Bassett Creek Watershed Management Commission

Regular Meeting
Thursday October 21, 2021
8:30 – 11:00 a.m.
Via Zoom – Click HERE to join the meeting.
Or join by phone +1-312-626-6799; Meeting number 820 8614 2061
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, with the exception of 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 – September 16, 2021 Commission Meeting
   - B. Acceptance of October 2021 Financial Report
   - C. Approval of Payment of Invoices
     - i. Keystone Waters, LLC – September 2021 Administrative Services
     - ii. Keystone Waters, LLC – September 2021 Printing Expenses
     - iii. Barr Engineering – September 2021 Engineering Services
     - iv. Kennedy & Graven – August 2021 Legal Services
     - v. Redpath – September Accounting Services
     - vi. We All Need Food and Water – September 2021 Administrative and Education Services
     - vii. Stantec (Wenck) – Aug/Sept WOMP
     - viii. Finance & Commerce – Public Hearing Notice
     - ix. ECM Publishers – Public Hearing Notice
     - x. Metro Blooms – Lawns to Legumes Grant Project
     - xi. Metro Blooms – Local Contribution to Pollinator Project
   - D. Approval to Direct Commission Engineer to Submit Flood Control Inspection Report to Cities, Minnesota DNR, U.S. Army Corps of Engineers
   - E. Approval to Submit the Draft Environmental Assessment Worksheet for the Main Stem Lagoon Dredging Project to the City of Golden Valley (Responsible Government Unit, RGU) for Review and Approval

5. **BUSINESS**

   A. Receive Information on Proposed North Green Loop Development, Minneapolis (30 min)

   BREAK (at Chair's discretion)

   B. Receive Information on Chloride Reduction Projects (20 Min)
   C. Review Data on Sweeney Lake Chloride Sources (20 min)
   D. Update on Planning for 2025 Watershed Plan Development (10 min)
   E. Review Status of 2021 Operating Budget (5 min)

F. Consider Administrator Attendance at Joint SWCD-WD Meeting (5 min)

6. COMMUNICATIONS (10 minutes)

A. Administrator's Report
   i. Reminder of WEDNESDAY Meeting in November
   ii. Update on BCWMC Bicycle Tour
B. Chair
C. Commissioners
   i. Updates on Bryn Mawr Open House, SEA School Walk for Water Event, Buckthorn Bust Event in Bassett's Creek Park
D. TAC Members
   i. Parkers Lake and Mt. Olivet CIP Project Bids
E. Committees
F. Education Consultant
G. Legal Counsel
H. Engineer
   i. Environmental Work for MPRB

7. INFORMATION ONLY (Information online only)

A. BCWMC Administrative Calendar
B. CIP Project Updates http://www.bassettcreekwmo.org/projects
C. Grant Tracking Summary and Spreadsheet
D. Northside Lawns to Legumes Update
E. WCA Notices, Plymouth
F. WCA Notices, Golden Valley

8. ADJOURNMENT

Upcoming Meetings & Events

- Buckthorn Busting Event – Volunteers Needed: Saturday October 16th, 1:00 – 4:00 p.m., Bassett's Creek Park, Minneapolis (Event Flyer)
- Metro MAWD Meeting – Tuesday October 19th, 7:00 p.m. online
- BCWMC Regular Meeting: WEDNESDAY, November 17, 8:30 a.m., online

Bassett Creek Watershed Management Commission

AGENDA MEMO
Date: October 14, 2021
To: BCWMC Commissioners
From: Laura Jester, Administrator
RE: Background Information for 10/21/21 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 (10 minutes)**

   A. Approval of Minutes – September 16, 2021 Commission Meeting- **ACTION ITEM with attachment**

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

   C. Approval of Payment of Invoices **- ACTION ITEM with attachments (online) –** *I reviewed the following invoices and recommend approval of payment.*
      i. Keystone Waters, LLC – September 2021 Administrative Services
      ii. Keystone Waters, LLC – September 2021 Printing Expenses
      iii. Barr Engineering – September 2021 Engineering Services
      iv. Kennedy & Graven – August 2021 Legal Services
      v. Redpath – September Accounting Services
      vi. We All Need Food and Water – September 2021 Administrative and Education Services
      vii. Stantec (Wenck) – Aug/Sept WOMP
      viii. Finance & Commerce – Public Hearing Notice
      ix. ECM Publishers – Public Hearing Notice
      x. Metro Blooms – Lawns to Legumes Grant Project
      xi. Metro Blooms – Local Contribution to Pollinator Project

   D. Approval to Direct Commission Engineer to Submit Flood Control Inspection Report to Cities, Minnesota DNR, U.S. Army Corps of Engineers – **ACTION ITEM with attachment (full document online) -** *In accordance to the Operation and Maintenance Manual for the Bassett Creek Flood Control Project (FCP), an annual inspection of the FCP features was completed by Commission Engineers. Staff requests approval to submit the inspection report to the appropriate entities. The municipalities are responsible for routine maintenance and repair of the FCP features located within their city and are responsible for submitting the completed FCP Maintenance Record from the previous year's inspection.*

   E. Approval to Submit the Draft Environmental Assessment Worksheet for the Main Stem Lagoon Dredging Project to the City of Golden Valley (Responsible Government Unit, RGU) for Review and Approval – **ACTION ITEM with attachment (full document online)** – *As discussed at the September meeting, the EAW was developed by the Commission Engineer for this project. It is a brief document designed to lay out the basic facts of a project to determine if an Environmental Impact Statement (EIS) is required for the proposed project. It also provides permit information, informs the public about the project, and helps identify ways to protect the environment. The EAW will be signed by the City of Golden Valley as the Responsible Government Unit. I recommend directing staff to submit the EAW to Golden Valley.*

5. BUSINESS

A. Receive Information on Proposed North Green Loop Development, Minneapolis (30 min) **– INFORMATION ITEM with attachment** – *A developer in Minneapolis is proposing to build a structure over a key access shaft into the Bassett Creek Tunnel. Staff including Commission Engineers, Commission Attorney, and I have been in discussions with city staff and the developer regarding impacts to tunnel access and alternatives for accessing the tunnel should the development be approved by the city. The attached letter to city staff outlines some of our questions and concerns regarding the proposed development (and includes a location map for context). Staff will update the Commission with further information at this meeting.*

B. Receive Information on Chloride Reduction Projects (20 Min) – **INFORMATION ITEM with attachment** – *At the meeting in August, the Commission received information on high chloride levels in Sweeney Lake and heard briefly about some chloride reduction projects and programs happening in the watershed. High chlorides are being tackled in a variety of ways. The attached memo provides more information on these projects. Staff and TAC members will provide additional detail at the meeting.*

C. Review Data on Sweeney Lake Chloride Sources (20 min) – **INFORMATION ITEM with attachment** – I*n response to learning about high chloride levels in Sweeney Lake, and noting the request for more information from Commissioners, I asked the Commission Engineers to review chloride and land use data from the Sweeney Lake watershed to help determine possible sources of chloride and areas of high loading rates. The attached memo describes the data and analyses. Commissioners could consider further analyzing individual chloride sources in the Sweeney Lake watershed.*

D. Update on Planning for 2025 Watershed Plan Development (10 min) – **DISCUSSION ITEM no attachment** – *Commission Engineers Chandler and Williams and I met recently to begin outlining a framework, timeline, and public engagement options for development of the 2025 Watershed Management Plan. At this meeting I would like feedback on an idea we have for hosting a BCWMC workshop on "Equity in Watershed Management" early next year. Workshop ideas will be presented at the meeting.*

E. Review Status of 2021 Operating Budget (5 min) – **INFORMATION ITEM (See Item 4B)** – *We are 2/3 of the way through the fiscal year and it's time to take a look at budget status. While Technical Services and Education are running just under budget so far, Administration is running high due to higher than budgeted expenses for financial management, legal services, and my hours. Overall, we are projected to come in at or just under budget for the year. I will keep a close watch on expenses over the next four months.*

F. Consider Administrator Attendance at Joint SWCD-WD Meeting (5 min) – **ACTION ITEM no attachment** - *The Executive Committee of the Minnesota Association of Watershed Administrators (MAWA) and a group of Soil and Water Conservation District Managers are planning a joint meeting to share common interests and identify opportunities to strengthen existing partnerships. The meeting will be held on November 9th and 10th at the Arrowwood Resort in Baxter, MN. A meeting of MAWA will follow the joint meeting. I typically attend MAWA meetings. The Commission should consider my attendance at these meetings.*

6. COMMUNICATIONS (10 minutes)

A. Administrator's Report – **INFORMATION ITEM with attachment**
   i. Reminder of WEDNESDAY Meeting in November
   ii. Update on BCWMC Bicycle Tour

B. Chair

C. Commissioners
   i. Updates on Bryn Mawr Open House, SEA School Walk for Water Event, Buckthorn Bust Event in Bassett's Creek Park

D. TAC Members

i. Parkers Lake and Mt. Olivet CIP Project Bids

E. Committees
F. Education Consultant
G. Legal Counsel
H. Engineer
   i. Environmental Work for MPRB

7. INFORMATION ONLY (Information online only)

A. BCWMC Administrative Calendar
B. CIP Project Updates http://www.bassettcreekwmo.org/projects
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D. Northside Lawns to Legumes Update
E. WCA Notices, Plymouth
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8. ADJOURNMENT

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- BCWMC Regular Meeting: WEDNESDAY, November 17, 8:30 a.m., online

I.

Item 4A.
BCWMC 10-21-21

Bassett Creek Watershed Management Commission

DRAFT Minutes of Public Hearing and Regular Meeting
Thursday, September 16, 2021
8:30 a.m.
Via video conference due to the COVID-19 global pandemic

1. CALL TO ORDER and ROLL CALL

On Thursday, September 16, 2021 at 8:31 a.m. via video conference. Chair Cesnik brought the Bassett Creek Watershed Management Commission (BCWMC) to order.

Commissioners, city staff, and others present

City	Commissioner	Alternate Commissioner	Technical Advisory Committee Members (City Staff)
Crystal	Dave Anderson	*Vacant Position*	Mark Ray
Golden Valley	*Absent*	Jane McDonald Black	Eric Eckman, Jeff Oliver, Drew Chirpich
Medicine Lake	Clint Carlson	*Absent*	*Absent*
Minneapolis	Michael Welch	Jodi Polzin	Katie Kowalczyk
Minnetonka	Mike Fruen	*Vacant Position*	*Absent*
New Hope	*Absent*	Patrick Crough	Dave Lemke
Plymouth	Catherine Cesnik	*Absent*	Ben Scharenbroich
Robbinsdale	Wayne Sicora*	*Vacant Position*	Marta Roser, Richard McCoy
St. Louis Park	Jim de Lambert*	Angela Lawrence*	Erick Francis
Administrator	Laura Jester, Keystone Waters		
Engineers	Karen Chandler and Greg Wilson, Barr Engineering		
Recorder	*Absent*		
Legal Counsel	Dave Anderson, Kennedy & Graven		
Presenters/ Guests/Public	None present		

*Partial attendance

2. PUBLIC FORUM ON NON-AGENDA ITEMS

No members of the public were present for the public forum.

3. APPROVAL OF AGENDA

MOTION: Alternate Commissioner McDonald Black moved to approve the agenda. Commissioner Welch seconded the motion. Upon a roll call vote, the motion carried 7-0, with the cities of Robbinsdale and St. Louis Park absent from the vote.

4. CONSENT AGENDA

The following items were approved as part of the consent agenda. Item 4A was pulled from the agenda for further review and discussion.

B. Acceptance of September 2021 Financial Report
C. Approval of Payment of Invoices
   i. Keystone Waters, LLC – August 2021 Administrative Services
   ii. Keystone Waters, LLC – August 2021 Printing Expenses
   iii. Barr Engineering – August 2021 Engineering Services
   iv. Kennedy & Graven – July 2021 Legal Services
   v. Shingle Creek WMC – West Metro Water Alliance Contribution
   vi. Redpath – August Accounting Services
   vii. We All Need Food and Water – August 2021 Administrative and Education Services
D. Approval of Maryland Avenue Deck Improvements Project, Golden Valley

The general and construction account balances reported in the September 2021 Financial Report are as follows:

Current Assets	**Capital Improvement Projects**	**Construction Fund**	**General Fund**	**TOTAL**
Checking	$354,473.23	$32,272.00	$139,728.62	$526,473.85
4MP Fund Investment	$ 3,501,105.22	$0.00	$262.12	$3,501,367.34
4M Fund Investment	$1,483,511.82	$0.00	$37.42	$1,483,549.24
Total Checking/Savings September 2021	$5,339,090.27	$32,272.00	$140,028.16	$5,511,390.43

MOTION: Alternate Commissioner McDonald Black moved to approve the consent agenda as amended. Alternate Commissioner Crough seconded the motion. Upon a roll call vote, the motion carried 7-0, with the cities of Robbinsdale and St. Louis Park absent from the vote.

