sources may not decompose and become biologically available in receiving waterbodies.
- **Pollutant delivery**: Some fraction of the pollutants residing on a street may not have been conveyed to downstream waterbodies in the absence of street sweeping. E.g., wind action may move leaf material from the street into a park where it degrades over the winter and following spring, never reaching a downstream waterbody.

The purpose of this section and definitions is to highlight that (a) a majority of modern studies have focused on estimating pollutant recovery from street sweeping and that (b) pollutant reduction is equal to or less than pollutant recovery. While this study attempts to account for the impact of downstream water quality treatment (BMPs) within the Bassett Creek watershed, it does not account for processes related to bioavailability or pollutant delivery, which have not been well studied and are outside of the focus of this study. For this reason, pollutant reduction cited in the study should only be used for relative comparison and prioritization of street sweeping efforts within the Bassett Creek watershed. Calculation of street sweeping recovery is discussed further in Section 2.3, and calculation of street sweeping reduction to priority waterbodies is discussed in Section 2.5.

2.3 GIS WQM: Pollutant loading and street sweeping recovery

Barr's GIS WQM is a GIS-based water quality model used to estimate pollutant loading and BMP performance. For this study, only the pollutant loading and street sweeping modules within the GIS WQM were utilized. A complete description of methodology used in the GIS WQM can be found in the City of Richfield Street Sweeping Prioritization Study technical memorandum (Barr, 2021).

To analyze pollutant loading and street sweeping recovery using the GIS WQM, the following datasets were used:

- **Watershed imperviousness**: Directly connected imperviousness was estimated using land use-based assumptions and impervious surface data from a combination of 2024 NearMap aerial imagery, Microsoft Building Footprints, and 2022 MnDOT data.

- **Canopy cover**: Barr developed tree canopy cover estimates using GIS processing techniques referencing 2024 NearMap.

- **Road surfaces**: Barr developed road surface polylines (GIS delineations that identify the locations of road surfaces) and delineated road surface area using MnDOT 2022 data. Road surfaces were then checked for accuracy with 2024 aerial imagery.

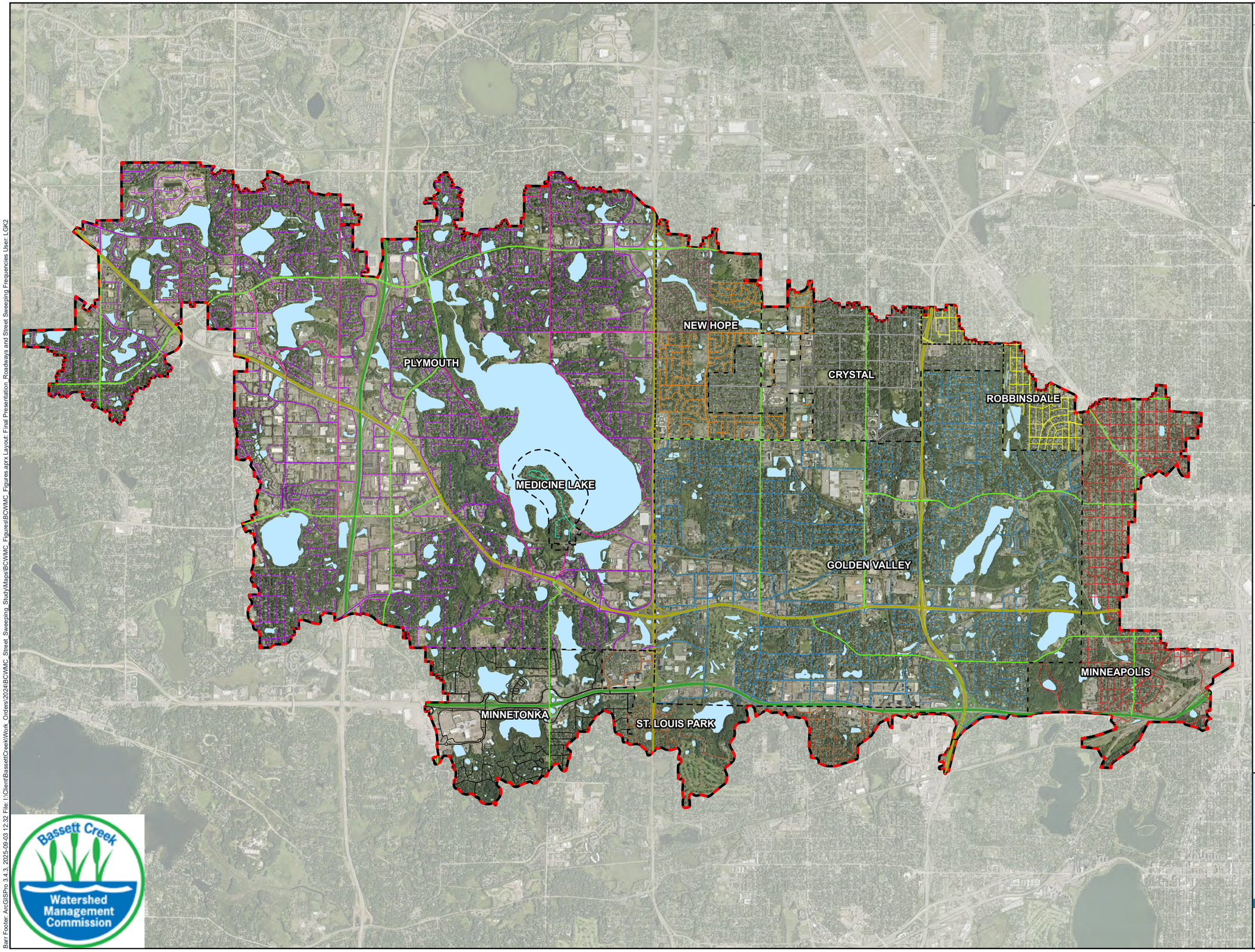
- **Street sweeping frequency**: The seasonal street sweeping frequency assumed for operations within the BCWMC (by member cities, Hennepin County, and MnDOT) was developed using survey responses and assumptions outlined in Table 2-3.

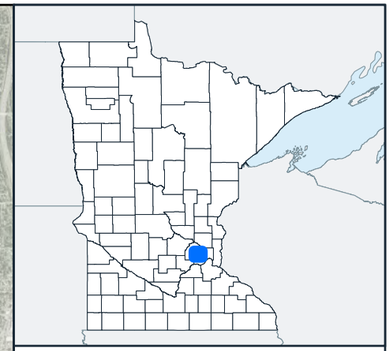
The following provides a high-level overview of processing used to develop pollutant loading values and estimates of street sweeping recovery:

- **Pollutant loading**: TP and TSS loadings were estimated within the GIS WQM based on directly connected imperviousness (Barr, 2020).

- **Street sweeping recovery**: Street sweeping pollutant recovery is estimated using empirical relationships for TSS and TP developed by Sutherland and Jelen, 1997 and Kalinosky et al., 2015. These empirical relationships are a function of canopy cover, average sweeping interval, and regression coefficients which vary by month to reflect seasonal phosphorus loading conditions.

Figure 2-2shows the road areas, maintenance authorities, and simulated baseline seasonal street sweeping frequency for roadways across the BCWMC. Finer resolution maps for these areas are included in **Appendix B**. Figure 2-3 through Figure 2-5 show the percent canopy cover, percent impervious cover, and estimated areal TP loading rate for all areas within the BCWMC legal boundary, respectively.





BCWMC Jurisdictional Boundary
Municipal Boundaries
Waterbodies

Street Sweeping Frequencies *

- CRYSTAL - 1 Sp/1 Su/2 F
- GOLDEN VALLEY - 1 Sp/1 Su/1 F
- MEDICINE LAKE - 1 Sp/0 Su/1 F
- MINNEAPOLIS - 1 Sp/4 Su/1 F
- MINNETONKA - 1 Sp/0 Su/0 F
- NEW HOPE - 1 Sp/0 Su/1 F
- NEW HOPE/NORTHWOOD LAKE - 4 Sp/4 Su/4 F
- ROBBINSDALE - 2 Sp/3 Su/2 F
- PLYMOUTH RESIDENTIAL - 2 Sp/1 Su/0 F
- PLYMOUTH NONRESIDENTIAL - 2 Sp/1 Su/1 F
- ST. LOUIS PARK - 2 Sp/1 Su/1 F
- HENNEPIN COUNTY - 1 Sp/0 Su/1 F
- STATE HIGHWAY - 0 Sp/0 Su/0 F
- INTERSTATE - 0 Sp/0 Su/0 F

* Sp = spring
Su = summer
F = fall

N

0 2,500 5,000
Feet

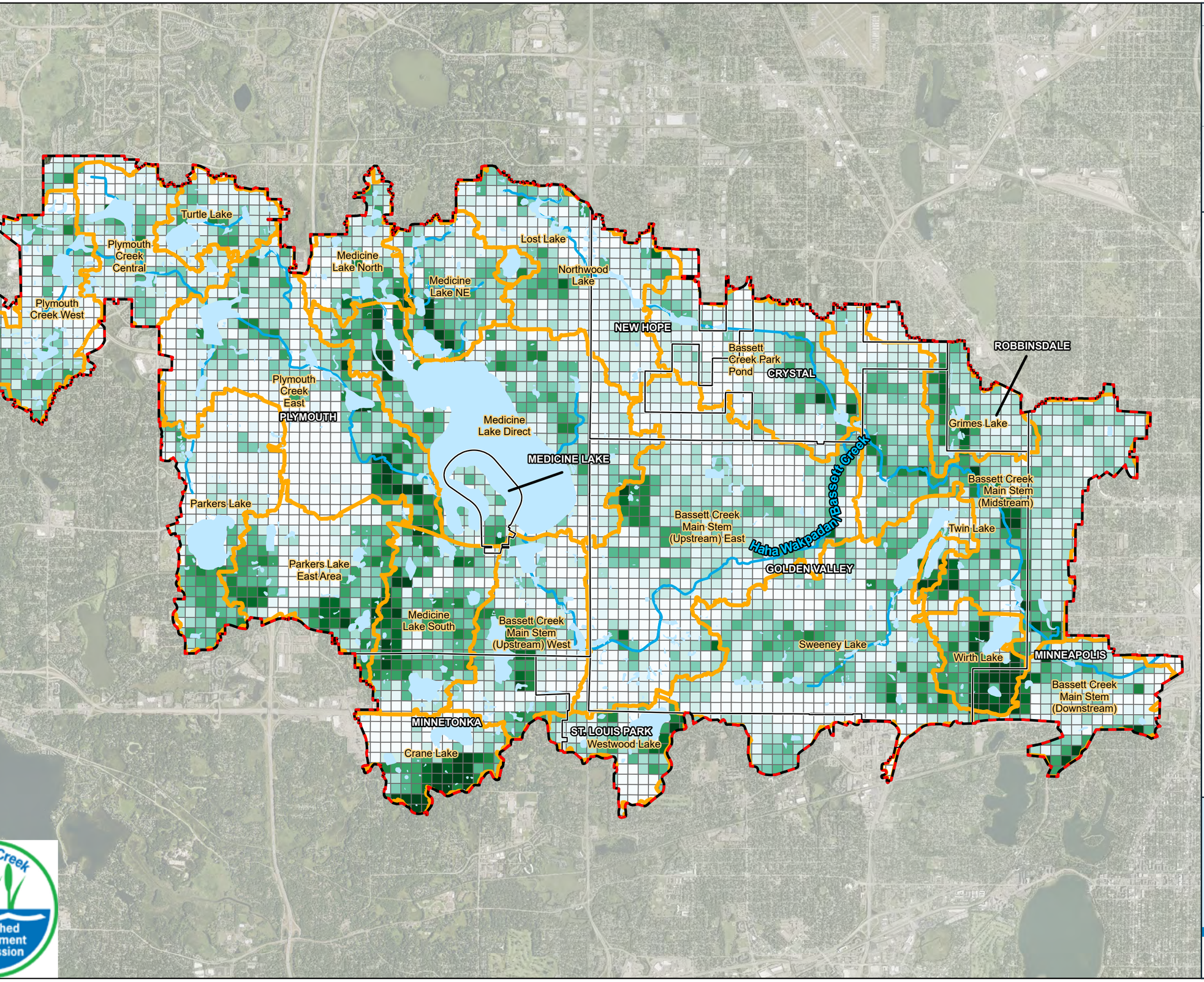
Road Areas and Existing Street Sweeping Frequency
Bassett Creek Watershed Management Commission