5. PUBLIC HEARING

A. Receive Comments on Proposed 2022 CIP Projects (15 min)
   i. Medley Park Stormwater Treatment Facility (ML-12)
   ii. SEA School-Wildwood Park Flood Reduction Project (BC – 2, 3, 8, 10)

[Alternate Commissioner Lawrence joins the meeting]

Chair Cesnik opened the public hearing at 8:36 a.m. Administrator Jester provided a brief overview of the reason for the hearing. With no members of the public in attendance and no questions or comments by commissioners or others, Chair Cesnik closed the public hearing at 8:40 a.m.

6. BUSINESS

A. Consider Approval of Resolution 21-05 Ordering 2022 Improvements

i. Ordering 2022 Improvements
ii. Making Findings Pursuant to Minnesota Statutes Section 103B.251
iii. Certifying Costs to Hennepin County
iv. Approving Agreement with City of Golden Valley for Construction of Medley Park Stormwater Treatment Facility (ML-12)
v. Approving Agreement with City of Golden Valley for Construction of SEA School-Wildwood Park Flood Reduction Project (BC – 2, 3, 8, 10)

Administrator Jester walked through the provisions of the resolution and noted that this is the same resolution that is adopted each year to order the next year's CIP projects and set the final levy. Commissioner Welch noted an error in provision 3 of the resolution and requested a slight change to language in provision 7 to note that no *additional* costs will be charged *to the Commission* or other members of the Commission.

MOTION: Commissioner Welch moved to approve the resolution with the amendments. Commissioner Carlson seconded the motion. Upon a roll call vote, the motion carried 8-0, with the city of Robbinsdale absent from the vote.

[Commissioner Sicora arrives.]

B. Consider Recommendations on Carp Control Options for Schaper Pond and Sweeney Lake

Commission Engineer Chandler provided background noting that at the February 2021 meeting, the Commission Engineer presented results of the 2020 carp removal efforts from Schaper Pond and Sweeney Lake. She noted that removals were successful at lowering carp populations to levels below the threshold that impacts water quality. However, it was also learned that Schaper Pond was likely a nursery area for carp. In February, staff was directed to evaluate various options for long term control of carp in Schaper Pond and Sweeney Lake. She introduced Greg Wilson with Barr Engineering.

Commission Engineer Wilson walked through the matrix of options with the Commission and noted that several different options were evaluated including constructing electric and non-electric barriers. He noted they also considered stocking panfish in Schaper Pond to predate carp eggs. After reviewing the benefits, limitations and costs of various options, he noted staff currently recommends adaptive management to reassess the carp population and their movements by repeating the carp assessment performed in 2019. This action would help us understand how quickly the carp population might rebound in these waterbodies to pre-removal levels and which permanent solution would be most cost effective. He recommended performing the work in May – September 2022 and reporting back in fall 2022.

Alternate Commission McDonald Black appreciated the detailed matrix of options and noted that the Commission has invested a lot of money in Sweeney Lake so it's important to protect that investment by finding a long-term carp management strategy. She wondered if carp would impact the alum treatment. Engineer Wilson noted that was unlikely because the alum settled mostly in the deep areas of the lake where carp are less likely to spend time.

Alternate Commissioner McDonald Black noted that she would like to move forward with constructing barriers to ensure the investment in Sweeney Lake is protected. Administrator Jester reported that barrier construction, whether electric or not, would be a huge and expensive undertaking due to the railroad property, routing electricity to the site, and ongoing maintenance. She indicated the recommended approach would tell us if perhaps removing carp every few years would be an acceptable option if the populations don't rebound too quickly.

There was discussion about the option to introduce panfish in Schaper Pond to eat carp eggs. It was noted that although that may open other opportunities such as a community fishing pier, the pond isn't good panfish habitat and would likely need to be stocked annually. Further, the timing of the stocking might be too late for carp egg predation.

Commissioner Welch indicated his support for additional monitoring but also suggested that the Commission have contracts and approvals in place to perform another round of carp removal in 2022 in case carp numbers are found to have rebounded already. Engineer Wilson noted that was a good approach saying if carp numbers are found to be high in May and June, then action would switch to box netting and electrofishing to protect the investment in Sweeney Lake. Commissioner Sicora indicated that he thought that adaptive management was a good approach because of the complexity of the site and the different variables involved.

There was further discussion about introducing panfish; staff agreed they could contact the MnDNR about the option.

MOTION: Commissioner Welch moved to approve the adaptive management approach by gathering additional carp population data in 2022 and directed staff to prepare a scope of work with Carp Solutions or a similar company for approval at a future Commission meeting for carp removal in 2022, and to contact the MnDNR regarding panfish stocking in Schaper Pond. Alternate Commissioner McDonald Black seconded the motion. Upon a roll call vote the motion carried 9-0.

C. Consider Recommendations on Watershed Based Implementation Funding Comments

Administrator Jester reported that the Minnesota Association of Watershed Districts (MAWD) requested that watershed organizations consider providing comments to the MN Board of Water and Soil Resources (BWSR) on how Watershed Based Implementation Funding is distributed in the metro area. She recommended sending a letter to BWSR with comments as outlined in her memo in the packet.

[Commissioner de Lambert joins the meeting.]

Commission Engineer Chandler asked which entities prepare plans under MN Statute 103B. Commissioner Welch responded that watersheds and cities prepare these plans. He also noted his belief that the efficacy of the collaborative work by cities and watersheds is undermined if projects in "non-103B plans" are funded with watershed based funding. Commissioner Welch also indicated that it is important for the Commission to submit its own comments on this matter rather than having MAWD necessarily speak for the Commission.

MOTION: Commissioner Carlson moved to direct Administrator Jester to submit a letter to BWSR with the Chair's review and approval. Commissioner Welch seconded the motion. Upon a roll call vote, the motion carried 9-0.

[Chair Cesnik called for a 5-minute break. Alternate Commissioner Lawrence departs the meeting.]

4A. (From Consent Agenda) Approval of Minutes – August 19, 2021 Commission Meeting
Administrator Jester answered Commissioner Welch's question about the August meeting minutes.

MOTION: Commissioner Welch moved to approve the minutes from the August 19, 2021 Commission meeting. Alternate Commissioner McDonald Black seconded the motion. Upon a roll call vote, the motion carried 9-0.

D. Consider Recommendations for Main Stem Lagoon Dredging Project Permitting Process

Administrator Jester reminded commissioners that the memo in the printed meeting packet had been revised and that the new memo was posted online and emailed with the meeting announcement.

Commission Engineer Chandler briefly reviewed the Main Stem Lagoon Dredging Project and described the development of an Environmental Assessment Worksheet (EAW). She noted the Responsible Government Unit (RGU) is the City of Golden Valley and they would be the EAW signatory. She also noted other permits needed for the project. Engineer

Chandler reviewed staff's recommended approach for signing and submitting the EAW and other permits. There was some discussion on whether the MnDNR is actually the RGU.

MOTION: Commissioner Welch moved to approve the following:

1. BCWMC Board of Commissioners reviews and considers approval to submit the draft EAW to the RGU for review and approval by the RGU
2. Administrator reviews and provides input on the RGU's responses to comments on the EAW; brings matters to the Commission, as appropriate
3. Administrator is delegated to review and sign all other permit applications related to this project; bringing matters to the Commission, as appropriate

Alternate Commissioner McDonald Black seconded the motion. Upon a roll call vote, the motion carried 9-0.

6. COMMUNICATIONS

A. Administrator's Report

i. Update on BCWMC Bicycle Tour – Invitations sent; responses requested; no rain date planned; approval to reserve space at Utepils for up to $300

ii. Indigenous Voices Oral History Project – Church in Golden Valley near the creek developed a land acknowledgement statement and is planning to interview native people about the importance of the creek in their culture. Will be interesting project and good to include these voices and interests in the 2025 watershed plan.

iii. Update on CAMP monitoring for chlorides – Initially Met Council said chloride holding time isn't conducive to CAMP monitoring; staff is looking into this more

B. Chair—none

C. Commissioners

- Commissioner Carlson noted that the Global Water View presentation shows how fortunate we are in this area with regards to clean water
- Commissioner Welch noted the second open house on the Bryn Mawr project was well attended and there is interest in the BCWMC's CIP project. He noted support of a buffer around the ponds to deter geese.

D. TAC Members—none

E. Committees

F. Education Consultant—none

G. Legal Counsel—none

H. Engineer

- A trickle of water is currently coming over the Medicine Lake dam.
- Staff began discussions on planning for development of the 2025 Plan and will meet soon.
- The City of Minneapolis is reviewing a proposed development that would be constructed over the double box culvert and over a key access point to the deep tunnel. Staff will bring additional information to the Commission as appropriate.

7. INFORMATION ONLY (Information online only)

A. BCWMC Administrative Calendar
B. CIP Project Updates http://www.bassettcreekwmo.org/projects
C. Grant Tracking Summary and Spreadsheet
D. Consider Providing Input on Hennepin County Natural Resources Strategic Plan
E. WCA Notice of Decision, Golden Valley
F. WCA Notices of Application, Plymouth
G. MAISRC Research & Management Showcase – Registration Open

8. ADJOURNMENT

The meeting was adjourned at 10:30 a.m.

BCWMC October Financial Report - General Ledger	Capital Improvement Projects	General Fund	TOTAL
ASSETS			
Current Assets			
Checking/Savings			
101 · Wells Fargo Checking	327,362.49	44,041.84	403,676.33
102 · 4MP Fund Investment	3,501,105.22	262.12	3,501,367.34
103 · 4M Fund Investment	1,483,511.82	37.42	1,483,549.24
Total Checking/Savings	5,311,979.53	44,341.38	5,388,592.91
Accounts Receivable			
112 · Due from Other Governments	353,800.00	6,777.00	360,577.00
113 · Delinquent Taxes Receivable	20,717.00	0.00	20,717.00
Total Accounts Receivable	374,517.00	6,777.00	381,294.00
Other Current Assets			
114 · Prepaids	0.00	3,223.00	3,223.00
Total Other Current Assets	0.00	3,223.00	3,223.00
Total Current Assets	5,686,496.53	54,341.38	5,773,109.91
TOTAL ASSETS	**5,686,496.53**	**54,341.38**	**5,773,109.91**
LIABILITIES & EQUITY			
Liabilities			
Current Liabilities			
Other Current Liabilities			
212 · Unearned Revenue	200,000.00	1.00	200,001.00
251 · Unavailable Rev - property tax	20,717.00	0.00	20,717.00
Total Other Current Liabilities	220,717.00	1.00	220,718.00
Total Current Liabilities	220,717.00	1.00	220,718.00
Total Liabilities	220,717.00	1.00	220,718.00
Equity			
311 · Nonspendable prepaids	0.00	3,223.00	3,223.00
312 · Restricted for improvements	4,562,582.00	0.00	4,562,582.00
314 · Res for following year budget	0.00	5,000.00	5,000.00
315 · Unassigned Funds	0.00	493,025.05	493,025.05
32000 · Retained Earnings	0.00	-95,159.98	-95,159.98
Net Income	327,681.55	223,768.29	583,721.84
Total Equity	4,890,263.55	629,856.36	5,552,391.91
TOTAL LIABILITIES & EQUITY	**5,110,980.55**	**629,857.36**	**5,773,109.91**
UNBALANCED CLASSES	575,515.98	-575,515.98	0.00