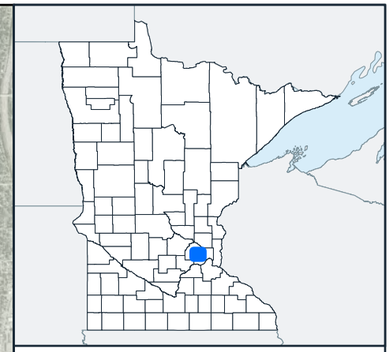
FIGURE 2-2

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Bassett Creek Watershed Management Commission

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BCWMC Jurisdictional Boundary
Municipal Boundaries
Major Watershed Boundaries
Waterbodies
Streams

Percent Tree Canopy Cover Road Overhang

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

N

0 2,000 4,000
Feet

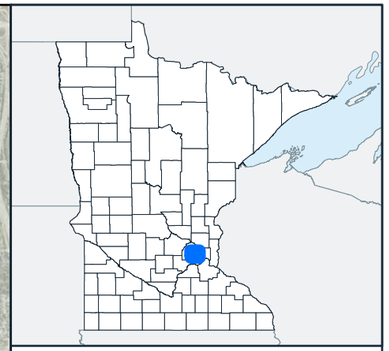
Percent Canopy Cover Road Overhang (2024)
Bassett Creek Watershed Management Commission

FIGURE 2-3

BARR

Bassett Creek Watershed Management Commission

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BCWMC Jurisdictional Boundary
Municipal Boundaries
Waterbodies
Streams
Major Watershed Boundaries

Percent Total Imperviousness

0-10%
10-20%
20-30%
30-40%
40-50%
50-60%
60-70%
70-80%
80-90%
90-100%

0 2,000 4,000
Feet

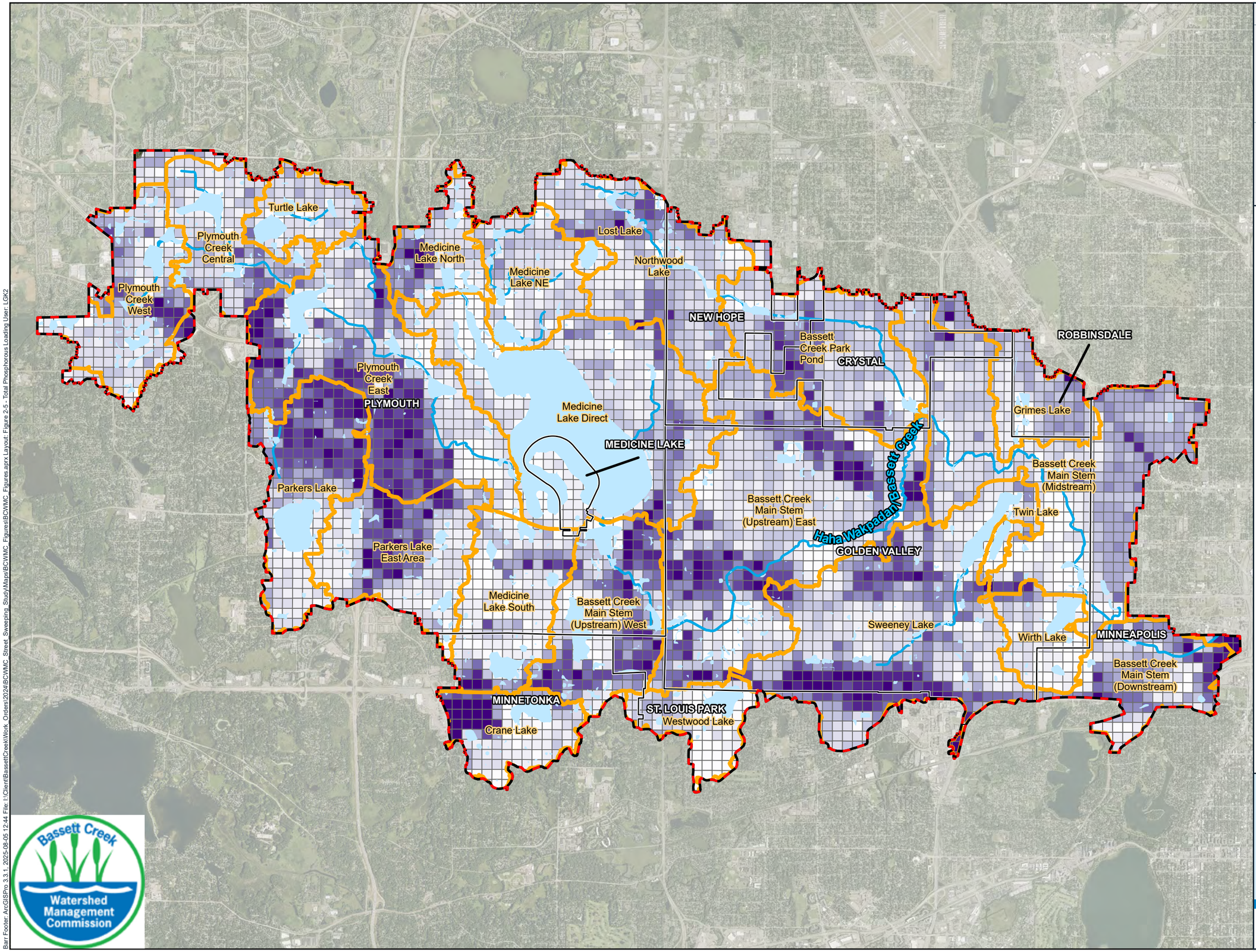
Turtle Lake
Plymouth Creek Central
Plymouth Creek West
Plymouth Creek East
PLYMOUTH
Medicine Lake North
Medicine Lake NE
Lost Lake
Northwood Lake
NEW HOPE
Bassett Creek Park Pond
CRYSTAL
ROBBINSDALE
Grimes Lake
Medicine Lake Direct
MEDICINE LAKE
Parkers Lake
Parkers Lake East Area
Bassett Creek Main Stem (Upstream) East
Haha Wakpadan/Bassett Creek
Bassett Creek Main Stem (Midstream)
Twin Lake
GOLDEN VALLEY
Medicine Lake South
Bassett Creek Main Stem (Upstream) West
Sweeney Lake
Wirth Lake
MINNEAPOLIS
Bassett Creek Main Stem (Downstream)
MINNETONKA
Crane Lake
ST. LOUIS PARK
Westwood Lake

Percent Total Imperviousness (2024)
Bassett Creek Watershed Management Commission

FIGURE 2-4

BARR

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BCWMC Jurisdictional Boundary
Municipal Boundaries
Waterbodies
Streams
Major Watershed Boundaries

Total Phosphorus Load (lbs/ acre/year)

- 0-0.2 lbs
- 0.2-0.4 lbs
- 0.4-0.6 lbs
- 0.6-0.8 lbs
- 0.8-1.0 lbs
- 1.0-1.2 lbs
- 1.2-1.4 lbs
- 1.4-1.6 lbs
- 1.6-1.8 lbs
- 1.8- 2.07 lbs

N

0 2,000 4,000
Feet

Estimated Areal Total Phosphorus Loading
Bassett Creek Watershed Management Commission

FIGURE 2-5

BARR

Bassett Creek Watershed Management Commission

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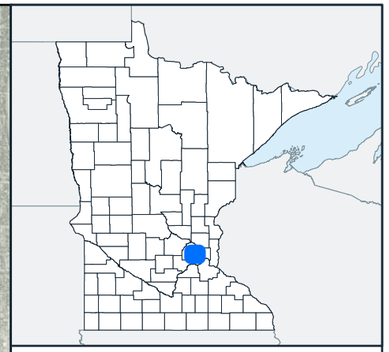
2.4 P8: Downstream treatment from existing BMPs

The BCWMC's P8 models were used to evaluate the amount of pollution reduction being achieved by existing water quality BMPs within the watershed. Results from the P8 models were used to estimate the percent (%) of cumulative pollutant load reduction occurring downstream from all modeled P8 catchments (i.e., downstream water quality treatment, as described in Section 2.2). This information was then used to calculate street sweeping pollutant reduction to downstream waterbodies as shown below in Equation 1:

[1]
$$Street\ Sweeping\ Pollutant\ Reduction\ to\ Waterbody\ \left(\frac{lbs}{yr}\right) = Street\ Sweeping\ Pollutant\ Recovery\ \left(\frac{lbs}{yr}\right) \times (1 - Existing\ Cumulative\ Downstream\ Pollutant\ Reduction\ (\%))$$

Calculation of pollutant reduction is a useful metric for evaluating street sweeping prioritization efforts, as this value more closely approximates the amount of pollutant reduction that could be anticipated to the BCWMC's (receiving) priority waterbodies.

Figure 2-6 shows the cumulative TP reduction calculated across the Bassett Creek Watershed using the BCWMC's P8 models. As described above, the cumulative reduction figure highlights TP reduction achieved by existing water quality BMPs within the watershed. A value of 0% cumulative reduction indicates that there are no intermediate water quality BMPs between that point and the receiving priority waterbody. In these areas, raw street sweeping pollutant "recovery" is equivalent to street sweeping pollutant "reduction" to the priority waterbody (see discussion in Section 2.2). In other areas (i.e., areas tributary to intermediate water quality BMPs), pollutant reduction associated with street sweeping to the priority waterbody is estimated using Equation 1.



BCWMC Jurisdictional Boundary
Municipal Boundaries
Waterbodies
Major Watershed Boundaries

Cumulative TP Reduction (%)

- 0 - 10%
- 10 - 20%
- 20 - 30%
- 30 - 40%
- 40 - 50%
- 50 - 60%
- 60 - 70%
- 70 - 80%
- 80 - 90%
- 90 - 100%

N

0 2,000 4,000
Feet

Turtle Lake
Plymouth Creek Central
Plymouth Creek West
Plymouth Creek East
PLYMOUTH
Medicine Lake North
Medicine Lake NE
Lost Lake
Northwood Lake
NEW HOPE
Bassett Creek Park Pond
CRYSTAL
ROBBINSDALE
Grimes Lake
Medicine Lake Direct
MEDICINE LAKE
Parkers Lake
Parkers Lake East Area
Medicine Lake South
Bassett Creek Main Stem (Upstream) West
Bassett Creek Main Stem (Upstream) East
Bassett Creek Main Stem (Midstream)
Twin Lake
GOLDEN VALLEY
Sweeney Lake
Wirth Lake
MINNEAPOLIS
Bassett Creek Main Stem (Downstream)
MINNETONKA
Crane Lake
ST. LOUIS PARK
Westwood Lake

Cumulative Percent TP Reduction
Bassett Creek Watershed Management Commission

FIGURE 2-6

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Barr Footer: ArcGISPro 3.3.1, 2025-08-05 12:44 File: I:\Client\BassettCreek\Work_Orders\2024\BCWMC_Street_Sweeping_Study\Maps\BCWMC_Figures\BCWMC_Figures.aprx Layout: Figure 2-6 - Cumulative Percent TP Reduction User: LGK2

2.5 Watershed-wide street sweeping summary: Existing conditions

Using the methodology described in Sections 2.3 and Section 2.4, street sweeping pollutant recovery and reduction were evaluated for all areas within the BCWMC. Table 2-4 and Table 2-5 provide a summary of estimated street sweeping TSS and TP recovery and reduction, respectively, based on the reported existing street sweeping routines. As outlined in Section 2.4, pollutant reduction more-closely approximates the pollutant load kept out of downstream waterbodies by street sweeping operations. Table 2-4 shows that existing street sweeping operations are estimated to recover 2.3% of the estimated annual TSS loading from the watershed and 3.5% of the annual total phosphorus loading within the BCWMC. Table 2-5 shows this is expected to equate to about 1.3% of annual TSS and 2.6% of annual TP load reduction prior to discharge to BCWMC's priority water bodies.