BCWMC October Financial Report - Operating Budget	Annual Budget	Sep 17 - Oct 21, 21	Feb 1 - Oct 21, 21	Budget Balance
Income				
411 · Assessments to Cities	554,900.00	0.00	554,900.00	0.00
412 · Project Review Fees	62,000.00	8,000.00	42,000.00	20,000.00
413 · WOMP Reimbursement	5,000.00	0.00	4,500.00	500.00
414 · State of MN Grants	0.00	0.00	11,777.26	-11,777.26
415 · Investment earnings	0.00	0.00	299.54	-299.54
416 · Use of Fund Balance	5,000.00	0.00	0.25	4,999.75
417 · Transfers from LT & CIP	42,000.00	0.00	0.00	42,000.00
Total Income	668,900.00	8,000.00	613,477.05	55,422.95
Expense				
1000 · General Expenses				
1010 · Technical Services	134,000.00	5,282.50	69,165.00	64,835.00
1020 · Development/Project Reviews	68,000.00	6,716.72	61,668.73	6,331.27
1030 · Non-fee and Preliminary Reviews	24,000.00	5,889.00	19,607.06	4,392.94
1040 · Commission and TAC Meetings	12,000.00	756.00	7,369.70	4,630.30
1050 · Surveys and Studies	9,000.00	0.00	2,761.41	6,238.59
1060 · Water Quality / Monitoring	129,000.00	10,195.09	71,426.41	57,573.59
1070 · Water Quantity	7,000.00	986.00	6,159.56	840.44
1080 · Annual Flood Control Inspection	12,000.00	1,005.50	7,116.04	4,883.96
1090 · Municipal Plan Review	2,000.00	0.00	0.00	2,000.00
1100 · Watershed Monitoring Program	23,000.00	3,725.54	13,339.91	9,660.09
1110 · Annual XP-SWMM Model Updates	0.00	0.00	375.50	-375.50
1120 · TMDL Implementation Reporting	7,000.00	0.00	0.00	7,000.00
1130 · APM/AIS Work	14,000.00	0.00	8,533.35	5,466.65
1140 · Erosion Control Inspections	0.00	0.00	0.00	0.00
1000 · General Expenses - Other		0.00	0.00	0.00
Total 1000 · General Expenses	441,000.00	34,556.35	267,522.67	173,477.33
2000 · Plan Development				
2010 · Next Gen Plan Development	18,000.00	1,110.00	1,110.00	16,890.00
2000 · Plan Development - Other		0.00	0.00	0.00
Total 2000 · Plan Development	18,000.00	1,110.00	1,110.00	16,890.00
3000 · Administration				
3010 · Administrator	67,400.00	4,896.00	52,110.00	15,290.00
3020 · MAWD Dues	3,750.00	0.00	3,750.00	0.00
3030 · Legal	15,000.00	1,060.80	9,384.70	5,615.30
3040 · Financial Management	4,000.00	1,000.00	6,600.00	-2,600.00
3050 · Audit, Insurance & Bond	18,000.00	0.00	14,849.00	3,151.00
3060 · Meeeting Catering	1,300.00	0.00	0.00	1,300.00
3070 · Administrative Services	8,000.00	156.86	4,860.59	3,139.41
3000 · Administration - Other		0.00	0.00	0.00
Total 3000 · Administration	117,450.00	7,113.66	91,554.29	25,895.71
4000 · Education				
4010 · Publications / Annual Report	1,300.00	0.00	0.00	1,300.00
4020 · Website	1,800.00	0.00	406.60	1,393.40
4030 · Watershed Education Partnership	17,350.00	3,500.00	7,000.00	10,350.00
4040 · Education and Public Outreach	26,000.00	9,301.09	21,086.96	4,913.04
4050 · Public Communications	1,000.00	513.53	1,028.24	-28.24
4000 · Implementation - Other		0.00	0.00	0.00
Total 4000 · Implementation	47,450.00	13,314.62	29,521.80	17,928.20
5000 · Maintenance				
5010 · Channel Maintenance Fund	20,000.00	0.00	0.00	20,000.00
5020 · Long Term-FEMA Floodplain Model	25,000.00	0.00	0.00	25,000.00
5000 · Maintenance - Other		0.00	0.00	0.00
Total 5000 · Maintenance	45,000.00	0.00	0.00	45,000.00
Total Expense	668,900.00	56,094.63	389,708.76	279,191.24
Net Income	**0.00**	**-48,094.63**	**223,768.29**	**-223,768.29**

BCWMC October Financial Report - CIP	Annual Budget	Sep 17 - Oct 21, 21	Feb 1 - Oct 21, 21	Inception to Date Exp	Remaining Budget
Income					
BC2,3,8 · DeCola Ponds B&C Improve		0.00	34,286.00		
BC23810 · Decola Ponds/Wildwood Park	0.00	0.00	0.00		
BC5 · Bryn Mawr Meadows	0.00	0.00	0.00		
BC7 · Main Stem Dredging Project		0.00	125,000.00		
BCP2 · Bassett Creek Park & Winnetka	0.00	0.00	0.00		
CL3 · Crane Lake Improvement Project	0.00	0.00	0.00		
ML21 · Jevne Park Stormwater Mgmt	0.00	0.00	0.00		
NL2 · Four Seasons Mall Area	0.00	0.00	0.00		
Qual · Channel Maintenance Fund		0.00	0.00		
SL1,3 · Schaper Pond Enhancement	0.00	0.00	0.00		
SL8 · Sweeny Lake Water Quality	0.00	0.00	236,850.01		
TW2 · Twin Lake Alum Treatment	0.00	0.00	0.00		
WST2 · Westwood Lake Water Quality	0.00	0.00	0.00		
Total Income	0.00	0.00	396,455.07		
Expense					
2017CRM · CIP-Main Stem Cedar Lk Rd-Dupon	1,064,472.00	0.00	511.50	132,029.25	932,442.75
BC-238 · CIP-DeCola Ponds B&C	1,600,000.00	0.00	0.00	1,507,985.31	92,014.69
BC-2381 · CIP-DeCola Ponds/Wildwood Pk	0.00	0.00	20,036.50	53,395.89	-53,395.89
BC-5 · CIP-Bryn Mawr Meadows	912,000.00	2,298.50	8,801.04	58,084.43	853,915.57
BC-7 · CIP-Main Stem Lagoon Dredging	2,759,000.00	8,209.00	12,585.50	114,992.53	2,644,007.47
BCP-2 · CIP- Basset Cr Pk & Winnetka	1,123,351.00	0.00	0.00	1,066,648.32	56,702.68
ML-12 · CIP-Medley Park Stormwater	0.00	0.00	30,191.00	82,843.61	-82,843.61
ML-20 · CIP-Mount Olive Stream Restore	178,100.00	0.00	3,601.50	39,595.42	138,504.58
ML-21 · CIP-Jevne Park Stormwater Mgmt	500,000.00	0.00	0.00	56,390.75	443,609.25
ML-23 · CIP-Purch High Eff St Sweeper	81,600.00	0.00	0.00	0.00	81,600.00
NL-2 · CIP-Four Seasons Mall	990,000.00	0.00	0.00	185,236.56	804,763.44
PL-7 · CIP-Parkers Lake Stream Restore	485,000.00	0.00	3,666.00	61,213.12	423,786.88
SL-1,3 · CIP-Schaper Pond	612,000.00	1,733.00	11,481.00	440,083.95	171,916.05
SL-8 · CIP-Sweeney Lake WQ Improvement	568,080.00	1,262.60	10,171.48	338,907.07	229,172.93
TW-2 · CIP-Twin Lake Alum Treatment	163,000.00	0.00	0.00	91,037.82	71,962.18
WST-2 · CIP-Westwood Lake Water Quality	404,500.00	0.00	0.00	223,640.96	180,859.04
Total Expense	12,680,226.00	13,503.10	101,045.52	4,839,684.99	
Net Income	**-12,680,226.00**	**-13,503.10**	**295,409.55**		

BCWMC October Financial Report - Long Term Accounts

		Total Budget	Sep 17 - Oct 21, 21	Year-to-Date	Inception to Date	Remaining Budget
Income						
	Fld1 · Flood Control Long Term Maint		0.00	14,064.50	169,420.90	
	Fld2 · Flood Control Long Term Exp	699,980.00	0.00	5,529.50	484,266.41	
Total		699,980.00	0.00	8,535.00	-314,845.51	385,134.49
	Flood1 · Emergency FCP Income		0.00		0.00	
	Flood2 · Emergency FCP Expense	500,000.00	0.00		0.00	
Total		500,000.00	0.00	0.00	0.00	500,000.00
	Gen · Next gen Plan Development Income		0.00		0.00	
	Gen1 · Next gen Plan Development Exp	30,000.00	0.00		0.00	
Total		30,000.00	0.00	0.00	0.00	30,000.00
	Qual · Channel Maintenance Fund		0.00			
	Qual1 · Channel Maintenance Expense	440,950.00	0.00		267,073.30	
Total		440,950.00	0.00	0.00	-267,073.30	173,876.70
	TMDL1 · TMDL Studies Income		0.00			
	TMDL2 · TMDL Studies Expense	135,000.00	0.00		107,850.15	
Total		135,000.00	0.00	0.00	-107,850.15	27,149.85

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BARR

Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co.
Subject: Bassett Creek 2021 Flood Control Project Inspection
Date: October 14, 2021
Project: 23270051.52 2021 4065

In accordance with the Operation and Maintenance Manual for the Bassett Creek Flood Control Project (FCP), an annual inspection is required to review the condition of the FCP features. The FCP was turned over to the local sponsor during 2002. Therefore, inspection of the FCP features was initialized during the fall of 2002, which was the first formal inspection by the Bassett Creek Watershed Management Commission (BCWMC). Except as noted, the annual inspections have been performed from 2002-2021. Inspections were not performed during 2003, 2011, and 2013 due to BCWMC budget considerations. Some of the municipalities have performed independent inspections of several of the FCP structures. The municipalities are responsible for routine maintenance and repair of the BCWMC FCP features located within their city. The municipalities are also responsible for submitting the completed FCP Maintenance Record from the previous year's inspection. It is important that the BCWMC receive these records, as the inspection and reporting are essential to ensure the BCWMC/Minneapolis maintains its eligibility to receive federal funds to repair or replace FCP features in the event of a catastrophe.

Pursuant to BCWMC policy, the municipalities may request reimbursement from the BCWMC for major maintenance and repairs that exceed $25,000. However, the municipalities must perform regular, routine maintenance and submit the required reporting before requesting and receiving BCWMC reimbursement. This will help prevent the situation wherein the BCWMC pays for maintenance work over $25,000 because the municipalities neglected routine maintenance for several years. The BCWMC expects the municipalities to inform the Commission in advance (e.g., two years) of their request for reimbursement. The BCWMC will consider adding maintenance and repair projects that are more than $100,000 to the BCWMC CIP.

Table 1 (at the end of this memo) provides examples of maintenance and repairs that are major or could be major. In addition, the cities (or other road authority) where the FCP features are located are responsible for maintenance, repair and replacement of road crossings, and their corresponding conveyance structures, that were installed as part of the FCP.

The following are the 2021 inspection comments and recommendations:

Plymouth Features

Inspection Date: August 19, 2021
Inspection Personnel: Patrick Brockamp and Josh Phillips (Barr)

1. **Plymouth Creek Fish Barrier (Constructed 1987)**
    a. The structure appeared to be in satisfactory condition.
    b. The water level was below the staff gauge but was calculated as -0.90 feet by measuring down. Water was 1.04 feet below the weir at the time of the inspection.
    c. Sediment has accumulated in the pool upstream of the structure and formed a delta, which was overgrown with vegetation. The deposited sediment was generally creating a meander in the creek toward the east (left) bank. Deposited sediment has been noted since 2005 and appears to be increasing over time.
    d. The railings at the upstream end of the structure, on the east (left) and west (right) sides, have rusted off below the water level. This is consistent with previous inspections and has been noted since 2015.
    e. The abutment walls have expansion joints in the middle, just upstream of the weir. The west (right) expansion joint gap was first measured in 2002 at 7/8 inches for comparison with future inspections. The west (right) expansion joint gap was measured at 7/8 inches this year.
    f. The top downstream edge of the concrete pile cap forming the weir has deteriorated along its entire length. Deterioration includes loss of cement paste and fines resulting in exposed aggregate. The weir appears to be functioning properly and controlling water to the design elevation.
    g. Three cracks were observed on the downstream west (right) wing wall. This is consistent with previous inspections and has been noted since 2004.
    h. Seven diagonal cracks were observed on the downstream east (left) wing wall. Three of the cracks are more prominently defined, closed cracks. Observation of the three prominent cracks is consistent with previous inspections and has been noted since 2002. The other four cracks are generally closed hairline cracks and less noticeable.
    i. A 14-inch diameter tree was observed growing adjacent to the downstream east (left) wing wall and through the railing.
    j. Small trees and shrubs were observed growing on the embankment and downstream channel banks, including some near the wing walls and railings.

Recommended Action:

- Remove accumulated sediment from the upstream pool. (Note: In 2010, the City of Plymouth submitted an Environmental Assessment Worksheet (EAW) to the Minnesota Pollution Control Agency (MPCA) for a channel improvements project. The MPCA informed the City of Plymouth that the Clean Water Act expressly prohibits the use of creeks, streams, lakes, and wetlands from being used as a pollution treatment system except in extreme situations,

Note: references to "right" and "left" are with respect to facing downstream.

therefore dredging of the sediment upstream of the fish barrier, in order to continue to utilize the area upstream of the fish barrier as a sedimentation pond, was prohibited by the MPCA and not permitted. It is recommended that the City of Plymouth coordinate with the MPCA to revisit this issue or discuss viable alternatives to remove the sediment since the project intent was not as a sediment basin but as a fish barrier.)

- Repair railings on the upstream side of the structure.
- Remove trees and vegetation on embankment and channel banks. Chemically treat stumps with Garlon 3A herbicide (or other specialty herbicide for use in wetland sites and waterways) to prevent regrowth.
- Monitor concrete cracks and the width of the expansion joints.

2. Medicine Lake Outlet Structure (Constructed 1996)

a. The channel between Medicine Lake and the outlet structure was dry and clear of debris.
b. The outlet structure appeared to be in satisfactory condition.
c. A new staff gauge was cooperatively manufactured and installed by the BCWMC and City of Plymouth on March 17, 2021. The gauge was "in the dry" due to drought conditions during the inspection.
d. Although not part of the Bassett Creek FCP, there is a large willow tree directly downstream of the South Shore Drive bridge that has begun to fall into the creek and could block or divert flows toward the right bank if it falls completely.

In late May 2019, City of Plymouth staff observed water flowing over the east side, but not the west side, of the Medicine Lake Outlet Structure. The city performed a baseline survey of the dam in the summer of 2019 and found that the east side of the dam was 0.15 feet lower than the west side. Future surveys can be performed to compare against the baseline.

Recommended Action:

- Although not part of the Bassett Creek FCP, consider removing the large willow tree directly downstream of the South Shore Drive bridge that has begun to fall into the creek to prevent a potential future flow blockage or erosion.