Table 2-4 BCWMC Existing Street Sweeping Performance: Pollutant Recovery (collected by sweepers)

Pollutant	Estimated Current Total Loading (lb/yr)	Estimated Street Sweeping Recovery (lb/yr)	Estimated Street Sweeping Recovery (%)
TP	17,447	617	3.5%
TSS	5,270,976	121,667	2.3%

Table 2-5 BCWMC Existing Street Sweeping Performance: Pollutant Reduction (prevented from entering downstream waterbodies)

Pollutant	Estimated Current Total Loading (lb/yr)	Estimated Street Sweeping Reduction (lb/yr)	Estimated Street Sweeping Reduction (%)
TP	17,447	455	2.6%
TSS	5,270,976	67,684	1.3%

Using subwatersheds delineated within the GIS WQM model, results shown in Table 2-4 and Table 2-5 can be easily recalculated at a variety of scales. Table 2-6 shows TP recovery and reduction calculations for each major subwatershed within the Commission. **Appendix C** presents TSS and TP recovery and reduction results by municipality and by major subwatershed.

Table 2-6 BCWMC Existing Street Sweeping Performance: TP Recovery and Reduction by Major Subwatershed

Major Subwatershed	Area (acres)	Estimated Current TP Loading (lbs/yr)	Estimated Removals			
			Street Sweeping: Recovery		Street Sweeping: Reduction	
			Recovery (lbs/yr)	Recovery (%)	Reduction (lbs/yr)	Reduction (%)
Bassett Creek Main Stem (Downstream)	794	650	36	5.5%	34	5.2%
Bassett Creek Main Stem (Midstream)	2416	1,537	149	9.7%	135	9.2%
Bassett Creek Main Stem (Upstream) East	2852	2,218	62	2.8%	44	2.0%
Bassett Creek Main Stem (Upstream) West	1064	959	13	1.3%	9	0.9%
Bassett Creek Park Pond	1254	919	38	4.2%	36	3.9%
Crane Lake	566	397	5	1.4%	1	0.3%
Grimes Lake	499	323	36	11.1%	14	4.3%
Lost Lake	55	15	1	7.2%	1	6.2%
Medicine Lake Direct	2506	986	37	3.7%	27	2.7%
Medicine Lake NE	665	313	10	3.3%	4	1.1%
Medicine Lake North	490	327	6	1.8%	2	0.7%
Medicine Lake South	934	479	12	2.6%	6	1.3%
Northwood Lake	1324	915	34	3.7%	30	3.3%
Parkers Lake	1065	1,001	14	1.4%	11	1.1%
Parkers Lake East Area	1059	828	16	1.9%	3	0.4%
Plymouth Creek Central	801	475	12	2.6%	7	1.6%
Plymouth Creek East	2045	1,884	26	1.4%	21	1.1%
Plymouth Creek West	1059	637	13	2.0%	6	1.0%
Sweeney Lake	2400	2,053	64	3.1%	50	2.5%
Turtle Lake	416	203	6	3.1%	2	1.2%
Twin Lake	77	24	1	5.3%	1	2.4%
Westwood Lake	449	136	9	6.3%	3	2.7%
Wirth Lake	434	167	16	9.7%	7	4.7%
TOTAL	**25,226**	**17,447**	**617**	**3.5%**	**455**	**2.6%**

3 Street Sweeping Scenario Evaluation and Prioritization Mapping

In addition to modeling and evaluating the pollutant recovery efficiency of existing street sweeping operations, the developed GIS WQM model is capable of rapid evaluation of alternative street sweeping routines. For the purposes of this study, we evaluated an additional (watershed-wide) street sweeping scenario to assess impact and consider prioritization, using the following modeling analysis.

- **Scenario Analysis**: Evaluate alternative street sweeping scenario (Section 3.1).
- **Prioritization**: Utilize the results from the modeling scenario to develop street sweeping prioritization mapping (Section 3.2).
- **Cost-benefit**: Estimate the cost associated with completing seasonal street sweeping and calculate the cost-benefit based on both pollutant recovery and pollutant reduction to priority waterbodies (Section 3.3).

The following subsections outline scenario modeling and results, prioritization methodology, and mapping for evaluated street sweeping scenarios.

3.1 Street sweeping baseline scenario

To better understand the potential impact of changes to municipal street sweeping operations, BCWMC requested that Barr evaluate a uniform watershed-wide sweeping approach. This “Baseline Scenario” evaluates the impact of one watershed-wide street sweeping approach applied across the entire Bassett Creek Watershed: one spring sweeping, one summer sweeping, and two fall sweepings. (Section 3.2). The Baseline Scenario was selected at the BCWMC’s June 4, 2025 technical advisory committee (TAC) meeting and was selected to (1) establish a “baseline” seasonal street sweeping frequency for consideration by member cities and (2) develop a watershed-wide street sweeping approach to facilitate uniform prioritization (i.e., model and evaluate a consistent street sweeping modeling scenario across the study area to allow for equivalent comparison of relative street sweeping priority throughout the Bassett Creek Watershed).

Analyzing this scenario also allows for comparison of the estimated pollutant removal benefits achieved from the Baseline Scenario to results from existing street sweeping operations. This analysis provides an unbiased comparison of which areas throughout the Commission could benefit most from increasing existing seasonal street sweeping operations up to the Baseline Scenario (see Section 3.2).

Street sweeping pollutant recovery and reduction results for existing conditions and the Baseline Scenario are compared in Table 3-1 and Table 3-2. As can be seen, the Baseline Scenario resulted in higher recovery and reduction values than existing street sweeping operations. **Appendix C** presents TSS and TP recovery and reduction results by municipality and major subwatershed for existing conditions vs the Baseline Scenario, which can be used to evaluate the relative impact of each street sweeping scenario within specific cities and major subwatersheds.

Table 3-1 BCWMC Street Sweeping Recovery Results for Existing Conditions vs. Baseline Scenario

Pollutant	Estimated Current Total Loading (lbs/yr)	Estimated Street Sweeping Recovery by Scenario			
		Existing Conditions		Baseline Scenario (1-1-2)	
		Recovery (lbs/yr)	Recovery (%)	Recovery (lbs/yr)	Recovery (%)
TP	17,447	617	3.5%	820	4.7%
TSS	5,270,976	121,667	2.3%	136,223	2.6%

Table 3-2 BCWMC Street Sweeping Reduction Results for Existing Conditions vs. Baseline Scenario

Pollutant	Estimated Current Total Loading (lbs/yr)	Estimated Street Sweeping Reduction by Scenario			
		Existing Conditions		Baseline Scenario (1-1-2)	
		Reduction (lbs/yr)	Reduction (%)	Reduction (lbs/yr)	Reduction (%)
TP	17,447	455	2.6%	569	3.3%
TSS	5,270,976	67,684	1.3%	72,212	1.4%

3.2 Watershed-wide street sweeping prioritization

Utilizing results from the GIS WQM model, the relative effectiveness of street sweeping can be evaluated by subwatershed. Specifically, the value of pollutant load reduction per curb-mile can be evaluated and compared to determine where street sweeping is most and least effective across the Commission. Street sweeping prioritization can be evaluated utilizing recovery or reduction results. The summary below compares the pros and cons of these strategies:

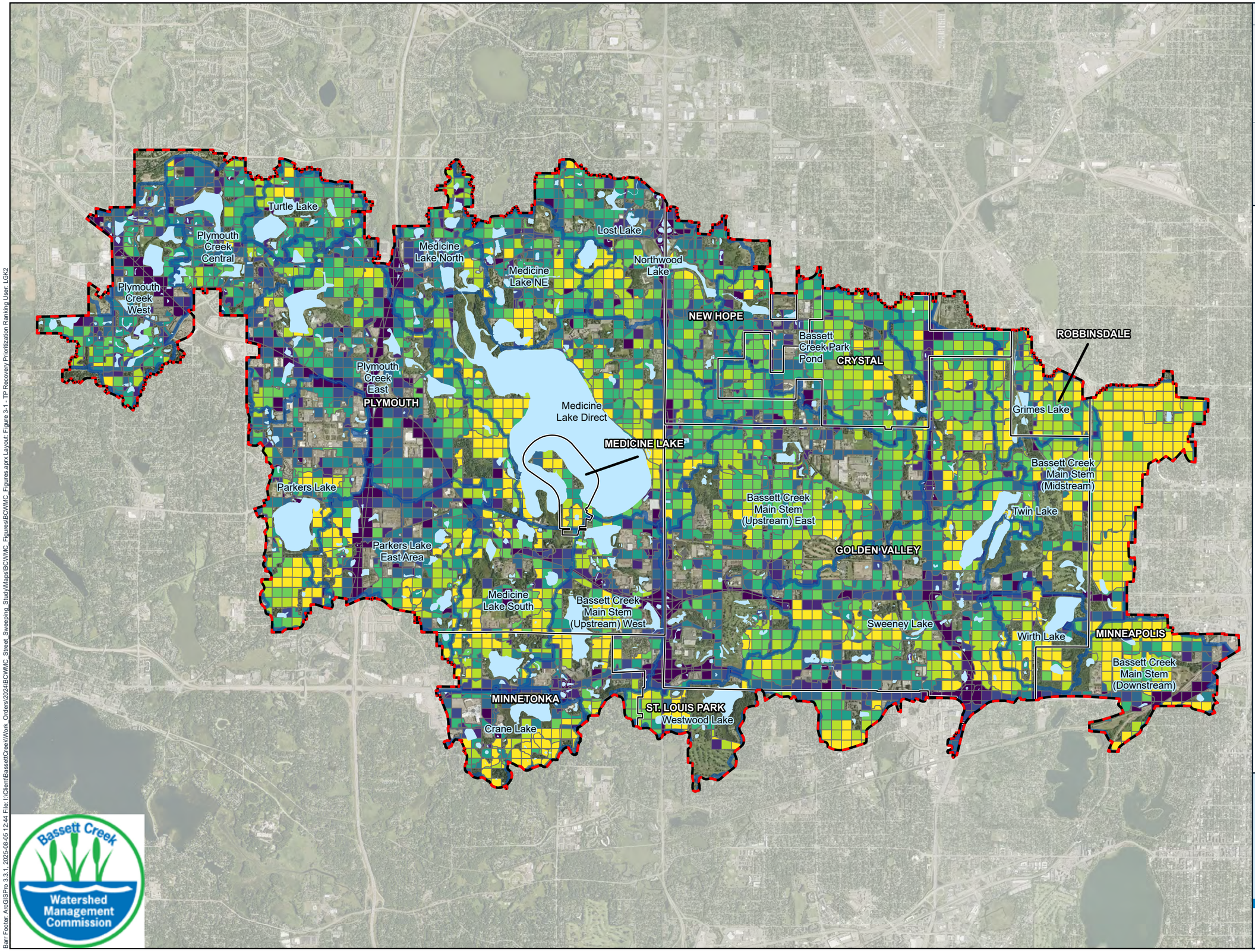
- **Recovery prioritization**: Prioritizes street sweeping by evaluating total TSS and TP pollutant recovery across the Commission.
    - **Pros**: Priority areas can be identified consistently, watershed-wide (not reliant on P8 results).
    - **Cons**: Does not account for BMP treatment opportunities downstream of street sweeping areas (i.e., does not prioritize based on pollutant reduction to downstream, receiving waterbodies).
- **Reduction prioritization**: Prioritizes street sweeping by evaluating total TSS and TP pollutant reduction to receiving waterbodies.
    - **Pros**: Accounts for downstream treatment/attempts to more closely approximate the pollutant load reduction to receiving waterbodies.
    - **Cons**: Reduction priority can only be evaluated in areas where water quality modeling has been performed.