Golden Valley Features

Inspection Date: August 19, 2021
Inspection Personnel: Patrick Brockamp and Josh Phillips (Barr)

1. Wisconsin Avenue Control Structure (Constructed 1987)

a. The water level was below the lowest staff gauge reading upstream and downstream of the culvert.
b. The flood gate was closed (down) at the time of the inspection and appeared to be in satisfactory condition.

Note: references to "right" and "left" are with respect to facing downstream.

c. Deposited sediment was observed in the bottom of the culvert, ranging from 0-2 inches deep. The deposited sediment is consistent with previous inspections and has been noted since 2006.
d. Some of the gabion baskets upstream and downstream of the culvert have deteriorated or broken and riprap had fallen out of the baskets at some locations. Although the gabion baskets are no longer functioning as installed, no significant erosion was observed.
e. The railings at the upstream and downstream ends of the culvert were in satisfactory condition.
f. Brush is growing around the downstream end of the culvert.

Recommended Action:

- Cut and remove brush near culvert ends. Chemically treat stumps with Garlon 3A herbicide (or other specialty herbicide for use in wetland sites and waterways) to prevent regrowth.
- Monitor deposited sediment in the culvert.
- Monitor upstream and downstream banks for erosion.

2. Golden Valley Country Club – Box Culvert, Overflow Weir, and Downstream Channel (Constructed 1994)

a. The channel and riprap armoring from Pennsylvania Avenue to the box culvert appeared to be in satisfactory condition.
b. The box culvert, joints, and railings appeared to be in satisfactory condition.
c. The overflow weir (earth berm) appeared to be in satisfactory condition and has been maintained by the Golden Valley Country Club staff as manicured fairway turf.
d. Some sediment deposition was observed on the north (left) bank just upstream of the box culvert on top of the riprap, consistent with previous years.
e. Some sediment deposition in other upstream areas was observed. This may have been due to low water levels.

Recommended Action:

- Monitor sediment deposition on the north (left) bank just upstream of the box culvert.

3. Westbrook Road Crossing (Constructed 1993)

a. The concrete Bebo culvert appeared to be in satisfactory condition.
b. Spalled concrete and exposed rebar were observed around the storm sewer pipe entering the culvert on the west (left) side, this was noted in the previous years' inspections.
c. Longitudinal hairline cracks were observed on the top of sections of the Bebo culvert, extending across the entire section (pre-cast section) width. The cracks are approximately 2 feet off-center of the structure. These cracks are consistent with previous inspections and have been noted since 2002.

Note: references to "right" and "left" are with respect to facing downstream.

d. A joint gap and separation were observed between the two furthest downstream sections of the culvert and there are signs of pressure points where the last section has pushed against the top of the two wing walls. Fractured concrete was observed on the east (right) side of the culvert, potentially due to the movement. This is consistent with previous inspections and has been noted since 2015.
e. Spalled concrete was observed at multiple locations upstream and downstream of the culvert at the top of the wing walls and head wall. This is consistent with previous inspections and has been noted since 2007.
f. Cracks were observed in the road pavement above the structure. This is consistent with previous inspections and has been noted since 2010. Crack sealant was applied to the road surface in 2019.
g. The railings appeared to be in satisfactory condition.

Recommended Action:

- Repair spalled concrete and exposed rebar at storm sewer connection on west (left) side of culvert.
- Provide grout at the downstream east (right) catch basin to prevent further deterioration of the concrete adjusting rings resulting in potential damage to the road or culvert.
- Monitor cracks in the culvert.
- Monitor joint gap and fractured concrete at pressure points.
- Monitor spalled concrete at wing walls and head walls.
- Monitor cracks in the road.

4. Regent Avenue Crossing (Constructed 1981-1984)

a. The concrete Bebo culvert appeared to be in satisfactory condition.
b. The channel bottom was soft and mucky and the water level was below the bottom of the staff gauge and not measured.
c. Spalled concrete was observed at the middle joint of the upstream north (left) wing wall. This in consistent with previous inspections and has been noted since 2002.
d. A crack was observed at the upstream north (left) wing wall. The crack was near the top of the wing wall and travels at a 45-degree angle down to the headwall. This in consistent with previous inspections and has been noted since 2002.
e. Multiple cracks were observed at the upstream south (right) wing wall. This is consistent with previous inspections and has been noted since 2008.
f. City staff repaired the spalled concrete and exposed rebar that were previously observed around the storm sewer pipe entering the culvert on the north (left) side.
g. A crack was observed at the downstream south (right) wing wall. The crack was near the top of the wing wall and travels at a 45-degree angle down to the headwall. This is consistent with previous inspections and has been noted since 2002.

Note: references to “right” and “left” are with respect to facing downstream.

h. Flows appeared to have scoured the north (left) side of the creek bottom and deposited sediment on the south (right) side of the creek bottom.
i. The railings appeared to be in satisfactory condition.

Recommended Action:

- Monitor spalled concrete at the upstream north (left) wing wall.
- Monitor crack at the upstream north (left) wing wall.
- Monitor cracks at the upstream south (right) wing wall.
- Monitor crack at the downstream south (right) wing wall.
- Monitor creek bottom for scouring and deposition and, as needed, armor creek bottom along culvert foundation.

5. Noble Avenue Crossing (Constructed 1981-1984)

a. The concrete Bebo culvert appeared to be in satisfactory condition.
b. Longitudinal hairline cracks were observed throughout the length of the top of the culvert, extending across the entire (pre-cast) section width. The cracks were either in the center of the structure or approximately 2 feet off-center of the structure. This is consistent with previous inspections and has been noted since 2002.
c. Spalled concrete and exposed plastic joint material were observed approximately two feet either side of center throughout the length of the top of the culvert. The cement paste covering the plastic joint material has separated and exposed the plastic. This is consistent with previous inspections and has been noted since 2002.
d. In July 2021, city staff repaired the spalled concrete and exposed rebar that were previously observed around the storm sewer pipe entering the culvert on the north (left) side.
e. Spalled concrete was observed at the downstream north (left) wing wall. This is consistent with previous inspections and has been noted since 2002.
f. Multiple cracks and spalling were observed at the top of downstream north (left) wing wall. The cracking is consistent with previous inspections and has been noted since 2007.
g. The downstream south (right) wing wall was slightly leaning toward creek. Inspection staff have monitored the offset between the upper portion of the wing wall and the lower portion of the wing wall, which is leaning toward the creek, since 2002 to document movement. The inspection staff's measurements are listed below:

Year	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Offset	5/8″	N/A *	5/8″	11/16″	1″	1″	1″	1-1/8″	1-1/8″
Year	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
Offset	N/A *	1-1/8″	N/A *	1-1/8″	1-1/8″	1-1/8″	1-1/8″	1-1/8″	1-3/16″
Year	**2020**	**2021**							
Offset	1-3/16″	1-1/2″							

Note: references to "right" and "left" are with respect to facing downstream.

* FCP inspection was not performed due to budget considerations.

h. Minor bank erosion and scour was observed on both sides of the downstream wing walls. This is consistent with previous inspections and has been noted since 2002.
i. Flows appeared to be scouring the north (left) side of the creek bottom.
j. The railings appeared to be in satisfactory condition.
k. The City of Golden Valley installed riprap in 2018 to reinforce the bank and minimize continued erosion at the outside edge of the upstream south (right) wing wall, however some erosion has perpetuated upstream.

Recommended Action:

- Monitor cracks and spalled concrete in the culvert and wing walls.
- Monitor bank erosion at downstream wing walls and upstream of installed riprap at upstream south (right) wing wall.
- Monitor creek bottom for scouring and, as needed, armor creek bottom along culvert foundation.

Golden Valley / Minneapolis Features

Inspection Date: August 19, 2021
Inspection Personnel: Patrick Brockamp and Josh Phillips (Barr)

1. Highway 55 Control Structure (Constructed 1987)

a. The concrete control structure appeared to be in satisfactory condition.
b. A hairline crack was observed in the east (left) wall of the inlet structure, although it appears that the crack may have been previously sealed with caulk. The crack is positioned in the middle of the wall extending full height. This is consistent with previous inspections and has been noted since 2002.
c. Erosion was observed around the east (left) side of the structure, likely from road runoff. In the summer of 2021, Minnesota Department of Transportation (MnDOT) crews placed class 5 aggregate on the east (left) side of the structure to access the upstream end of the structure to preform repairs of the double box culvert below Highway 55. The new class 5 aggregate is actively eroding.
d. MnDOT crews also drilled holes into the structure to install brackets and a temporary plate to block flows through the structure so they could perform repairs. MnDOT removed the plate, brackets, and bolts, but did not fill or repair the bolt holes.
e. A piece of rebar and relatively small mass of concrete extended into the lower west (right) side of the opening of the low flow weir. A steel threaded rod extended approximately 2 inches from the south face of concrete on the east (left) side of low flow weir. These observations have not been noted in previous years' inspections, but water levels were lower in 2021 than previous years, exposing this part of the structure for the first time or since 2015.

Note: references to "right" and "left" are with respect to facing downstream.

Recommended Action:

- Protect the sides of the structure with armoring (rock or riprap) or reinforced vegetation to limit additional erosion. Alternatively, divert road runoff away from the structure.
- Request that MnDOT repair bolt holes with concrete gout.
- Sawcut and remove rebar and concrete chunk on east (left) side of low flow weir.
- Sawcut steel rod to be flush to concrete along south face of concrete on the east (left) side of the low flow weir.
- Monitor hairline crack in the control structure.

Crystal Features

Inspection Date: August 19, 2021
Inspection Personnel: Patrick Brockamp and Josh Phillips (Barr)

1. **Markwood Open Channel – Gabion Section (Constructed 1981-1984)**
    a. The channel appeared to be in satisfactory condition.
    b. Significant vegetation growth was observed along the gabion section of the channel.
    c. In 2021, the City of Crystal replaced the creek culvert across Louisiana Avenue and added riprap. Some construction features are still in place as the site was actively under construction at the time of the inspection.

Recommended Action:

- Clear woody vegetation in the channel. Consider clearing vegetation every 3-5 years to maintain flow capacity, maintain channel access, and protect gabion baskets.

2. **Markwood Open Channel (Constructed 1981-1984)**
    a. The channel appeared to be in satisfactory condition.
    b. Significant vegetation growth was observed along the side slopes of the channel.
    c. Erosion was observed along the toe of the north (left) and south (right) banks. This is consistent with previous inspections and has been noted since 2006.
    d. Some homeowner retaining walls and fences along the channel were leaning toward the channel and, in some cases, appeared to be failing. This is consistent with previous inspections and has been noted since 2009.
    e. The city's corrugated metal pipe (CMP) storm sewer, discharging into the channel between 6833 and 6825 Markwood Drive, was in poor condition. The pipe bottom was corroded and there was erosion and undercutting around the pipe end.

Recommended Action:

- Clear woody vegetation in the channel. Consider clearing vegetation every 3-5 years to maintain flow capacity and access through the open channel.
- Monitor erosion along the toe of the channel banks.

Note: references to "right" and "left" are with respect to facing downstream.

- Although not part of the flood control project, monitor retaining walls and fences for potential failure and obstruction of flow through the channel.
- Although not part of the flood control project, City may want to consider repairing or replacing the CMP storm sewer.

3. 36th Avenue and Hampshire Avenue Crossing – 8 feet x 6 feet Double Box Culverts (Constructed 1981-1984)

a. The concrete box culverts, joints and tie bars appeared to be in satisfactory condition.
b. Some riprap has deposited in the box culverts.
c. Sediment has deposited in the box culverts, mostly in the downstream half of the box culverts. This is consistent with previous inspections and has been noted since 2016.
d. On both culverts, the fifth joint from the downstream end had a 2 ½ inch gap, which is a larger gap than the rest of the joints. This is consistent with previous inspections and has been noted since 2010.
e. Various locations of spalled concrete and exposed reinforcing was observed through both culverts.
f. No infiltration into the culvert was observed in 2021.

Recommended Action:

- Remove deposited riprap in the box culverts.
- Monitor sediment in the box culverts.
- Monitor the joint gaps in the box culverts.
- Monitor spalled concrete, and exposed reinforcing in the culverts.

4. Markwood Downstream Overflow (Constructed 1981-1984)

a. The overflow was in satisfactory condition.

Recommended Action:

- None

5. Markwood 8 feet x 4 feet Box Culvert (Constructed 1981-1984)

a. The culvert was only visually inspected from the outside at the downstream end. No obstructions or sedimentation was observed, and the box culvert appeared to be in satisfactory condition.

Recommended Action:

- None

6. Georgia Avenue Crossing (Constructed 1981-1984)

a. The concrete culverts appeared to be in satisfactory condition.

Note: references to "right" and "left" are with respect to facing downstream.

b. Cracking and potential spalling was observed in the south (right) culvert at the second and fourth joints at approximately the five o'clock position.
c. Minor erosion was observed between the concrete culverts at the upstream end.
d. The riprap on the downstream end has been slightly redistributed to create a channelized flow path.
e. Both culverts appeared to begin to drop around mid-channel.
f. There is a downed tree upstream of the culvert that is partially in the creek.
g. Some riprap has deposited in the north (left) culvert.