Using GIS WQM and P8 cumulative pollutant reduction results (Figure 2-6), total recovery and reduction values were calculated at a smaller scale (average size: 2.3 acres) utilizing results from the watershed-wide Baseline Scenario (see Section 3.1). Specifically, recovery and reduction values per curb-mile were

calculated, normalized, and ranked for all modeled GIS WQM subwatershed-grid areas to produce a final ranking value (1 = highest-ranked priority area, 0 = lowest-ranked priority area).

Figure 3-1 and Figure 3-2 display prioritization rankings at the subwatershed scale for both TP recovery and reduction, respectively. Prioritization ranking for pollutant recovery is primarily a function of tree canopy density over street areas, while prioritization ranking for total reduction is additionally a function of cumulative pollutant reduction achieved by structural BMPs downstream of the street sweeping area (see Figure 2-6).

While review of Figure 3-1 and Figure 3-2 can be used to identify areas of higher and lower prioritization throughout the watershed, results at this scale may be difficult to incorporate directly into an enhanced street sweeping strategy, as municipalities are likely unable to vary street sweeping operations street-by-street or block-by-block.



BCWMC Jurisdictional Boundary
Municipal Boundaries
Waterbodies
Major Watershed Boundaries

Rank: TP Raw Recovery

- 0 - 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- 0.4 - 0.5
- 0.5 - 0.6
- 0.6 - 0.7
- 0.7 - 0.8
- 0.8 - 0.9
- 0.9 - 1

lower street sweeping priority
higher street sweeping priority

N

0 2,000 4,000
Feet

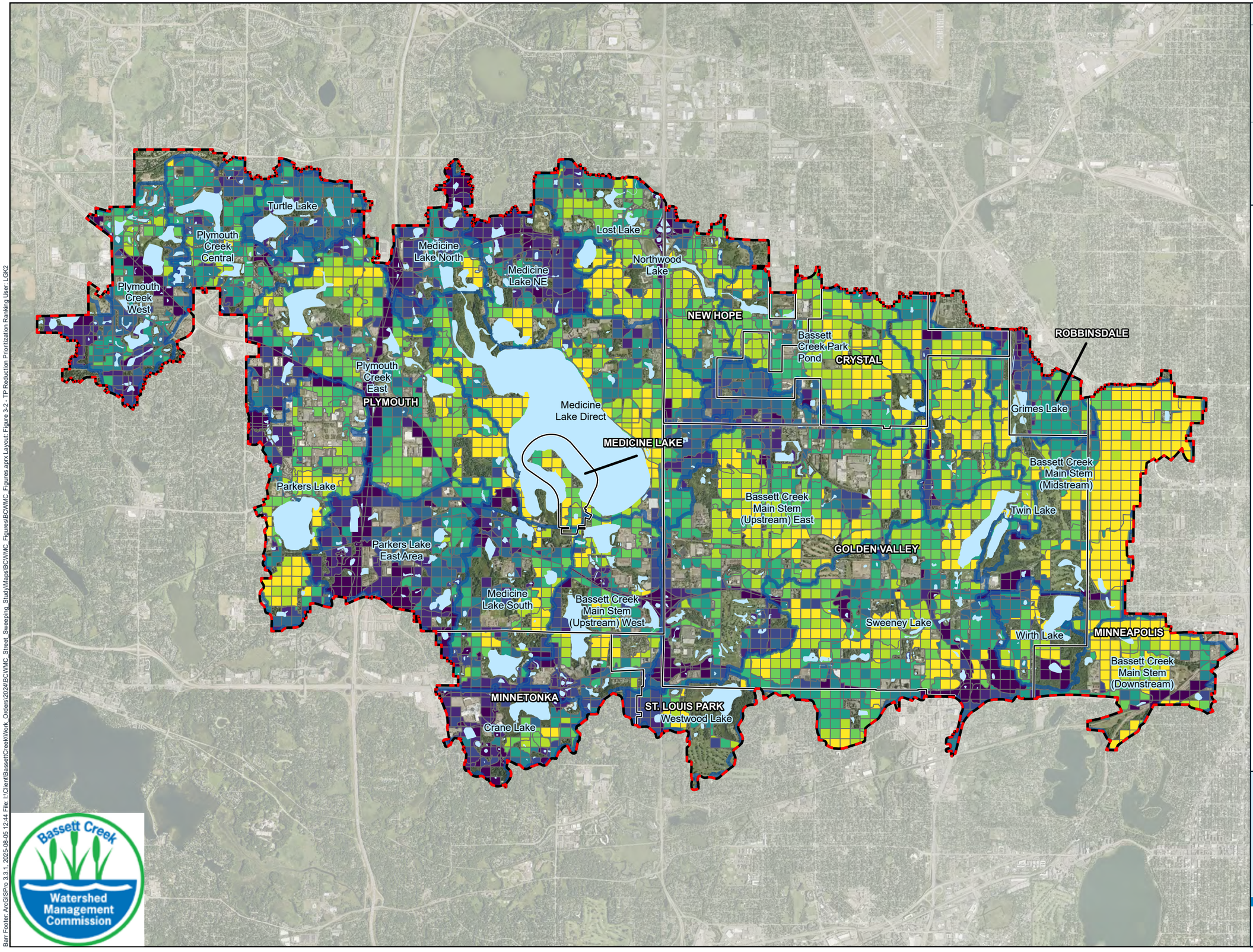
TP Recovery Prioritization Ranking
Bassett Creek Watershed Management Commission

FIGURE 3-1

BARR

Bassett Creek Watershed Management Commission

Barr Footer: ArcGISPro 3.3.1 2025-08-05 12:44 File: I:\Client\BassettCreek\Work_Orders\2024\BC\WMC_Street_Sweeping_Study\Maps\BCWMC_Figures\BCWMC_Figures.aprx Layout: Figure 3-1 - TP Recovery Prioritization Ranking User: LGK2



TP Reduction Prioritization Ranking
Bassett Creek Watershed Management Commission

FIGURE 3-2

BARR

Bassett Creek Watershed Management Commission

Barr Footer: ArcGISPro 3.3.1, 2025-08-05 12:44 File: I:\Client\BassettCreek\Work_Orders\2024\BCWMC_Street_Sweeping_Study\Maps\BCWMC_Figures\BCWMC_Figures.aprx Layout: Figure 3-2 - TP Reduction Prioritization Ranking User: LGK2

Table 3-3 and Table 3-4, below, are included to assist the BCWMC and their member cities with prioritization of enhanced street sweeping strategies at the scale of (a) municipal boundaries and (b) priority watershed boundaries. Table 3-3 and Table 3-4 compare the effectiveness of existing street sweeping operations to the Baseline Scenario, based on both pollutant recovery and pollutant reduction. Values are compared and ranked by city and by priority watershed to allow the BCWMC and their member cities to evaluate which areas would benefit most by increasing street sweeping operations up to the Baseline Scenario.

Results included in Table 3-3 and Table 3-4 summarize the estimated increase in pollutant removal benefits of moving to the Baseline Scenario by municipality and major subwatershed. Table C11 and Table C12 in Appendix C show the estimated benefits within each of these areas, normalized by curb mile. Using these two different approaches to develop a priority ranking provides a different lens and results when considering which areas across the watershed may be higher vs. lower in terms of pursuing increased sweeping. Presenting the results using both approaches allows the BCWMC and their member cities to consider results through multiple lenses. For example, when considering the additional benefit by subwatershed, the Medicine Lake Direct subwatershed receives the highest ranking in terms of the expected benefits of increased sweeping to raw pollutant recovery, and the Plymouth Creek East subwatershed receives the highest rank in terms of expected benefits in pollutant reduction to a receiving priority waterbody. When considering these additional benefits per curb mile being swept, the Crane Lake and Lost Lake subwatersheds become highest priority.

Further discussion on results and interpretation of these rankings is included in Section 5. **Appendix C** includes tables showing TSS recovery and reduction rankings by municipality and major subwatershed. Table 3-3 and Table 3-4 also highlight areas which are already swept more than the Baseline Scenario recommendation (i.e., one spring sweeping, one summer sweeping, and two fall sweepings). For example, Table 3-3 shows a decrease in street sweeping recovery and reduction for Minneapolis and Robbinsdale, which currently perform more seasonal sweeping than the Baseline Scenario (see Table 2-3).

Table 3-3 Street Sweeping TP Recovery and Reduction Ranking by Municipality

Municipality	Existing Conditions: TP Recovery (lbs/year)	Baseline Scenario (1-1-2)			Existing Conditions: TP Reduction (lbs/year)	Baseline Scenario (1-1-2)		
		Recovery (lbs/year)	Increase (lbs/year)	Recovery Increase Ranking (#)*		Reduction (lbs/year)	Increase (lbs/year)	Reduction Increase Ranking (#)*
Plymouth	158	295	138	1	98	181	83	1
Golden Valley	164	216	52	2	124	163	39	2
Minneapolis	148	125	-23	--	135	113	-22	--
Crystal	48	49	1	7	39	40	1	6
New Hope	35	39	3	4	30	31	1	7
Minnetonka	11	46	35	3	4	15	11	3
St. Louis Park	22	25	3	5	13	15	2	4
Robbinsdale	29	21	-8	--	10	8	-2	--
Medicine Lake	2	4	2	6	2	3	1	5
Total	**617**	**820**	**203**	**N/A**	**455**	**569**	**114**	**N/A**

* 1 = highest priority; 7 = lowest priority; -- = already sweeping more than baseline scenario

Table 3-4 Street Sweeping TP Recovery and Reduction Ranking by Major Subwatershed

Major Subwatershed	Existing Conditions: TP Recovery (lbs/year)	Baseline Scenario (1-1-2)			Existing Conditions: TP Reduction (lbs/year)	Baseline Scenario (1-1-2)		
		Recovery (lbs/year)	Increase (lbs/year)	Recovery Increase Ranking (#)*		Reduction (lbs/year)	Increase (lbs/year)	Reduction Increase Ranking (#)*
Bassett Creek Main Stem (Downstream)	36	30	-6	--	34	28	-6	--
Bassett Creek Main Stem (Midstream)	149	142	-7	--	135	127	-8	--
Bassett Creek Main Stem (Upstream) East	62	81	19	3	44	58	14	4
Bassett Creek Main Stem (Upstream) West	13	28	16	8	9	18	9	6
Bassett Creek Park Pond	38	43	5	16	36	40	4	11
Crane Lake	5	23	18	5	1	5	4	12
Grimes Lake	36	30	-6	--	14	12	-2	--
Lost Lake	1	2	1	19	1	2	1	18
Medicine Lake Direct	37	59	22	1	27	43	16	2
Medicine Lake NE	10	20	9	12	4	7	3	13
Medicine Lake North	6	12	6	15	2	5	3	16
Medicine Lake South	12	29	17	6	6	14	8	7
Northwood Lake	34	41	7	13	30	35	5	10
Parkers Lake	14	27	13	9	11	21	10	5
Parkers Lake East Area	16	32	16	7	3	7	4	14
Plymouth Creek Central	12	22	10	11	7	13	6	9
Plymouth Creek East	26	48	22	2	21	39	18	1
Plymouth Creek West	13	25	12	10	6	12	6	8
Sweeney Lake	64	83	18	4	50	64	14	3

Major Subwatershed	Existing Conditions: TP Recovery (lbs/year)	Baseline Scenario (1-1-2)			Existing Conditions: TP Reduction (lbs/year)	Baseline Scenario (1-1-2)		
		Recovery (lbs/year)	Increase (lbs/year)	Recovery Increase Ranking (#)*		Reduction (lbs/year)	Increase (lbs/year)	Reduction Increase Ranking (#)*
Turtle Lake	6	12	6	14	2	5	3	15
Twin Lake	1	2	0	20	1	1	0	20
Westwood Lake	9	11	2	18	4	4	0	19
Wirth Lake	16	19	3	17	7	9	2	17
Total	**617**	**820**	**203**	**N/A**	**455**	**569**	**114**	**N/A**

* 1 = highest priority; 20 = lowest priority; -- = area being swept more than baseline scenario

3.3 Cost-benefit analysis

To evaluate and compare the relative cost-benefit of street sweeping scenarios evaluated in this study, Barr developed high-level estimates of cost per sweeping operations. A detailed, municipality-specific cost evaluation of street sweeping operations was outside the scope of this analysis. Cost-efficiency information from the recently completed *City of Woodbury: Enhanced Street Sweeping Plan* (EOR, 2022) was used to estimate the cumulative cost of successive sweepings per season per lane-mile swept. Note: cost estimation information from the EOR study is highly specific to the City of Woodbury and should not be used to estimate actual cost per sweeping for other municipalities. However, because the goal of this analysis is to have an equivalent basis of comparison of cost across all swept road areas, this methodology was deemed sufficient for development of the cost-benefit analysis presented in this section. The cost associated with each successive sweeping was evaluated in two ways: (1) assuming street sweeping is conducted by municipal staff using municipal-owned street sweeping equipment; and (2) assuming that street sweeping is contracted out.

Development of cost for each strategy is described below:

- **Conducted by Municipality**: A regression equation developed from information with the Woodbury study (EOR, 2022) was utilized to calculate the cost-efficiency ($/lane-mile) for the total number of street sweepings performed annually.
- **Contracted**: A constant value of $102/lane-mile was used (EOR, 2022). Note that this value is within the range of contracted sweeping costs observed for street sweeping efforts conducted in Ramsey Washington Metro Watershed District in 2023 (Barr, 2024).

Utilizing the strategies above, cost was calculated for the watershed-wide enhanced street sweeping scenario (one spring, one summer, and two fall sweepings). Table 3-5 shows how the cost-benefit ranges for TP recovery and reduction by number of street sweeping operations conducted per season. From the review of the information provided, the following conclusions can be drawn:

- **Conducted by Municipality vs. Contracted**: Based on the methodology utilized (EOR, 2022), sweeping operations conducted by the municipality are more cost-efficient than contracted street sweeping.
- **Cost effectiveness of fall sweeping**: The first sweep within a season results in the highest recovery value (per Kalinosky et al., 2015), and recovery decreases with each subsequent sweeping each season). Table 3-5 shows that the first fall sweeping has the most favorable cost-benefit of all the baseline sweeping events. Additionally, Table 3-5 highlights that, even though the 2nd fall sweeping has a less favorable cost-benefit than the first fall sweeping, it is still similar to the first sweeping of the spring season. These results highlight the degree to which fall sweeping is more cost-effective (in terms of dollars per pound of phosphorus recovered) than sweeping in the spring or summer.
- **Cost efficiency**: Table 3-5 shows a cost-benefit range of $170 to $830 per pound of TP recovery per year, generally increasing (i.e., becoming less efficient) as more seasonal sweeping is being conducted. This is because, as more sweeping is conducted, less pollutant is recovered per sweeping event. With that said, the methodology utilized in this study supports the conclusion that street sweeping is a highly cost-effective BMP for phosphorus reduction (Hobbie et al, 2020; EOR, 2022), especially in highly developed watersheds with limited opportunities for structural BMP implementation.

Table 3-5 Relative Cost-Benefit of TP Recovery and Reduction for watershed-wide Baseline Sweeping Scenario

Season	Sweeping	Conducted by Municipality		Contracted	
		Recovery ($/lb-TP/yr)	Reduction ($/lb-TP/yr)	Recovery ($/lb-TP/yr)	Reduction ($/lb-TP/yr)
Spring	1	$349.8	$504.2	$607.8	$876.1
Summer	1	$481.3	$693.8	$836.4	$1205.6
Fall	1	$171.7	$247.4	$298.3	$430.0
	2	$371.5	$535.6	$645.6	$930.6
Relative Total Annual Cost		**$242,863**		**$422,016**	

4 Street Sweeping for Chloride Management

In addition to evaluating the water quality benefits of street sweeping toward reducing TSS and TP loading, the Commission also wanted to understand the potential for street sweeping to reduce chloride loading to downstream waterbodies. More specifically, the BCWMC wanted to learn what research is being conducted on chloride management through street sweeping and how current sweeping practices across the watershed affect chloride loading.

4.1 Literature review

A brief literature review was conducted to explore existing research on chloride management through street sweeping. While many studies examined street sweeping efficiencies and chloride loading independently, very few directly investigated the impact of both variables. A summary of relevant sources is included below.

Chloride Content of Street Cleaning Waste and its Potential Environmental Impact (Gronba-Chyla, 2022)
This study investigated chloride concentrations in swept material in a midsized city in Poland, focusing on how seasonality and road area affect concentrations. Researchers found that chloride concentrations in swept material collected from roadways averaged around 35.4 mg/L in the fall and 321.6 mg/L in the spring, indicating a significant increase from winter de-icing events. Highest chloride concentrations were found around stormwater catch basins, averaging 1,468 mg/L in the spring. Prior to analysis, the swept material was dissolved in water and filtered, which differs from standard methods used by the MPCA (MPCA, 2022). This limits the ability to extrapolate results from this study to local reductions; however, results emphasize the seasonality of chloride loading and highlight the importance of spring management.

Sustainability Assessment of Heavy Metals and Road Maintenance Salts in Sweep Sand from Roadside Environment (Kazlauskienė et al., 2013)
The goal of this study was to examine chloride and heavy metal concentrations in swept material from a midsized city in Lithuania where a combination of road salt, sand, and brine are applied as de-icing agents. Samples were collected in the spring and chloride concentrations in the swept material ranged from 54-589 mg/kg. Researchers did not quantify the amount of chloride removed through sweeping in relation to annual loading, but the results provide a useful reference range for comparing chloride levels in locally swept material.

Chloride Contributions from Water Softeners and Other Domestic, Commercial, Industrial, and Agricultural Sources to Minnesota Waters (Overbo et al., 2019)

This publication presents a statewide chloride budget for Minnesota, identifying road salt as the largest contributor to chloride pollution in surface waters. An estimated 403,600 tons of chloride enters Minnesota's surface waterbodies annually, with over 150,000 tons originating from the Twin Cities Metro Area alone. This study also highlights the decline in road salt application over the past decade due to warming winters and increasing salt application efficiency. These reduction patterns were used to determine updated chloride loading rates in the BCWMC area.

Nine Mile Creek Watershed Chloride Total Maximum Daily Load Report (Barr, 2010)

This TMDL report was prepared for NMCWD to address the chloride impairment in Nine Mile Creek. Within the report, road salt application rates were estimated for municipalities in the district using a combination of road salt purchasing records, MS4 road mileage, and a chloride mass balance approach. Road salt application rates for the MS4s ranged from 680 to 3000 tons/year. The municipalities analyzed have similar characteristics and are in close proximity to municipalities in the BCWMC. Loadings from this report were adjusted based on findings from Overbo et al., (2019) and used to estimate chloride loading in the BCWMC area.

4.2 Salt use in BCWMC

A series of questions on winter road maintenance activities and de-icing practices was included within the street sweeping survey distributed to member cities, the county, and MnDOT as part of this study in order to gain insights on chloride usage within the BCWMC for the purposes of this analysis. Results from the street sweeping survey show that deicing applications vary between municipalities within the Commission, as summarized in Table 4-1.

Table 4-1 Municipal Winter Roadway Deicing Survey Responses

Municipality	Question: What are the primary materials used for deicing?	Question: Is there any data currently being collected on the amount of deicing material applied each year?	Reported annual salt application (tons)
Minneapolis	Rock salt, MgCl-infused rock salt, and brine	Yes, in our MS4 permit information.	2020: 9,807 2021: 11,184 2022: 11,293 2023: 3,213
St Louis Park	Brine and salt, we do not use sand	We track plow routes and measure the brine and salt usage for the trucks that use brine and salt.	--
Minnetonka	Untreated rock salt, brine, calcium chloride additives	Yes. For each snow event, the salt controllers on the trucks collect data for miles traveled, hours used, salt spreading distance, lbs salt applied, blast, average salt rate (lbs/mi), prewet distance and prewet gallons (if truck is outfitted with brine pump).	2020: 2,190 2021: 2,550 2022: 2,395 2023: 3,068 2024: 690
Golden Valley	Salt, Brine, and BEET HEET	Yes, we track this in a spreadsheet every year.	2023: 1,025 2024: 231
Hennepin County	Rock salt, brine, and potassium acetate	Yes	--
Plymouth	Rock salt and brine. Apex used below 15 degrees	Yes, we track salt and brine usage for all snow events	2020: 1,330 2021: 2,245 2022: 1,380 2023: 2,350 2024: 845
New Hope	Rock salt and brine	We track the total tonnage of deicing material applied.	2020: 331 2021: 443 2022: 512 2023: 306 2024: 151
Robbinsdale	Rock salt and brine	Yes	--
Crystal	Rock salt and salt brine	Yes	2025: 123
Medicine Lake	--	--	--

Results from the chloride reduction analysis show that chloride removal through street sweeping practices results in a small fraction of the total chloride applied annually. Survey responses, along with prior TMDL assumptions (Barr, 2010), were used to develop a high-level estimate of total chloride loads from winter road maintenance across the study area. To evaluate the potential impact of street sweeping, we incorporated pollutant concentration data from the City of Plymouth's swept material (City of Plymouth, 2023). Between 2007 and 2024, the average chloride concentration in Plymouth's dry swept material was 280 mg/kg. Using Barr's WQM model (Section 2.3) to estimate the total dry mass collected annually through street sweeping in the BCWMC, and applying Plymouth's average concentration data, we estimated that of the 12,600 tons of chloride loaded annually, only 190 lbs are removed through current street sweeping practices. This results in a 0.0007% chloride removal rate.

To further investigate seasonal efficiency in chloride removal, we utilized data from Plymouth's December 2023 samples, which showed significantly higher chloride concentrations, averaging 3,783 mg/kg. This

concentration when paired with swept material totals from one spring sweep across the entire BCWMC area resulted in an estimated chloride removal rate of 0.004%.

4.3 Chloride reduction takeaways

Based on the available data on chloride loading and reduction, we can conclude that while street sweeping can be an important component of a city's larger effort for addressing chlorides and collecting excess salt before it's transported downstream to receiving waters, it is not an effective overall strategy for managing chloride loading. Under current practices, it's estimated that less than 0.01% of the chloride applied annually is removed through current sweeping practices in the BCWMC area. It is important to note that annual weather variability can significantly influence both chloride application rates and potential reductions. For example, in 2023 we had a severe winter with high snowfall, while 2024 was notably mild. These differences are reflected in Table 4-1, where all reporting municipalities showed a substantial decrease in salt applications between the two years. However, even under favorable conditions, such as low application rates combined with high material recovery, chloride reduction is still a fraction of the total load applied. While increasing winter sweeping frequencies could increase chloride reduction, there are challenges associated with this management option. Municipalities reported experiencing difficulties sweeping during icy conditions, ineffectiveness of filters during wet conditions, and concerns about equipment corrosion.

5 Conclusions and Recommendations

A modeling analysis was performed to evaluate water quality benefits from existing street sweeping operations within the BCWMC, plus an enhanced street sweeping scenario. Results of this analysis were used to evaluate the relative effectiveness of different street sweeping scenarios in terms of (a) stormwater pollutants recovered, (b) pollutant reduction to downstream waterbodies, and (c) seasonal cost-benefit. Additionally, results were used to develop street sweeping prioritization mapping, which can be used to identify high-priority areas (e.g., neighborhoods, major subwatersheds, etc.) for targeted, enhanced street sweeping efforts. A summary of the analysis presented in this technical report, including key conclusions and recommendations, is included below:

- Information obtained from member cities, Hennepin County, and MnDOT was used to evaluate and summarize existing street sweeping operations within the BCWMC. Information obtained was used to inform modeling of existing street sweeping operations (Section 2.1).