Recommended Action:

- Remove the upstream downed tree.
- Remove the riprap in the north (left) culvert.
- Monitor cracking and potential spalling in the south (right) culvert.
- Monitor minor erosion between the concrete culverts on the upstream end.
- Monitor riprap on the downstream end to ensure it continues to provide adequate energy dissipation.

7. Edgewood Embankment (Constructed 1981-1984)

a. The concrete culvert appeared to be in satisfactory condition.
b. The embankment appeared to be in satisfactory condition.
c. No visible settlement or erosion was observed along the embankment.
d. Small trees and shrubs were observed growing on the embankment.
e. The natural boulder riprap between the Edgewood embankment and Douglas Drive crossing is significantly overgrown with vegetation.
f. Spalled concrete was observed at the fifth joint from the upstream end at approximately the 7 o'clock position.
g. Spalling observed on north (right) side of outlet.
h. Sediment has accumulated in the pool downstream of the culvert and formed a delta, which had some vegetation growing on it. The deposited sediment was generally creating a meander in the creek toward the south (right) bank.

Recommended Action:

- Remove small trees and shrubs growing on the embankment.
- Clear woody vegetation in the channel between the Edgewood Embankment and Douglas Drive crossing as needed to maintain a clear flow path through the channel.
- Monitor spalled concrete at the fifth joint from the upstream end in the culvert.
- Monitor spalling on outlet structure.
- Monitor sediment accumulation in the pool downstream of the culvert.

8. Douglas Drive Crossing (Constructed 1981-1984)

a. The concrete box culvert appeared to be in satisfactory condition.

Note: references to "right" and "left" are with respect to facing downstream.

b. The grouted riprap installed on either side of the box culvert outlet has started to deteriorate, and a gap has opened between the grout and the wall of the box culvert. This is consistent with previous inspections and has been noted since 2016.
c. Spalled concrete was observed at the downstream north (left) wing wall.
d. Sediment has deposited in the bottom of the culvert, ranging from 0-2 inches deep.
e. Riprap was observed in the culvert.
f. On the downstream end of the culvert, settling was observed in the sidewalk on either side of the culvert.
g. Small trees were observed growing adjacent to the structure at the downstream end.
h. Although not part of the flood control project, the privately-owned CMP culvert downstream of the Douglas Drive crossing is in poor condition. Sagging of this culvert has been observed during inspections since 2009. The culvert is significantly bowing and settling has occurred on either side of the culvert, which is evident in the road pavement above the structure.

Recommended Action:

- Consider adding a safety railing along the sidewalk at the upstream and downstream end of the culvert.
- Remove riprap from the culvert.
- Monitor deposited sediment in the culvert.
- Monitor grouted riprap at the downstream end of the box culvert.
- Monitor spalled concrete at the downstream north (left) wing wall.
- Monitor settling in the sidewalk at the downstream end of the culvert.
- Although not part of the flood control project, it is recommended that the City coordinate with the property owner to repair or replace the culvert downstream of Douglas Drive.

9. 34th Avenue Crossing (Constructed 1981-1984)

a. The concrete culvert appeared to be in satisfactory condition.
b. Some riprap has deposited in the culvert.
c. Sediment has deposited in the bottom of the culvert, ranging from 0-4 inches deep. This is consistent with previous inspections and 0-12 inches of sediment has been noted in the culvert since 2002.
d. The tie bars directly upstream and downstream of the manhole connection to the culvert were rusty and flaking. This is consistent with previous inspections and has been noted since 2008.

Recommended Action:

- Remove riprap from the culvert.
- Monitor accumulated sediment in the culvert.
- Monitor tie bars directly upstream and downstream of the manhole connection to the culvert.

Note: references to "right" and "left" are with respect to facing downstream.

10. Brunswick Avenue Crossing (Constructed 1981-1984)

a. The north (left) culvert is at a slightly lower elevation at the upstream end, therefore the north (left) culvert was conveying a majority of the base flow at the time of the inspection.
b. The north (left) culvert had some joint separation near the downstream end. Rocks have accumulated causing a small flow obstruction.
c. Strained and detached tie bars were observed in the north (left) culvert. One joint with broken tie bars was previously re-grouted by the City of Crystal, but the joint reopened and a 1-1/2 inch gap in the joint was observed during the 2008 inspection. A 3-inch gap in the joint has been noted since 2009.
d. Spalled concrete and exposed reinforcing were observed in various locations in the south (right) culvert.
e. Fractured pieces of concrete and grout were observed at various joints in both culverts.
f. Longitudinal and circumferential cracks were observed in both culverts.
g. Cracks were observed in the road pavement above the structure.
h. Sediment has deposited in the channel between the Brunswick Avenue crossing and the 32nd Avenue crossing and created two deltas in the channel. The channel was armored with boulder riprap in 2014. The sediment delta has been observed since 2017.
i. Two boulders had fallen out of place on the south (right) side of the natural boulder wall, between the Brunswick Avenue crossing and the 32nd Avenue crossing and were deposited in the channel bottom.

Recommended Action:

- Repair detached tie bars.
- Repair fractured concrete and grout at joints in the culverts.
- Replace boulders into the natural boulder wall between the Brunswick Avenue crossing and the 32nd Avenue crossing.
- Remove deposited sediment and vegetation in the channel between the Brunswick Avenue crossing and the 32nd Avenue crossing.
- Monitor spalled concrete and exposed reinforcing in the culverts.
- Monitor minor cracks in the culverts and road.
- Monitor joint separation in north (left) side culvert.

11. 32nd Avenue Crossing (Constructed 1981-1984)

a. The southwest (right) culvert is at a slightly lower elevation at the upstream end.
b. The concrete culverts appeared to be in satisfactory condition. The culverts were only visually inspected from the outside at the upstream and downstream ends due to low clearance and high-water levels.
c. Water was observed seeping into the north (left) culvert through the bottom of the first joint at the upstream end of the culvert. Water then seeped below the culvert through the second joint and back into the culvert through the third joint. These observations indicate

Note: references to "right" and "left" are with respect to facing downstream.

that the joints are not well sealed and there is potential for loss of fines (piping) below the culvert.

d. Concrete erosion along the culvert invert was noted at the upstream side of the north (left) culvert and at the upstream joints.
e. A downed tree was observed in the channel upstream of the culvert.

Recommended Action:

- Remove the downed tree upstream of the crossing.
- Monitor the joints and any potential settling or other issues at the upstream end of north (left) culvert.

12. Bassett Creek Park Pond and Outlet (Constructed 1995)

a. Bassett Creek Park Pond appeared to be in satisfactory condition.
b. Sediment has deposited in the northwest corner of Bassett Creek Park Pond and formed multiple deltas, which are overgrown with trees and vegetation. This has been noted since 2006 and the sediment deposition appears to be increasing.
c. The outlet pipes appeared to be in satisfactory condition.

Recommended Action:

- None

Additional Comments:

- Dredging of Bassett Creek Park Pond and upstream channel improvements (BCP-2) is included in the BCWMC CIP Table 5-3. The BCWMC completed a feasibility study for the dredging of Bassett Creek Park Pond and Winnetka Pond in May 2017. The City of Crystal dredged Winnetka Pond East in 2019. The Bassett Creek Park Pond dredging is included as a future BCWMC CIP project, pending funding.

13. Detention Pond and Outlet Structure (Constructed 1995)

a. The outlet structure appeared to be in satisfactory condition.
b. The detention pond appeared to be in satisfactory condition, but a survey is needed to assess accumulated sediment.

Recommended Action:

- Survey the detention pond to determine if the pond has accumulated sediment.

Crystal / Golden Valley Features

Inspection Date: August 19, 2021
Inspection Personnel: Patrick Brockamp and Josh Phillips (Barr)

Note: references to "right" and "left" are with respect to facing downstream.

1. **Highway 100 Double Box Culverts (Constructed 1930s, and 2001) and Inlet Structure (Constructed 1995)**
    a. The concrete box culverts and concrete inlet structure appeared to be in satisfactory condition.
    b. Circumferential cracks and areas of spalled concrete were observed in the north (left) box culvert.
    c. Longitudinal cracks, circumferential cracks, and areas of spalled concrete were observed along the top of the south (right) box culvert. MnDOT performed repairs to the culverts in 2007, but cracks have been noted since 2008 and areas of concrete spalling have been noted since 2014.
    d. Deposited sediment was observed in the north (left) box culvert, generally ranging from 6-24 inches deep. This is consistent with previous inspections and 6-24 inches of deposited sediment has been observed in the north (left) box culvert since 2002.
    e. The outlet portion of the structure appeared to be in satisfactory condition.

Recommended Action:

- Monitor accumulated sediment in north (left) box culvert and consider future removal.
- Monitor cracking and spalling concrete in both box culverts.

Minneapolis Features

Inspection Date: August 19, 2021
Inspection Personnel: Patrick Brockamp and Parker Brown (Barr)

1. **Open Channel (Constructed 1992)**
    a. The open channel, from Van White Memorial Boulevard to the inlet structure, appeared to be in satisfactory condition.
    b. The banks were generally vegetated. Some areas had exposed soil and steep slopes but seemed stable and no obvious signs of bank erosion were noted.
    c. Sediment has deposited and formed a delta on the south (right) side of the channel between the debris barrier and inlet structure. Vegetation was growing on the delta and approximately one-quarter of the channel was blocked by the sediment, debris, and vegetation. This is consistent with last year's observation.
    d. A new outfall with riprap armoring was installed from the Minneapolis impound lot.

Recommended Action:

- Remove accumulated sediment and debris on the south (right) side of the channel between the inlet structure and debris barrier.
- Monitor downed tree(s) and debris and remove as needed.

Additional Comments:

Note: references to "right" and "left" are with respect to facing downstream.

- Bassett Creek Main Stem Erosion Repair Project (CIP 2017 CR-M) is included in the BCWMC CIP Table 5-3. The BCWMC completed a feasibility study for the project in May 2016, and ordered construction of the project at their September 2016 meeting. The project was originally scheduled for construction during the summer of 2018, but due to permitting issues with the US Army Corps of Engineers and the State Historic Preservation Office, it was postponed, and construction was completed in November and December of 2020. The project should reduce erosion along segments of the Bassett Creek channel and minimize sediment and pollutant transportation downstream to the Mississippi River.

- The City of Minneapolis removed the Irving Avenue Bridge, immediately upstream of the Bassett Creek Main Stem Erosion Repair Project limits and replaced a sanitary sewer across Bassett Creek. Restoration included additional riprap and rock vanes in Bassett Creek in this area (see BCWMC #2020-16).

2. Debris Barrier (Constructed 1992)

a. The debris barrier piles appeared to be in satisfactory condition.
b. The cable was missing or broken in the center portion of the channel. The middle seven barrier piles did not have a cable attached. The cable should extend from end to end, attached at each post.

Recommended Action:

- Repair or replace the steel cable on debris barrier.
- Monitor for debris and remove as needed.

3. Inlet Structure (Constructed 1992)

a. The concrete inlet structure appeared to be in satisfactory condition.
b. Vertical cracks were observed in the concrete on either side of the structure.
c. Cracks were observed near where the handrail posts are embedded.
d. The railings appeared to be in satisfactory condition.
e. Some of the vertical bars have been bent and projecting a slight bow but generally appeared to be in satisfactory condition.
f. The inlet structure was clear of debris.

Recommended Action:

- Monitor for debris and clear as needed.
- Monitor cracks in the concrete inlet structure.

4. Double Box Culvert (Constructed 1992)

a. The 5-year double box culvert inspection was performed on October 22-23, 2019. The BCWMC prepared a separate report for the 2019 double box culvert inspection. The next inspection will be scheduled in 2024.

Note: references to “right” and “left” are with respect to facing downstream.

5. 3rd Avenue Tunnel (Constructed 1990) and 2nd Street Tunnel (Constructed 1979)

a. Inspection of the Third Avenue and Second Street "deep" tunnels are on a 5-year and 10-year inspection interval, respectively. The most recent inspection of the deep tunnels was completed in 2020.

Table 1: Routine vs. Major Maintenance and Repairs Items

Item #	Routine vs. Major Maintenance and Repairs – as Recommended by the TAC[1] and approved by the BCWMC[2]
Routine	
1	Vegetation: removal of trees, removal of brush, chemical treatment of stumps, control of noxious weeds, establish vegetation on bare areas
2	Removal of debris: woody debris, riprap, trash from channel, inlets, culverts
3	Repair erosion; channels, inlet and outlet structures, culvert ends
4	Repair/replace riprap: on inlet and outlet ends of culverts, channels, banks
6	Remove sediment from channels, structures, culverts, etc.
10	Repair/maintain guard rails, handrails and fencing: remove rust, prime and paint, repair damaged rails and posts, replace rusted-out sections, repair cables, replace posts, repair chain link fence
12	Repair concrete pipe: repair joints, tie-bolts, spalling, connection to culverts, breakage
13	Repair/replace catch basins, manholes, casting assemblies, grates
14	Repair/maintain debris barrier: removal of debris, repair cables, replace poles
15	Repair/maintain tunnel inlet trash rack: repair/replace trash rack rods (loose or broken, vandalized, bent)
16	Street repairs: pavement, curb and gutter, cracks, depressions, settlement
Major	
5	Repair/replace gabion baskets
7	Remove sediment/dredge ponds, basins, etc.
17	Tunnel repairs: concrete and other repairs to the new Bassett Creek tunnel
Could be major depending on extent	
8	Repair scouring/undercutting at structures and culvert outlets
9	Repair concrete structures: cracking, spalling, breakage
11	Culverts/Bebo sections: joints, settlement, separation, concrete spalling, wing walls – movement and breakage

[1] Based on needed repairs identified during 2016 FCP inspection.
[2] Per BCWMC actions at their May 19, 2016 and July 21, 2016 meetings.

Note: references to "right" and "left" are with respect to facing downstream.

Item 4E.
BCWMC 10-21-21
Full Document Online

Environmental Assessment Worksheet

Main Stem Lagoon Dredging Project

Prepared for
Bassett Creek Watershed Management Commission

October 2021

4300 MarketPointe Drive, Suite 200
Minneapolis, MN 55435
952.832.2600
www.barr.com

Environmental Assessment Worksheet

Main Stem Lagoon Dredging Project

October 2021

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July 2013 version

ENVIRONMENTAL ASSESSMENT WORKSHEET

This Environmental Assessment Worksheet (EAW) form and EAW Guidelines are available at the Environmental Quality Board's website at: http://www.eqb.state.mn.us/EnvRevGuidanceDocuments.htm. The EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project Title

Main Stem Lagoon Dredging Project

2. Proposer

Bassett Creek Watershed Management Commission
Contact person: Laura Jester
Title: Administrator
Address: 16145 Hillcrest Lane
City, State, ZIP: Eden Prairie, MN 55346
Phone: (952) 270-1990
Email: laura.jester@keystonewaters.com

3. RGU

City of Golden Valley
Contact person: Marc Nevinski
Title: Physical Development Director
Address: 7800 Golden Valley Road
City, State, ZIP: Golden Valley, Mn 55427
Phone: (763) 593-8008
Email: mnevinski@goldenvalleymn.gov

4. Reason for EAW Preparation

Required:	Discretionary:
· EIS Scoping	· Citizen petition
X Mandatory EAW	· RGU discretion
	· Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

Minnesota Rules, part 4410.4300, subpart 27 – Public waters, public waters wetlands, and wetlands.

5. Project Location

- County: Hennepin County
- City/Township: Golden Valley
- PLS Location (¼, ¼, Section, Township, Range): Sections 17 and 20, Township 29N, Range 24W
- Watershed (81 major watershed scale): Mississippi River – Twin Cities
- GPS Coordinates: Latitude: 44.992641 Longitude: -93.320695
- Tax Parcel Numbers: 702924310001, 1702924340008, 1702924340006, 2002924230002, 1702924340010, and 2002924210004

At a minimum attach each of the following to the EAW:

- County map showing the general location of the project (**Figure 1**)
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable) (**Figure 2**)
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan. (**Appendix A**)

Figures are included in the "Figures" section at the end of the document text.

6. Project Description

a. Provide the brief project summary to be published in the *EQB Monitor*, (approximately 50 words).

The Bassett Creek Watershed Management Commission's (BCWMC) current Capital Improvement Program (CIP) includes project BC 7 "dredging of accumulated sediment in Main

Stem of Bassett Creek just north of Highway 55, Theodore Wirth Regional Park" (Main Stem Lagoon Dredging Project; Project). The Project includes dredging accumulated sediment from three lagoons (D, E, and F) along the Main Stem of Bassett Creek to improve water quality, improve habitat, and alleviate flooding.

b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities.

Project-related activities include removal of sediment from Lagoons D, E, and F (**Figure 3).** As planned, the Project would dredge all three lagoons (D, E, and F) to a depth of 6 feet, removing approximately 39,600 cubic yards of accumulated sediment. The lagoon bathymetry and bottom elevation currently varies from a deeper flow channel to sediment islands. In general, the depth of excavation will vary between 0 to 10 feet, roughly from 820 feet above mean sea level (amsl) to 810.6 feet amsl. After construction the approximate 6-foot depth of the three lagoons would increase the flood storage by approximately 2.19 acre feet.

Sediment removal would occur with mechanical dredging, using an excavator to scoop the sediment, with no grading taking place within the bottom of the lagoons. Excavation would be completed during the winter months when water levels are low.

Sediment from the three lagoons was tested in Fall 2019 for contaminants as part of Project planning. Testing results indicate that the sediment removed from the lagoons is not suitable for off-site reuse under MPCA's Best Management Practices for the Off-Site Reuse of Unregulated Fill document due to concentrations of polycyclic aromatic hydrocarbons (PAHs) as benzo[a]pyrene (BaP) equivalents and diesel range organics (DRO) (MPCA, 2012). In addition, BaP equivalents are above the MPCA Industrial Soil Reference Value (SRV), indicating the sediments are not suitable for reuse at other commercial or industrial properties. Based on the sediment sampling results and MPCA guidelines, the dredged material will require landfill disposal. If required, the dredged material would be stockpiled and allowed to dewater prior to hauling. Once selected, the contractor would be responsible for locating a suitable landfill for disposal of the dredged material.

The Project is located on public property (Theodore Wirth Regional Park) which is owned by the Minneapolis Park and Recreation Board (MPRB). Site access during construction would occur via Theodore Wirth Parkway.

It is anticipated that construction would begin in January 2023. Dredging activities would be completed by March 2023. The overall project, including restoration, would be completed by summer 2023.

c. Project magnitude:

Table 1 provides a summary of the proposed Project's magnitude.

Table 1 Project Magnitude Summary

Component	Size
Total project acreage	24.5 acres
Linear project length	Not applicable
Number and type of residential units	Not applicable
Commercial building area (in square feet)	Not applicable
Industrial building area (in square feet)	Not applicable
Institutional building area (in square feet)	Not applicable
Other uses—specify (in square feet)	Not applicable
Structure height(s)	Not applicable

d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.

Overall, the purpose of the Project is to increase permanent pool volume and sediment storage volume in the three lagoons; this would accomplish the following goals and objectives:

1. Reduce sediment loading to the Main Stem of Bassett Creek and improve downstream water quality by removing an estimated 600 lbs of total phosphorus (TP) and 156,000 lbs of total suspended solids (TSS) removed annually.
2. Remove accumulated sediment that is contaminated with PAHs, elevated lead, and petroleum associated with DRO.
3. Restore the intended design aesthetics and function of the original lagoon project.
4. Preserve natural beauty along the Main Stem of Bassett Creek and contribute to natural habitat quality.
5. Restore flood conveyance through this section of Bassett Creek.
6. Improve habitat for fish and other aquatic species by deepening the lagoons.

e. Are future stages of this development including development on any other property planned or likely to happen? · Yes X No

If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.

f. Is this project a subsequent stage of an earlier project? X Yes · No

If yes, briefly describe the past development, timeline and any past environmental review.

The Civilian Conservation Corps (CCC) originally constructed the three lagoons (seven in total) in 1937. Approximately 405,000 cubic yards (CY) of soil was excavated to create all seven lagoons. The seven lagoons created 27 acres of open water and 36 acres of usable land for recreation.

Since their creation in 1937, significant development has occurred throughout the watershed. A study performed by Barr in 2015 (Barr 2015) found that the lagoons remained relatively unchanged until the early to mid-1990s when dramatic changes started to occur. The study concluded that a sediment pulse in the early 1990's was the main contributor to rapid sedimentation in the lagoons. Through comparison of historical aerial imagery, it was apparent the lagoons were filling in, becoming noticeably shallower with sediment deposits forming along the banks. Lagoons D, E, and F have filled in significantly, becoming shallower and narrower. Sediment islands have formed in Lagoon E, which restricts flow and reduces the flood storage available in the area, resulting in an increase in flooding during smaller storm events. This could lead to additional flooding in other areas that would normally not be inundated. The sediment islands may also deflect flow and create erosion along the banks.

7. Cover Types

Estimate the acreage of the site with each of the following cover types before and after development: An assessment of land cover types was estimated using geographic information systems (GIS); the results are summarized in **Table 2** and shown in **Figure 4**.

Bassett Creek Watershed Management Commission

September 27, 2021

Liz Stout, P.E.
Water Resources Regulatory Coordinator
City of Minneapolis
309 Second Avenue South, Room 203
Minneapolis, MN 55401

Kevin Danen, P.E,
Surface Water & Sewers
City of Minneapolis
1901 East 26th Avenue
Minneapolis, MN 55404

Re: North Loop Green Phase III Mixed Use Development – Minneapolis, MN

Dear Liz and Kevin:

We appreciate the city bringing the referenced project to our attention and for requesting our review and comments. It's our understanding the North Loop Green Phase III building project is proposed to be constructed directly over the access vault, shaft and drop structure located at station 116+50 and over a section of the Bassett Creek tunnel (including the box culvert and Third Avenue tunnel). The drop structure is the transition between the box culvert and the Third Avenue tunnel. The 12-foot by 8-foot access shaft, located near the drop structure, is currently located in a parking lot and protected by five precast concrete cover planks. This site would be a primary staging area for future tunnel rehabilitation projects and under current site conditions it provides a large-scale access to tunnel infrastructure, which is not only imperative for routine maintenance but also under emergency circumstances. Although this project is located within an area in the City of Minneapolis under the jurisdiction of the Mississippi Watershed Management Organization (MWMO), it is our understanding that the BCWMC established an internal policy for taking on the operations and maintenance responsibility of the Bassett Creek tunnel and flood control project. In light of that policy and the BCWMC's longstanding involvement, please note the following preliminary comments and concerns based on our limited review and understanding of the development:

A. Station 116+50 Drop Structure and Access Shaft

1. As BCWMC engineer, we strongly oppose constructing a building or any other physical improvement directly over the Bassett Creek tunnel access shaft and recommend the developer investigate alternative plans to keep the access available and free of encumbrances for future access and construction. This includes providing adequate space for operating a crane around and above the shaft for transporting materials, large equipment, and personnel into the tunnel and to be available for emergency extraction of personnel inspecting or working in the tunnel.
    a. Construction staging involving tunnel repairs requires significant area to mobilize and stage personnel, equipment and materials. The proposed plans would substantially hinder those operations compared to existing conditions.

b. The 12-foot by 8-foot access shaft and vault at station 116+50 is oversized compared to other access areas and is crucial for debris removal and transporting large equipment such as skid steers and other mobile equipment, pumps, concrete, grout and grout lines, other materials, and personnel into the Third Avenue and Second Street tunnel system.
c. Compromising access to the shaft may significantly increase the cost to inspect and perform repairs to the tunnel and drop structure, including increased mobilization. ECI, Inc. (developer's consultant) provided an opinion of providing alternative access to the tunnel without the use of a crane. The letter did not assess the mobilization and construction cost implications associated with performing tunnel rehabilitation under the proposed development scenario compared to the existing open site. Also, the letter did not provide an opinion if the alternative access would allow for the mobilization of large equipment into the tunnel.
d. During construction, the shaft may also provide a critical location to stage a crane and personnel basket for emergency egress and personnel extraction due to injury, rising water elevation or other unsafe atmosphere conditions.

2. Does the City have an easement interest over the tunnel shaft that restricts or otherwise limits construction of physical improvements directly over the shaft? Such an easement may exist, given this critical infrastructure and would presumably prohibit the proposed development.

B. <u>Box Culvert and Third Avenue Tunnel (collectively referred to as tunnel)</u>

1. Excavation and dewatering along the tunnel must be performed utilizing means and methods to protect the tunnel's integrity. The developer must demonstrate that the proposed building/development or construction methods will not increase loading on the tunnel and drop structure/shaft or negatively impact the tunnel and drop structure/shaft structural integrity during construction or result in consolidation of soils beneath the box culvert segment of the tunnel resulting in settlement.
2. Dewatering methods and controls must be in place to prevent settlement of the box culvert segment of the tunnel. If groundwater drawdown is anticipated, the developer must address the following:
    a. What is the lowest elevation of the proposed groundwater drawdown?
    b. How will the drawdown impact the tunnel?
    c. What monitoring will be in place to document groundwater drawdown limits and to ensure the drawdown does not negatively impact the tunnel?
    d. What internal tunnel monitoring is proposed to document potential impacts?
3. If the work exposes the box culvert segment of the tunnel, earth pressures should generally be balanced along the tunnel during excavation and backfilling.
4. Stormwater runoff, groundwater or any water collected from dewatering operations must not be discharged into the Bassett Creek tunnel system, on a temporary or permanent basis without prior approval by the BCWMC.
5. The proposed North Loop Green Phase III appears to be located in an area where the tunnel cannot tolerate any settlement. See the following excerpt from the US Army Corps of Engineers' June 1997 Operation and Maintenance (O&M) Manual for the Bassett Creek Flood Control Project (conduit=box culvert):

Conduit

Sediment, rock, timber, and debris buildup in the conduit will reduce the capacity. Therefore, the conduit should be inspected and cleaned as required. Access to the conduit is available through access manholes located at channel stations 125+00, 134+00, 144+50, 156+50, 165+00, and 170+80.