- A model was developed to evaluate the effectiveness of existing street sweeping operations throughout the watershed in terms of TSS and TP pollutant reduction and recovery. Results were processed to summarize and compare the relative effectiveness of street sweeping operations by municipality and by major subwatershed. Results were summarized both by pollutant recovery (i.e., the mass of pollutant recovered during street sweeping operations) and pollutant reduction (i.e., the mass of pollutant reduced from downstream receiving waterbodies, considering the impact of watershed BMPs). (Section 2.5)

- The model was used to evaluate the effectiveness of a watershed-wide enhanced street sweeping Baseline Scenario (one spring, one summer, and two fall sweepings) (Section 3.1). Results were used to develop street sweeping prioritization mapping which identifies areas throughout the watershed where modeling indicates street sweeping would be most effective for water quality improvement within the Commission's priority waterbodies. These high-priority

sweeping areas often correspond to locations with a high percentage of tree canopy cover overhanging road surfaces (Section 3.2).

- If the Baseline Scenario was used across the whole watershed, an estimated additional 114 pounds of total phosphorus (TP) and 4,528 pounds of total suspended solids (TSS) would be prevented from reaching priority waterbodies each year (Table 3.2).

- The watershed-wide enhanced street sweeping scenario results were compared to results of the existing street sweeping condition analysis to rank and prioritize the relative benefit of enhanced street sweeping operations by municipality and by major subwatershed (Section 3.2).

- A cost-benefit analysis was performed to evaluate and compare the cost effectiveness of existing street sweeping and enhanced street sweeping scenarios. The cost-benefit methodology utilized in this study supports the conclusion that street sweeping is a highly cost-effective BMP for phosphorus reduction (Hobbie et al, 2020; EOR, 2022), especially in highly developed watersheds with limited opportunities for structural BMP implementation (Section 3.3).

- Chloride management through street sweeping was evaluated using the street sweeping model, survey results from member cities, Hennepin County, and MnDOT, and results from testing of swept material completed by the City of Plymouth. The analysis (Section 4) showed that current street sweeping operations within the BCWMC recover a very small fraction (<0.01%) of the chloride being applied annually.

The following provides a summary of recommendations and next steps developed over the course of this study. Recommendations were developed based on coordination and review of key project results (e.g., cost-benefit analysis, prioritization results, etc.) over the duration of this project, discussion with BCWMC and member city staff, as well as from research and outreach activities conducted to develop the tools utilized in this and other similar studies.

- Mapping of prioritized street sweeping areas (Figure 3-1 and Figure 3-2) and tabular summaries comparing and ranking the relative effectiveness of evaluated sweeping scenarios (Table 3-3 and Table 3-4) can be used to develop potential enhanced street sweeping programs and policies in the BCWMC. Goals outlined in the BCWMC's draft 2026-2035 Watershed Management Plan should also be reviewed and considered when prioritizing enhanced sweeping efforts.

- BCWMC may consider review of their Capital Equipment Cost Share Policy to incorporate findings from this study. For example, to ensure that Commission funds are being allocated toward activities and priority sweeping areas that are anticipated to be most beneficial toward improving water quality within their priority waterbodies (Section 3.2, Table 3-4).

- Individual cities may review prioritization figures and tables described above to improve their own street sweeping efforts. For example, cities may review the relative ranking by city (Section 3.2, Table 3-3) to determine the value in increasing the number of seasonal street sweeping operations performed. They may also consider sharing cost-benefit information (Section 3.3) to internal stakeholders to demonstrate the value of enhanced street sweeping as a BMP for water quality improvement and/or achieving progress towards waste load allocations goals established by regional TMDLs.

- Cities should consider collection of material weight (e.g., wet mass of collected street sweeping material) for use within the MPCA Street Sweeping Calculator. Material collected during enhanced street sweeping efforts (i.e., street sweeping efforts above and beyond what was in

place during the time that the MPCA has defined as the TMDL “baseline condition” year) may be recorded during annual TMDL reporting as progress towards achieving City waste load allocation goals. Cities may also consider periodic sampling and testing of collected material to verify default moisture content and nutrient content assumptions within the MPCA Street Sweeping Calculator.

- BCWMC and member cities should consider continued coordination related to addressing barriers to enhanced street sweeping efforts within the watershed. During TAC meeting discussions, TAC members shared information related to current barriers and identified potential opportunities (e.g., sharing of screening equipment, waste disposal strategies, etc.) for future collaborations. Coordination among cities and with the BCWMC should be considered to encourage information sharing and working toward the development of solutions to common barriers.

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Bassett Creek Watershed Management Commission

MEMO

Date: September 11, 2025
From: Laura Jester, Administrator
To: BCWMC Commissioners
RE: Administrator's Report

Aside from this month's agenda items, the Commission Engineers, city staff, committee members, and I continue to work on the following Commission projects and issues.

CIP Projects (more resources at http://www.bassettcreekwmo.org/projects.)

2019 Medicine Lake Road and Winnetka Avenue Area Long Term Flood Mitigation Plan Implementation Phase I: DeCola Ponds B & C Improvement Project (BC-2, BC-3 & BC-8) Golden Valley (no change since April): A feasibility study for this project was completed in May 2018 after months of study, development of concepts and input from residents at two public open houses. At the May 2018 meeting, the Commission approved Concept 3 and set a maximum 2019 levy. Also in May 2018, the Minnesota Legislature passed the bonding bill and the MDNR has since committed $2.3M for the project. The Hennepin County Board approved a maximum 2019 levy request at their meeting in July 2018. A BCWMC public hearing on this project was held on August 16, 2018 with no comments being received. Also at that meeting the Commission officially ordered the project and entered an agreement with the City of GoldenValley to design and construct the project. In September 2018, the City of Golden Valley approved the agreement with the BCWMC. The Sun Post ran an article on this project October 2018. Another public open house and presentation of 50% designs was held February 6, 2019. An EAW report was completed and available for public review and comment December 17 – January 16, 2019. At their meeting in February 2019, the Commission approved the 50% design plans. Another public open house was held April 10th and a public hearing on the water level drawdown was held April 16th. 90% Design Plans were approved at the April Commission meeting. It was determined a Phase 1 investigation of the site is not required. The City awarded a contract to Dahn Construction for the first phase of the project, which involves earthwork, utilities, and trail paving and extends through June 2020. Dewatering began late summer 2019. Tree removal was completed in early winter; excavation was ongoing through the winter. As of early June 2020, earth work and infrastructure work by Dahn Construction is nearly complete and trail paving is complete. Vegetative restoration by AES is underway including soil prep and seeding. Plants, shrubs, and trees will begin soon along with placement to goose protection fencing to help ensure successful restoration. The construction phase of this project was completed in June with minor punch list items completed in September. The restoration and planting phase is complete except for minor punch list items and monitoring and establishment of vegetation over three growing seasons. A final grant report for BWSR's Watershed Based Implementation Funding was submitted at the end of January 2021. City staff completed a site walk through to document dead or dying trees and shrubs in need of replacement (under warranty). This project (along with Golden Valley's Liberty Crossing Project) received the award for "Project of the Year" from the Minnesota Association of Floodplain Managers in 2021. A reimbursement request for Restoration, planting, and vegetation establishment completed in 2023 and tree replanting in 2024 was approved for payment at the April 2025 meeting. A final project report will be presented at a future meeting. Project website: http://www.bassettcreekwmo.org/index.php?cID=433 .

2020 Bryn Mawr Meadows Water Quality Improvement Project (BC-5), Minneapolis (No change since August): A feasibility study by the Commission Engineer was developed in 2018 and approved in January 2019. The study included wetland delineations, soil borings, public open houses held in conjunction with MPRB's Bryn Mawr Meadows Park improvement project, and input from MPRB's staff and design consultants. Project construction year was revised from 2020 and 2022 to better coincide with the MPRB's planning and implementation of significant improvements and redevelopment Bryn Mawr Meadows Park where the project will be located. A public hearing for this project was held September 19, 2019. The project was officially ordered at that meeting. In January 2020 this project was awarded a $400,000 Clean Water Fund grant from BWSR; a grant work plan was completed and the grant with BWSR was fully executed in early May 2020. The project and the grant award was the subject of an article in the Southwest Journal in

February: https://www.southwestjournal.com/voices/green-digest/2020/02/state-awards-grant-to-bryn-mawr-runoff-project/. In September 2020, Minneapolis and MPRB staff met to review the implementation agreement and maintenance roles. BCWMC developed options for contracting and implementation which were presented at the November meeting. At that meeting staff was directed to develop a memorandum of understanding or agreement among BCWMC, MPRB, and city of Minneapolis to recognize and assign roles and responsibilities for implementation more formally. The draft agreement was developed over several months and multiple conversations among the parties. At the May 2021 meeting the Commission approved to waiver potential conflict of the Commission legalcounsel and reviewed a proposal for project design by the Commission Engineer. The updated design proposal and the design agreement among all three parties were approved at the June 2021 meeting. Four public open houses were held in the park in 2021 to gather input on park concepts. Project partners met regularly throughout design to discuss schedules, planning and design components, and next steps. Concept designs were approved by the MRPB Board in late 2021. Staff met with MnDOT regarding clean out of Penn Pond and continue discussions. 50% design plans were approved by the Commission at the January 2022 meeting; 90% design plans were approved at the March 2022 meeting along with an agreement with MPRB and Minneapolis for construction. The agreement was approved by all three bodies. Commission Engineers finalized designs and assisted with bidding documents. Bids were returned in early August. At the meeting in August, the Commission approved moving forward with project construction (through MPRB), and approved a construction budget (higher than previously budgeted) and an amended engineering services budget. MPRB awarded the construction contract. In late November the contractor began the initial earthwork and started on portions of the stormwater pond excavations. By late December the 1st phase of construction was complete with the ponds formed and constructed. The contractor began driving piles in late January and began installing underground piping in early February. At the March meeting, the Commission approved an increase to the engineering services budget and learned the construction budget is currently tracking well under budget. The change order resulting from the City of Minneapolis' request to replace a city sewer pipe resulted in extra design/engineering costs that were approved by the Administrator so work could continue without delays. The MPRB will reimburse the Commission for those extra costs and will, in-turn, be paid by the city. In early May construction was focused in the Morgan / Laurel intersection. The right-of-way storm sewer work is complete including the rerouting of some of the existing storm infrastructure and installation of the stormwater diversion structures. Construction of the ponds is complete and stormwater from the neighborhood to the west is now being routed through new storm sewers to the ponds. Vegetation is currently being established around the ponds. At the October 2023 meeting the Commission approved an amendment to the agreement with MPRB and Minneapolis in order to facilitate grant closeout. At the December 2023 meeting the Commission approved a partial reimbursement to MPRB for $400,000. Corrections to a weir that was installed at the wrong elevation were made in spring 2024. A final grant report was submitted to the MN Board of Water and Soil Resources in late January 2024 and the final grant payment was recently received. Project as-built drawings were recently completed and an operations and maintenance plan is being developed. Final reimbursement requests from MPRB and Minneapolis are expected in 2015. August 2025 update: St. Anthony Falls Lab is using the new ponds as part of a study to understand how stormwater pond plant communities affect functioning of stormwater ponds, and how pond design, maintenance and management can be adapted to promote conditions that maximize water quality benefits in urban and road-impacted areas. Project website: http://www.bassettcreekwmo.org/projects/all-projects/bryn-mawr-meadows-water-quality-improvement-project

2020 Jevne Park Stormwater Improvement Project (ML-21) Medicine Lake (No change since July 2023): At their meeting in July 2018, the Commission approved a proposal from the Commission Engineer to prepare a feasibility study for this project. The study got underway last fall and the city's project team met on multiple occasions with the Administrator and Commission Engineer. The Administrator and Engineer also presented the draft feasibility study to the Medicine Lake City Council on February 4, 2019 and a public open house was held on February 28th. The feasibility study was approved at the April Commission meeting with intent to move forward with option 1. The city's project team is continuing to assess the project and understand its implications on city finances, infrastructure, and future management. The city received proposals from 3 engineering firms for project design and construction. At their meeting on August 5th, the Medicine Lake City Council voted to continue moving forward with the project and negotiating the terms of the agreement with BCWMC. Staff was directed to continue negotiations on the agreement and plan to order the project pending a public hearing at this meeting. Staff continues to correspond with the city's project team and city consultants regarding language in the agreement. The BCWMC held a public hearing on this project on September 19, 2019 and received comments from residents both in favor and opposed to the project. The project was officially ordered on September 19, 2019. On October 4, 2019, the Medicine Lake City Council took action not to move forward with the project. At their meeting in October 2019, the Commission moved to table discussion on the project. The project remains on the 2020 CIP list. In a letter dated January 3, 2022, the city of Medicine Lake requested that the Commission direct its engineer to analyze alternatives to the

Jevne Park Project that could result in the same or similar pollutant removals and/or stormwater storage capacity. At the March meeting, the Commission directed the Commission Engineer to prepare a scope and budget for the alternatives analysis which were presented and discussed at the April 2022 meeting. No action was taken at that meeting to move forward with alternatives analysis. In May and June 2023, Commission staff discussed the possibility of incorporating stormwater management features into a redevelopment of Jevne Park currently being considered by the City of Medicine Lake. After review of the preliminary park design plans, the Commission Engineer and I recommended implementation of the original CIP Project to the City. Project webpage: http://www.bassettcreekwmo.org/index.php?cID=467.