The concrete box conduit could be adversely affected in two ways by loads on the ground surface. The most obvious negative impact would occur if the structural capacity of the box conduit was exceeded. The other aspect would occur if the imposed surface load remained long enough to cause consolidation of the soil beneath the conduit, resulting in settlement that could damage the structure.

Listed below are the surcharge loads used in the design of the concrete conduit:

Station	Surcharge[1]	Surcharge[2]
116+50 to 138+00	652	31
138+00 to 145+00	705	34
145+00 to 155+00	735	35
155+00 to 169+00	768	37
169+00 to 172+00	987	47

[1] Pounds per square foot.
[2] Kilopascals.

The conduit between station 130+00 to 133+00 and station 150+00 to 152+50 was designed to accommodate only limited settlement by the addition of shear keys at 50-foot (15 m) spacing. The conduit between stations 119+00 and 121+00 cannot tolerate any settlement. Therefore, additional surface loading between these stations must be prohibited because of the poor soils that would consolidate with increased pressure.

C. Cooperative Agreements

1. Several agreements, including but not limited to the following, document O&M responsibilities of the Bassett Creek Flood Control Project (including the tunnel and drop structure).
    a. Agreement between The State of Minnesota Department of Transportation and the City of Minneapolis, February 3, 1978
    b. Local Cooperation Agreement between Department of the Army and The City of Minneapolis, Minnesota for Flood Protection on Bassett Creek, Hennepin County, Minnesota, June 27, 1986.
    c. Operation and Maintenance Manual, Flood Control Project Bassett Creek Local, Hennepin County, Minnesota, US Army Corps of Engineers, St. Paul District, June 1997 (O&M Manual)
    d. Joint and Cooperative Agreement for Boundary Change by and between the City of Minneapolis, the Bassett Creek Watershed Management Commission and the Middle Mississippi River Watershed Management Organization. September 28, 2000.

2. Finally, it's our understanding that any proposed improvement or modification to any of the Bassett Creek Flood Control Project features, which includes the above-mentioned elements, requires review and approval from other individuals and entities, including but certainly not limited to, the United States Army Corps of Engineers (USACE) District Engineer, the Minnesota Department of Transportation (MnDOT) and the City of Minneapolis Public Works and Surface

Waters and Sewers division. For those reasons, individuals that should be made aware of this project and the numerous concerns have been copied on this correspondence.

Our comments are based on our knowledge of the Bassett Creek tunnel and the following documents provided by the city:

1. North Loop Green Phase III, Permit Set 11/23/2020, Drawings A1.2-C (Level P3); L1.02A (Level 1.02A)
2. North Loop Green Phase III, Drawing issue 7/20/2021, Drawing A2.0 (Parking Plans); Drawing C2.0 (Area Site Plan); Drawing C4.2 (Utility Plan, Storm Sewer, Parking Level P3; Drawing C4.4 (Utility Plan, Sanitary Sewer & Watermain, Parking Level P3)
3. Document titled *North Loop Green III Mixed Use Project, Access to and potential use of the Bassett Creek (Vault) Drop Shaft Lid,* author, and date unknown.
4. Infinity Scaffold Quotation Number 21-0670, September 23, 2021.
5. ECI letter to Mr. David Spillman, North Loop Green III, Bassett Creek Tunnel Shaft Surface Access Rev 2, August 12, 2021.
6. ECI letter to Mr. David Spillman, North Loop Green III, Bassett Creek Tunnel Shaft Surface Access Rev 1, August 5, 2021.

In addition, the following information was also reviewed.

7. North Loop Green Phase III, Drawing Update 7/20/2021, Drawing AS0.1 (Tunnel Section).
8. OSM/St. Paul District, Corps of Engineers, As-Built Drawing M34.4-P-64/8 (Bassett Creek Stage IV, Drop Structure Section), July 1992.
9. Operation and Maintenance Manual, Flood Control Project Bassett Creek Local, Hennepin County, Minnesota, US Army Corps of Engineers, St. Paul District, June 1997 (O&M Manual).

If you have questions, please contact me at 952-832-2784 (jherbert@barr.com) or Laura Jester, BCWMC Administrator at 952-270-1990 (Laura.jester@keystonewaters.com).

Sincerely,

Jim Herbert, P.E.
Barr Engineering Co.
Engineers for the Bassett Creek Watershed Management Commission (BCWMC)

c: Stephanie Johnson, City of Minneapolis
Jeremy Strehlo, City of Minneapolis
Catherine Cesnik, BCWMC Chair
Laura Jester, BCWMC Administrator
David T. Anderson, Kennedy & Graven, Chartered (BCWMC Attorney)
Eric Wittine, USACE
Mark Pribula, MnDOT
Beth Neuendorf, MnDOT

Project Location
Bassett Creek Tunnel
Municipality
BCWMC Legal Boundary

BARR

N

0 150 300 Feet

Bassett Creek Watershed Management Commission

BCWMC #2021-3001A
NORTH LOOP
GREEN PHASE III
MIXED USE DEVELOPMENT
Minneapolis, MN

LOCATION MAP

Barr Footer: ArcGIS 10.8.1, 2021-10-14 10:21 File: I:\Client\BassettCreek\gis\maps\Permits\Maps-2021\2021-3001A North Loop Green Phase III Mixed Use Development.mxd User: EMA

Item 5B.
BCWMC 10-21-21

Bassett Creek Watershed Management

MEMO

To: BCWMC Commissioners and Alternate Commissioners
From: Laura Jester, Administrator
Date: October 14, 2021

RE: Chloride Reduction Efforts and Projects

With winter knocking at the door, it's time to get caught up on all the chloride reduction projects happening in the Bassett Creek Watershed and beyond. In addition to these new projects, the BCWMC education program and activities through the West Metro Water Alliance continue to focus on salt reduction with a variety of messages and materials.

1. Hennepin County Chloride Initiative (HCCI)

This project began when all eleven watersheds in Hennepin County agreed to use 10% (or $101,800) of their 2019 Watershed Based Implementation Funding to collectively address chloride pollution from winter deicers through a county-wide effort. Members of this collaborative include the eleven watershed organizations, Hennepin County, the Minnesota Pollution Control Agency, Stop Over Salting volunteers, and multiple cities including Plymouth and Minneapolis. Although this effort was originally coordinated by Riley Purgatory Bluff Creek Watershed District (RPBCWD), coordinating responsibilities were moved to BCWMC in early 2021 due to staffing changes at RPBCWD. To date, project outcomes include:

- Technical Barriers Study: A study by a University of Minnesota Ph.D. student on the barriers, needs, and attitudes of private salt applicators around the Metro Area in reducing chloride usage. Qualitative interviews and quantitative survey data were collected from private salt applicators in the summer and fall of 2019. The study found that knowledge of, and education about chloride water contamination issues were not necessarily a barrier for salt applicators. Liability and client demand were most associated with salt application choices, along with financial costs and liability concerns.

- Smart Salting for Property Management Manual: Some HCCI funding was used for the development of this guidebook by Fortin Consulting in 2019.

- Winter Maintenance Plan Templates: Development of templates for winter maintenance (or chloride reduction) plans to be used by cities or watersheds who request or require them for certain developments. (For example, BCWMC required the previous Four Seasons Mall developer to implement a chloride management plan, but when asked for an example or template for such a plan, none existed at the time.) Fortin Consulting was hired by HCCI to develop the templates. A group of advisors (including me and Plymouth staff) provided input and review of the draft templates. Three different levels of templates (basic, intermediate, and detailed) were developed along with a calculator to help determine the best template for a particular site or development. Find the calculator and templates at: https://www.bassettcreekwmo.org/developer/winter-maintenance.

- Professional Marketing Campaign: HCCI recently decided to request proposals from professional marketing firms to develop a program that will engage, educate, and support citizen boards with condo and townhome associations and faith-based organizations in reducing the amount of winter deicing salt used on their properties. A Request for Proposals is being distributed to firms this week. We envision the campaign materials (including a presentation and video) would be delivered by city or watershed staff or volunteers in order to build trust and ongoing relationships with these groups. Implementation of the program will hopefully result in a shift in client demand toward a reduction in deicing salts, and the use of best practices by contracted winter maintenance crews for targeted properties.

2. Parkers Lake Chloride Reduction Project Facilitation

This project is part of a BCWMC Capital Improvement Project aimed at reducing chloride loading to Parkers Lake. In this initial phase of the project, Plymouth is contracting with Young Environmental Consultants to facilitate data gathering and conversations with water quality experts from a variety of cities and watersheds (including BCWMC). This phase is also being partially funded with HCCI funding. The results of this phase of the project will be to: 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, 3). Develop a recommendation for a future pilot project to reduce chloride concentrations in Parkers Lake and could be replicated in other areas of Hennepin County, similar to Parkers Lake, and 4). Help target education and training needs by land use.

The first meeting of the group of water quality experts was held in July. Experts are currently gathering and analyzing their own chloride data to present to the group at a meeting later this month. Additional meetings are schedule for November, December, and January. A final report should be available early next year.

3. City Initiatives and MS4 Permits

Cities continue to use a variety of new and existing methods to help reduce chloride use. Here are just a few of the chloride management techniques used by BWCMC member cities.

- The new MS4 permit includes requirements for cities with regards to winter maintenance and chloride use including proper storage and handling, Smart Salt certified crews, education and outreach to the community, development and use of a written snow and ice management policy, etc. Each city is currently reviewing their practices and are revising policies and procedures, as warranted. Additionally, each city must now require proper salt storage at commercial, institutional, and industrial facilities including indoor or covered salt storage areas located on impervious surfaces.

- Cities (including Plymouth and Minnetonka) are hosting Smart Salting Certification Trainings for roads and parking lots/sidewalks. Classes being held this fall are filling up fast.

- Golden Valley is adding language to all its stormwater maintenance agreements requiring submittal of a Chloride Management Plan, addressing the use of chloride on the site, snow storage areas, personnel certified for chloride application, rate of application for the site, and sensitive areas to avoid application. The city is also developing a chloride dosing calculator for property managers.

- Plymouth is using its new high efficiency street sweeper to pick-up left-over salt in some areas. A report on the street sweeper is expected to be presented to the Commission in November.

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co. (Barr)
Subject: Item 5C: Sweeney Lake Chloride Sources
BCWMC October 21, 2021 Meeting Agenda
Date: October 14, 2021

Recommendation:

1. Review data and consider additional GIS analysis and loading estimates of individual chloride sources in the Sweeney Lake watershed The estimated range of cost to complete the GIS analysis and loading rate estimate of chloride sources in the Sweeney Lake watershed is between $5,000 and $10,000.

1.0 Executive Summary

At the August 2021 BCWMC meeting, Commissioners learned of the high chloride levels in Sweeney Lake and asked that chloride sources and reduction measures be reviewed at a future meeting. We analyzed chloride data from Sweeney Lake, chloride and conductivity data from the Sweeney Lake Branch (the creek that flows into Schaper Pond from the south), and land use information for the watershed. Results confirm that the Sweeney Lake Branch portion Sweeney Lake's watershed represents a significant portion of the overall chloride loading to the lake due to the higher density of impervious surface throughout the watershed (Figure 1). Results also confirm that reductions in chloride loading from the Sweeney Lake Branch of the watershed will also quickly lead to commensurate reductions in the chloride concentrations measured in Sweeney Lake following future implementation of management actions.

2.0 Background and Preliminary Analysis of Chloride Loading

Chloride levels in Sweeney Lake have become progressively higher within the last ten years, exceeding the 230 mg/L State standard, including a 284 mg/L annual average chloride concentration in 2020. As a result, Administrator Jester asked Barr to help frame and plan for discussion on reducing chloride loading to Sweeney Lake by evaluating the Sweeney Lake Branch stream monitoring data and recommending next steps for identifying and controlling the main sources of chloride in the Sweeney Lake watershed. This memorandum includes a detailed analysis of the available 2020 monitoring data, including mass balance estimates of chloride for the Sweeney Lake Branch stream station and Sweeney Lake.

Figure 1 shows the tributary area draining to the Sweeney Lake Branch water quality monitoring station, including land use delineations, and estimated impervious surfaces The imperviousness and proportion of higher density land use development (more impervious than single family residential) within the tributary area shown in Figure 1 is higher than the overall drainage to Bassett Creek. It is expected that the higher

density land use development corresponds with a higher proportion of salt (and associated chloride) loading due to contributions from private applicators, in addition to the road salt applied to the surrounding road surfaces by public entities.

The available 2020 monitoring data was the preliminary focus of analyzing chloride loading in the Sweeney Lake watershed, in addition to the 284 mg/L annual average chloride concentration in Sweeney Lake, which was used to estimate the average chloride mass for Sweeney Lake during 2020. Table 1 shows when samples were collected during 2020 and analyzed for chloride and specific conductance. Grab samples (indicated as GRAB in Table 1) were utilized during low flow conditions while several samples were composited and analyzed for storm events (indicated as COMP in Table 1). Table 1 also indicates the instantaneous discharge (for grab samples) or stormflow averages (for composites samples) of flow estimated for the respective sampling events.