2014 Schaper Pond Diversion Project and Carp Management, Golden Valley (SL-3) (no change since July): Repairs to the baffle structure were made in 2017 after anchor weights pulled away from the bottom of the pond and some vandalism occurred in 2016. The city continues to monitor the baffle and check the anchors, as needed. Vegetation around the pond was planted in 2016 and a final inspection of the vegetation was completed last fall. Once final vegetation has been completed, erosion control will be pulled and the contract will be closed. The Commission Engineer began the Schaper Pond Effectiveness Monitoring Project last summer and presented results and recommendations at the May 2018 meeting. Additional effectiveness monitoring is being performed this summer. At the July meeting the Commission Engineer reported that over 200 carp were discovered in the pond during a recent carp survey. At the September meeting the Commission approved the Engineer's recommendation to perform a more in-depth survey of carp including transmitters to learn where and when carp are moving through the system. At the October 2020 meeting, the Commission received a report on the carp surveys and recommendations for carp removal and management. Carp removals were performed through the Sweeney Lake Water Quality Improvement Project. Results were presented at the February 2021 meeting along with a list of options for long term carp control. Commission took action approving evaluation of the long-term options to be paid from this Schaper Pond Project. Commission and Golden Valley staff met in March 2021 to further discuss pros and cons of various options. At the September 2021 meeting, the Commission approved utilizing an adaptive management approach to carp management in the pond ($8,000) and directed staff to discuss use of stocking panfish to predate carp eggs. Commission Engineers will survey the carp in 2022. At the April meeting, the Commission approved panfish stocking in Schaper Pond along with a scope and budget for carp removals to be implemented later in 2022 if needed. Commission staff informed lake association and city about summer activities and plans for a fall alum treatment. Approximately 1,000 bluegills were released into Schaper Pond in late May. Carp population assessments by electroshocking in Sweeney Lake and Schaper Pond were completed last summer. A report on the carp assessment was presented in January. Monitoring in Schaper Pond in 2023 and a reassessment of carp populations in 2024 were approved in early 2023. Carp box netting in 2024 is also approved, as needed. A carp survey of Schaper Pond and Sweeney Lake were recently completed which found higher than expected carp numbers in Sweeney Lake. Carp Solutions completed box netting in Sweeney Lake in late September 2024. At the October meeting the Commission Engineer reported that 191 carp were removed bringing the carp density to about 31.3 kg/hectare, less than the 100 kg/hectare threshold for water quality problems. A more detailed report on carp population status and recommendations for further monitoring in Schaper Pond was presented and approved at the January 2025 meeting. Monitoring on the pond got underway earlier this summer. Challenges have included heavy rains and impacts to a city manhole that house monitoring equipment which had to be removed. Commission Engineers continue to make progress and are hopeful the monitoring season can be completed with enough samples and data collected. Additional information will be presented at a future meeting. Project webpage: http://www.bassettcreekwmo.org/index.php?cID=277.

2014 Twin Lake In-lake Alum Treatment, Golden Valley (TW-2) (No changes since August 2024): At their March 2015 meeting, the Commission approved the project specifications and directed the city to finalize specifications and solicit bids for the project. The contract was awarded to HAB Aquatic Solutions. The alum treatment spanned two days: May 18- 19, 2015 with 15,070 gallons being applied. Water temperatures and water pH stayed within the desired ranges for the treatment. Early transparency data from before and after the treatment indicates a change in Secchi depth from 1.2 meters before the treatment to 4.8 meters.

Water monitoring continues to determine if/when a second alum treatment is necessary. Monitoring results from 2023 were presented at the July 2024 meeting. Results show continued excellent water quality. The CIP funding remains in place for this project as a 2nd treatment may be needed in the future. Project webpage: http://www.bassettcreekwmo.org/index.php?cID=278.

2013 Four Seasons Area Water Quality Project (NL-2) (no change since July): At their meeting in December 2016, the Commission took action to contribute up to $830,000 of Four Seasons CIP funds for stormwater management at the Agora development on the old Four Seasons Mall location. At their February 2017 meeting the Commission approved an agreement with Rock Hill Management (RHM) and an agreement with the City of Plymouth allowing the developer access to a city-owned parcel to construct a wetland restoration project and to ensure ongoing maintenance of the CIP project components. At the August 2017 meeting, the Commission approved the 90% design plans for the CIP portion of the project. At the April 2018 meeting, Commissioner Prom notified the Commission that RHM recently disbanded its efforts to purchase the property for redevelopment. In 2019, a new potential buyer/developer (Dominium) began preparing plans for redevelopment at the site. City staff, the Commission Engineer and I have met on numerous occasions with the developer and their consulting engineers to discuss stormwater management and opportunities with "above and beyond" pollutant reductions. Concurrently, the Commission attorney has been working to draft an agreement to transfer BCWMC CIP funds for the above and beyond treatment. At their meeting in December, Dominium shared preliminary project plans and the Commission discussed the redevelopment and potential "above and beyond" stormwater management techniques. At the April 2020 meeting, the Commission conditionally approved the 90% project plans. The agreements with Dominium and the city of Plymouth to construct the project were approved May 2020 and project designers coordinated with Commission Engineers to finalize plans per conditions. In June 2021, the City of Plymouth purchased the property from Walmart. The TAC discussed a potential plan for timing of construction of the stormwater management BMPs by the city in advance of full redevelopment. At the August 2021 meeting, the Commission approved development of an agreement per TAC recommendations. The city recently demolished the mall building and removed much of the parking lot. At the December meeting the Commission approved the 90% design plans and a concept for the city to build the CIP project ahead of development and allow the future developer to take credit for the total phosphorus removal over and above 100 pounds. At the July meeting, the Commission approved an agreement with the city to design, construct, and maintain the CIP project components and allow a future developer to use pollutant removal capacity above 100 pounds of total phosphorus. A fully executed agreement is now filed. The updated 90% project plans were approved at the September 2023 meeting. Changes to those plans were needed to address permitting requirements resulted. Those changes were presented at the November 2024 meeting and were administratively approved by the Commission Engineers. Construction of the wetland restoration is complete (see photo). Project webpage: http://www.bassettcreekwmo.org/index.php?cID=282.

2021 Parkers Lake Chloride Reduction Project (PL-7) (no change since August): The feasibility study for this project was approved in May 2020 with Alternative 3 being approved for the drainage improvement work. After a public hearing was held with no public in attendance, the Commission ordered the project on September 17, 2020 and entered an agreement with the city of Plymouth to implement the project in coordination with commission staff. City staff and I have had an initial conversation about thisproject. The city plans to collect additional chloride data this winter in order to better pinpoint the source of high chlorides loads within the subwatershed. Partners involved in the Hennepin County Chloride Initiative (HCCI) are interested in collaborating on this project. A proposal from Plymouth and BCWMC for the "Parkers Lake Chloride Project Facilitation Plan" was approved for $20,750 in funding by the HCCI at their meeting in March. The project will 1) Compile available land use data and chloride concentrations, 2) Develop consensus on the chloride sources to Parkers Lake and potential projects to address these sources, and 3) Develop a recommendation for a future pilot project to reduce chloride concentrations in Parkers Lake, which may be able to be replicated in other areas of Hennepin County, and 4) help target education and training needs by landuse. A series of technical stakeholder meetings were held last fall and winter to develop recommendations on BMPs. A technical findings report was presented at the July 2022 meeting. At the September 2022 meeting, the Commission approved a scope and budget for a study of the feasibility of in-lake chloride reduction activities which was presented at the November meeting. The Commission directed staff to develop a scope for a holistic plan for addressing chloride runoff from the most highly contributing subwatershed. Commission and Plymouth staff continue to work on outreach and engagement with properties in the subwatershed, primarily through activities by WMWA's coordinator position. At the March meeting the Commission approved a contract with Bolton and Menk for assessment of salt storage and other practices at 4 properties. In April, Bolton and Menk staff met owners/operators of Brightview and submitted a report on their visit. I met with city and county staff to review the report and discuss next steps. We've asked Bolton & Menk to follow up on some specific recommendations with Brightview including tailored training, improvements to salt storage and equipment calibration. In July, a virtual meeting was held with a separate winter maintenance contractor, Twin Cities Outdoors. A site visit is planned for during winter operations. Visits to two additional properties will take place in early winter. Project website: www.bassettcreekwmo.org/projects/all-projects/parkers-lake-drainage-improvement-project

2022 Medley Park Stormwater Treatment Facility (ML-12) (No change since June): The feasibility study for this project is complete after the Commission Engineer's scope of work was approved last August. City staff, Commission Engineers and I collaborated on developing materials for public engagement over the fall/early winter. A project kick-off meeting was held in September, an internal public engagement planning meeting was held in October, and a Technical Stakeholder meeting with state agencies was held in November. A story map of the project was created and a survey to gather input from residents closed in December. Commission Engineers reviewed concepts and cost estimates have been reviewed by city staff and me. Another public engagement session was held in April to showcase and receive feedback on concept designs. The feasibility report was approved at the June meeting with a decision to implement Concept #3. At the July meeting the Commission directed staff to submit a Clean Water Fund grant application, if warranted. A grant application was developed and submitted. Funding decisions are expected in early December. A public hearing on this project was held in September with no members of the public attending. In September, a resolution was approved to officially order the project, submit levy amounts to the county, and enter an agreement with the city to design and construct the project. The city hired Barr Engineering to develop the project designs which are now underway. The BCWMC received a $300,000 Clean Water Fund grant from BWSR in December 2021 and the grant agreement approved in March 2022. 50% design plans were approved in February 2022 and 90% plans were approved at the May 2022 meeting. Final plans and bid documents were developed by the city's consultation (Barr Engineering). Construction began in November 2022 and winter construction was finished in late January 2023. Activities in spring 2023 included completing grading (topsoil adjustments); paving (concrete, bituminous); light pole and fixture install; benches install; site clean up and prep for restoration contractor. In late May 2023, Peterson Companies completed their construction tasks and the project transitioned to Traverse de Sioux for site restoration and planting. A small area of unexpected disturbance from construction was added to the overall area to be restored with native plants through a minor change order. Site restoration, planting, and seeding was completed in late June 2023. A final grant report was submitted to the MN Board of Water and Soil Resources in late January 2025 and all grant funds were received. The Commission approved reimbursement requests from Golden Valley at their October 2024 and March 2025 meetings. The project was recently featured in the "Snap Shots" newsletter from the MN Board of Water and Soil Resources. A final reimbursement request and report will be submitted after final vegetation establishment. www.bassettcreekwmo.org/projects/all-projects/medley-park-stormwater-treatment-facility

2022 SEA School-Wildwood Park Flood Reduction Project (BC-2, 3, 8, 10) (No change since December 2023): The feasibility study for this project is complete after the Commission Engineer's scope of work was approved last August. A project kick-off meeting with city staff was held in late November. Meetings with city staff, Robbinsdale Area School representatives, and technical stakeholders were held in December, along with a public input planning meeting. A virtual open house video andcomment form were offered to the public including live chat sessions on April 8th. The feasibility study report was approved in June with a decision to implement Concept #3. A public hearing on this project was held in September with no members of the public attending. In September, a resolution was approved to officially order the project, submit levy amounts to the county, and enter an agreement with the city to design and construct the project. The city hired Barr Engineering to develop the project designs which are now underway. A virtual public open house was held February 3rd. 50% Design Plans were approved at the January meeting. A public open house was held September 29th. 90% were approved at the October Commission meeting. Six construction bids were received in late February with several of them under engineer's estimates. The city contracted with Rachel Contracting and construction got underway earlier this spring. By late June excavation was completed and the playground area was prepped and ready for concrete work to begin on July 5. Bids were open for the SEA School/Wildwood Park restoration project on June 20. Three bids were received and two came in right around our estimate. The city is recommending the low bidder (Landbridge Ecological). At the end of July utility crews lowered the watermain and installed the storm sewer diversions into the park from along Duluth Street. The hydrodynamic separator was also set (with a crane). Crews also worked on the iron-enhanced sand filter and the outlet installation, stone work on the steepened slopes, trail prep, bituminous paving, and concrete work (curb and gutter, pads, and ADA ramps). The preconstruction meeting for the restoration work was held with work to begin late August or early September. The city awarded the contract for the DeCola Pond D outlet work to Bituminous Roadways Inc. in August. The SEA School site construction is complete and restoration work is complete for the season. The DeCola Pond D outlet replacement and site restoration is also now complete.

Project webpage: www.bassettcreekwmo.org/projects/all- projects/sea-school-wildwood-park-flood-reduction-project.

Bassett Creek Restoration Project: Regent Ave. to Golden Valley Rd. (2024 CR-M), Golden Valley:

A feasibility study for this project got underway in fall 2022. A public open house was held March 1st with 30 residents attending. The draft feasibility report was presented at the April meeting. A final feasibility report was presented at the June

meeting where the Commission approved the implementation of Alternative 3: to restore all high, medium, and low priority sites. A Clean Water Fund grant application for $350,000 was recently developed and submitted to BWSR. The Commission held a public hearing on this project at its September meeting and officially ordered the project and set the final levy. An agreement with the city of Golden Valley for design and construction was approved at the November 2024 Commission meeting. The Commission (Commission Engineers) will design the project and provide engineering services. A scope of work for engineering services was approved at the March meeting. A drone survey of the entire stretch was completed in early April. A project kick-off meeting was held with city and commission staff on April 9th. Field and desktop surveys are continuing. Meetings regarding utility easements and communications planning were recently held. A public open house on the project was held on June 5th. At the June meeting the Commission approved a scope and budget for a wetland delineation and architectural survey which are unexpected requirements for a permit from the U.S. Army Corps of Engineers. That work is getting underway. Additionally, Administrator Jester approved a scope and budget for an archeological survey that was included in the original engineering services scope as a contingency task with approval delegated to the Administrator. Commission Engineers presented the 50% designs at the July meeting. At the August meeting, commissioners reviewed a reprioritization of eroded sites and discussed cost saving and implementation options. Commissioners approved a new project budget to accommodate repair of new and expanded erosion and vegetation restoration on public and private properties along the project corridor. Project website: https://www.bassettcreekwmo.org/projects/all-projects/bassett-creek-restoration-project-regent-ave-golden-valley-r

Ponderosa Woods Stream Restoration Project, Plymouth (ML-22) (no change since July): A feasibility study for this project got underway in fall 2022. A public open house was held February 13th with 3 residents attending. The draft feasibility report was presented at the May meeting and additional information was presented at the June meeting where the Commission approved implementing Alternative 1.5. The Commission held a public hearing on this project at its September meeting and officially ordered the project, set the final levy, and approved an agreement with the City of Plymouth for project implementation. Plymouth hired Midwest Wetland Improvements to design the project. 60% designs were conditionally approved at the October meeting. A public open house was held on October 23rd. 90% design plans were approved at the November 2024 meeting. The city received favorable bids for the project and construction began in December. Tree removals and channel restoration is continuing and should be completed soon. Outreach and communication to impacted property owners has been thorough. Construction of the project is complete and vegetation establishment will continue into this year. Project website: www.bassettcreekwmo.org/projects/all-projects/ponderosa-woods-stream-restoration-project.

Sochacki Park Water Quality Improvement Project (BC-14) (no change since August): This project is proposed to be added to the CIP through a minor plan amendment as approved at the March Commission meeting with CIP funding set at $600,000. The project involves a suite of projects totaling an estimated $2.3M aimed improving the water quality in three ponds and Bassett Creek based on a subwatershed analysis by Three Rivers Park District (TRPD). A memorandum of understanding about the implementation process, schedules, and procedural requirements for the project was executed in April among BCWMC, TRPD, and the cities of Golden Valley and Robbinsdale. A feasibility study is underway for the project and is being funded by TRPD. The feasibility study kick off meeting was held June 5th. Information on the project and an update on the feasibility study was presented at the June meeting. A technical stakeholder meeting was held July 10th. A public open house was held July 26th and a Phase I Environmental Site Assessment was recently completed. The draft feasibility study was presented at the August meeting and the final feasibility study was approved at the September meeting. The Commission held a public hearing on this project at its September meeting and officially ordered the project and set the final levy. Project partners recently met to review a scope and budget for design and discuss construction sequencing, funding availability, and cooperative agreement provisions. TRPD was recently awarded $1.6M in federal funding for this project and other facility investments in Sochacki Park. Staff provided a project update at the March meeting. A cooperative agreement with TRPD and Robbinsdale was approved at the April meeting. Three Rivers Park District contracted with Barr Engineering to develop project designs. A Phase II Environmental Assessment was completed last year. Soil contamination (including PCBs) was found in some areas to be above MPCA action levels.

The following are recent (2025) updates for the project: MPCA approved the response action plan; TRPD cleared the federal environmental review requirements for the project and were issued a release of funds for the HUD grant; additional test pits were completed for soil pre-characterization, and the extent of contaminants is less than anticipated, especially with regards to PCBs; Hennepin County ERF grant for $447,000 was recently awarded for remediation efforts; Barr Engineering is adjusting the project cost estimates to reflect the recent soil testing work; public-facing information will be updated soon; project team meetings will resume soon to help guide the implementation process. Project webpage: https://www.bassettcreekwmo.org/projects/all-projects/sochacki-park-water-quality-improvement-project.

Plymouth Creek Restoration Project Dunkirk Lane to 38th Ave. North (2026 CR-P): A scope and budget for a feasibility study was approved at the October meeting. A project kick off meeting was held November 3rd and a technical stakeholder meeting was held December 5th. Field investigations and desktop analyses are complete. Site prioritization ranking criteria are being developed and concept designs are being developed. A public open house was held on March 11th. Residents who attended are in favor of the project and had questions about impacts to trees, potential construction activities in specific reaches, and buckthorn removal. The feasibility study was approved at the May meeting with Option 3a being approved for implementation. At the June meeting the Commission approved a maximum levy for 2025 that includes funding for this project which was approved by the Hennepin County Board August 6th At its September meeting, the Commission held a public hearing on this project and approved a resolution officially ordering the project, setting the 2025 levy, and entering an agreement with the City of Plymouth for design and construction. The city will hold a public open house on this project in spring 2025 after the city contracts with an engineering firm. A Clean Water Fund grant for $400,000 was awarded by BWSR. The grant agreement and sub-grant agreement were approved at the April meeting. The City of Plymouth hired Moore Engineering for project designs. Commission Engineers recently sent data, surveys, and models to their Moore Engineers staff at the request of the City of Plymouth. A public meeting will be scheduled for later this year. A pre-permitting meeting was held with permitting agencies on September 2nd. 60% designs are expected to be presented at the October meeting. Project webpage: https://www.bassettcreekwmo.org/projects/all-projects/plymouth-creek-restoration-dunkirk-lane-38th-ave-n.

Crane Lake Chloride Reduction Demonstration Project, Minnetonka (CL-4): At the meeting in July, the Commission approved a scope and budget for the feasibility study for this project. The Commission Engineer is gathering background information. A project kick off meeting was held in September 2024. In summer 2025, water quality sampling and continuous chloride monitoring at the five pond monitoring sites was completed. In August, Commission Engineers began the process of compiling and analyzing the field and laboratory monitoring results. They have also developed watershed chloride load assessment modeling, which will be calibrated based on the water quality monitoring data. The City of Minnetonka is currently surveying landowners about deicing practices. Survey results will be used to inform the feasibility study. Project webpage: https://www.bassettcreekwmo.org/projects/all-projects/crane-lake-chloride-reduction-demonstration-project.

Administrator Activities August 13 – September 10, 2025

Subject	Work Progress
CIP and Technical Projects	• Main Stem Bassett Creek Restoration Project: Meeting with Commission Engineer and city staff on vegetation management/buffer options, cost saving options, resident outreach and project schedule; reviewed DNR's Conservation Partners Legacy grant program; reviewed and signed wetland delineation report; met with Commission Engineers to discuss lessons learned thus far • Street Sweeping Prioritization Analysis: Reviewed and commented on draft final report; drafted executive summary • Plymouth Creek Restoration Project: Pre-permit meeting with Plymouth staff, Plymouth consulting engineers, and permitting agencies
Education and Outreach	• Participated in Watershed Partners Chloride subcommittee meeting • Corresponded with CAMP volunteers; picked up water samples from volunteers and delivered to central location for Met Council pick up • Participated in WMWA August meeting and drafted August WMWA meeting notes; gathered additional feedback from TAC members on future of WMWA; forwarded feedback to WMWA strategic planning subcommittee • Reviewed updates to website by consultants; corresponded with consultants • Correspondence re: tabling events and delivering materials for Canines for Clean Water event • Corresponded with graphic designer for estimate on watershed logo update and watershed signs • Reviewed water blessing flyer and corresponded with organizer
Administration	• Developed agenda; reviewed invoices and submitted expenses spreadsheet to Plymouth; reviewed financial report; drafted August meeting minutes; reviewed memos, reports, and documents for Commission meeting; printed and disseminated meeting information to commissioners, staff, and

	TAC; updated online calendar; drafted meeting follow up email; ordered catering for September Commission meeting; updated meeting notice • Participated in pre-meeting call with Commission Engineer and Chair Cesnik • Document filing, mailing checks and agreements and updating website calendar • Reviewed correspondence and discussed Fruen Mill potential variance request with developers and Commission Engineer and Commission Attorney; reviewed memo to commissioners; arranged for Fruen Mill tour • Drafted memo with Budget Committee recommendations • Participated in meeting re: potential chloride regulation strategies • Corresponded with BWSR staff re: checklist of provisions required in JPAs • Posted 2026 budget online • Invoiced Graffiti Mill, LLC for reimbursement for preliminary consultations with Commission Engineer • Correspondence with resident, Plymouth staff, and Commission Engineer re: fallen tree in channel to Medicine Lake dam • Completed survey for Clean Water Council
MN Watersheds	• Attended MN Watershed Resolutions meeting
2025 Watershed Management Plan	• Sent draft plan to Minneapolis neighborhoods • Drafted and submitted press release to Sun Post and Sun Sailor