Flow monitoring did not begin at the Sweeney Lake Branch station until May 8th and continuous measurements of specific conductance did not begin until June 19, 2020. Table 1 indicates that there is a positive correlation between chloride and specific conductance and negative correlation between chloride concentration and flow at the Sweeney Lake Branch monitoring station. The negative correlation between chloride and flow likely is the result of dilution during rainfall runoff events that are not associated with salt applications. Figure 2 shows the strong relationship between chloride and specific conductance, based on the monitoring data provided in Table 1. The statistical regression shown in Figure 2 was utilized to transform continuous flow (see Figure 3) and conductivity (see Figure 4) measurements from the Sweeney Lake Branch stream monitoring into incremental chloride loading estimates between May 8 and December 31, 2020. The incremental chloride loading estimates were transformed into cumulative estimates and plotted in Figure 5, which shows that the total estimated chloride loading at the Sweeney Lake Branch monitoring station is approximately 574,000 kg between May 8 and December 31, 2020. Figure 5 also shows that the total estimated chloride loading at the Sweeney Lake Branch monitoring station is approximately 343,000 kg between May 8 and September 8, 2020.

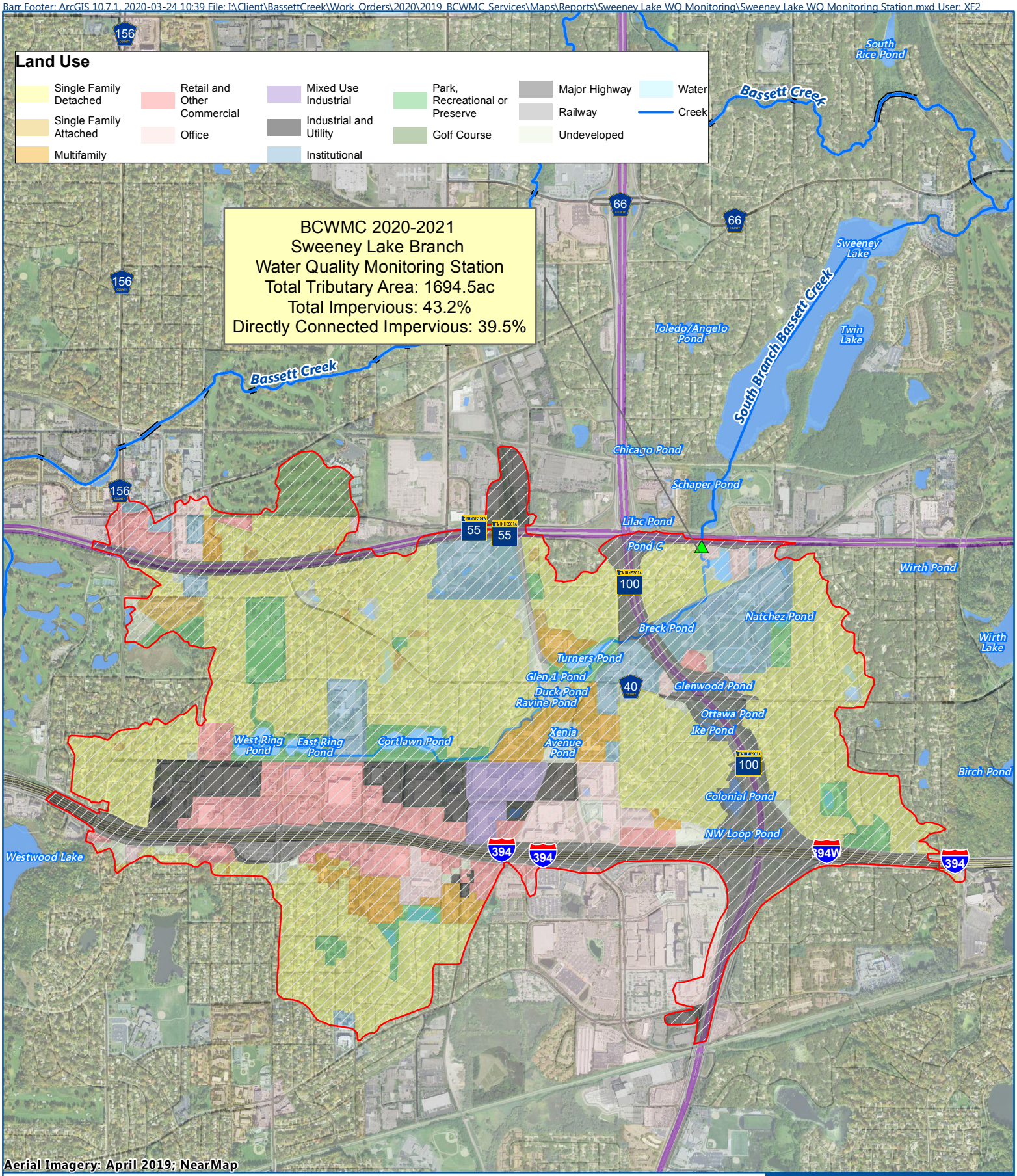
As previously indicated, the annual average chloride concentration in Sweeney Lake was 284 mg/L during 2020, which corresponds with an estimated average chloride mass of 276,000 kg for Sweeney Lake. Since the total estimated chloride loading at the Sweeney Lake Branch monitoring station between May 8 and September 8, 2020, is greater than average 2020 chloride mass for Sweeney Lake it is expected that the overall watershed drainage to Sweeney Lake was more than enough to flush the entire lake volume during that year. In addition, the loading estimates confirm that the Sweeney Lake Branch portion of the watershed represent a significant fraction of the overall chloride loading to Sweeney Lake. The results of this analysis also confirm that reductions in chloride loading from the Sweeney Lake Branch of the watershed will also quickly lead to commensurate reductions in the chloride concentrations measured in Sweeney Lake following future implementation of management actions.

3.0 Detailed Chloride Source Assessment and Recommendation

The preliminary results of the Sweeney Branch stream monitoring confirm that this portion of the Sweeney Lake watershed is a significant source of chloride to Sweeney Lake and the downstream Bassett Creek system. Through past work with Minnesota Pollution Control Agency, Barr has developed specific methodology for estimating the magnitude of individual sources of chloride that allow for targeting management practices in an urbanized watershed. It is recommended that the Commission Engineer and Administrator complete a GIS analysis and loading estimates of individual chloride sources in the Sweeney Lake watershed and report back to the Commission. The estimated range of cost to complete the GIS analysis and loading rate estimate of chloride sources in the Sweeney Lake watershed is between $5,000 and $10,000.

Table 1: Results of 2020 Sweeney Lake Branch monitoring.

Sample Name	Sampled Date	End Sampling	Chloride ion (mg/L)	Sp Conductance (uS/cm)	Flow (cfs)
GRAB	3/6/20 16:30	3/6/20 16:30	303.2		
GRAB	3/12/20 17:00	3/12/20 17:00	277		
COMP	5/23/20 13:55	5/24/20 09:28	162.1		
COMP	6/6/20 23:21	6/8/20 05:09	170.4		
COMP	6/18/20 20:51	6/20/20 10:41	154.9		
GRAB	6/25/20 06:50	6/25/20 06:50	295	1553	2.81
GRAB	7/24/20 08:00	7/24/20 08:00	271	1464	2.42
COMP	8/9/20 13:02	8/10/20 00:11	157	929	18.48
COMP	8/10/20 00:33	8/11/20 03:14	103	635	22.08
COMP	8/12/20 18:23	8/14/20 01:29	141	839	7.46
GRAB	8/21/20 10:30	8/21/20 10:30	258	1345	2.18
COMP	8/31/20 09:02	9/2/20 06:47	185	1097	5.92
GRAB	9/28/20 06:30	9/28/20 06:30	37.7		
COMP	10/12/20 00:08	10/12/20 13:02	158	1138	20.37
GRAB	10/30/20 09:35	10/30/20 09:35	258	1560	3.25
COMP	11/9/20 19:43	11/12/20 12:02	304		4.07
GRAB	11/30/20 09:00	11/30/20 09:00	333	1786	3.68
GRAB	12/22/20 09:30	12/22/20 09:30	348	1815	1.97


Land Use
Single Family Detached
Single Family Attached
Multifamily
Retail and Other Commercial
Office
Mixed Use Industrial
Industrial and Utility
Institutional
Park, Recreational or Preserve
Golf Course
Major Highway
Railway
Undeveloped
Water
Creek
BCWMC 2020-2021
Sweeney Lake Branch
Water Quality Monitoring Station
Total Tributary Area: 1694.5ac
Total Impervious: 43.2%
Directly Connected Impervious: 39.5%
Bassett Creek
South Rice Pond
Sweeney Lake
South Branch Bassett Creek
Twin Lake
Toledo/Angelo Pond
Chicago Pond
Schaper Pond
Lilac Pond
Pond C
Wirth Pond
Natchez Pond
Breck Pond
Wirth Lake
Turners Pond
Glen 1 Pond
Duck Pond
Ravine Pond
Glenwood Pond
Ottawa Pond
Ike Pond
Xenia Avenue Pond
West Ring Pond
East Ring Pond
Cortlawn Pond
Birch Pond
Colonial Pond
NW Loop Pond
Westwood Lake
394
394W
55
100
40
66
156
Aerial Imagery: April 2019; NearMap
Water Quality Monitoring Location
Tributary Area
Ponds and Wetlands
Open Channel
Culvert or Bridge
N
0
1,500
3,000
Feet
Bassett Creek Watershed Management Commission
BCWMC 2020-2021
Sweeney Lake Branch
Water Quality
Monitoring Station
FIGURE 1

Bassett Creek Watershed Management Commission

MEMO

Date: October 13, 2021
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: 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 Golden Valley 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. City staff recently completed a site walk through to document dead or dying trees and shrubs in need of replacement (under warranty). Project website: http://www.bassettcreekwmo.org/index.php?cID=433 .

2020 Bryn Mawr Meadows Water Quality Improvement Project (BC-5), Minneapolis: A feasibility study by the Commission Engineer began last fall and 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. At their meeting in April, the Commission approved a TAC and staff recommendation to move this project from implementation in 2019 to design in 2020 and construction in 2021 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. The final feasibility study was approved at the January 2019 Commission meeting. Staff discussed the maintenance of Penn Pond with MnDOT and received written confirmation that pond maintenance will occur prior to the park's reconstruction project with coordination among the BCWMC, MPRB, and MnDOT. A public hearing for this project was held September 19, 2019. The project was officially ordered at that meeting. An agreement with the MPRB and the city of Minneapolis will be considered at a future 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. 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 early September, 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 more formally recognize

and assign roles and responsibilities for implementation. The draft agreement was developed over several months and multiple conversations among the parties. At the May meeting the Commission approved to waiver potential conflict of the Commission legal counsel 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. CIP Project design is underway. Four public open houses have been held in the park since late July to gather input on park concepts. Project partners meet regularly to discuss schedules, planning and design components, and next steps. 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 Oct 2019): 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 on October 17th, the Commission moved to table discussion on the project. The project remains on the 2020 CIP list. Project webpage: http://www.bassettcreekwmo.org/index.php?cID=467.

2019 Westwood Lake Water Quality Improvement Project (WST-2) St. Louis Park (No change since October 2020): At their meeting in September 2017, the Commission approved a proposal from the Commission Engineer to complete a feasibility study for this project. The project will be completed in conjunction with the Westwood Hills Nature Center reconstruction project. After months of study, several meetings with city consultants and nature center staff, and a public open house, the Commission approved Concept 3 (linear water feature) and set a maximum 2019 levy at their May meeting. 50% designs were approved at the July meeting and 90% design plans were approved at the August meeting. The Hennepin County Board approved a maximum 2019 levy request at their meeting in July. A BCWMC public hearing on this project was held on August 16th with no comments being received. At that meeting the Commission officially ordered the project and entered an agreement with the City of St. Louis Park to design and construct the project and directed the Education Committee to assist with development of a BCWMC educational sign for inside the nature center. The draft sign was presented at the October 2017 meeting and was finalized over the winter. The Sun Sailor printed an article on the project in October 2018. A ribbon cutting by the city was held September 13th. The building and site are open to the public and being used to educate students. The system is capturing stormwater runoff from roof and paving, and the runoff is being stored underground and pumped via solar or hand pumps into the engineered creek. None of the captured water is flowing over land into Westwood Lake. The educational sign indoors is installed. Project website: http://www.bassettcreekwmo.org/projects/all-projects/westwood-lake-water-quality-improvement-project.

2017 Main Stem Bassett Creek Streambank Erosion Repair Project (2017CR-M) (no change since Feb): The feasibility study for this project was approved at the April Commission meeting and the final document is available on the project page at: http://www.bassettcreekwmo.org/index.php?cID=281. A Response Action Plan to address contaminated soils in the project area was completed by Barr Engineering with funding from Hennepin County and was reviewed and approved by the MPCA. The Commission was awarded an Environmental Response Fund grant from Hennepin County for $150,300 and a grant agreement is in the process of being signed by the county. A subgrant agreement with the City will be developed. The City hired Barr Engineering to design and construct the project. Fifty-percent and 90% designs were approved at the August and October Commission meetings, respectively. In September 2017, design plans were presented by Commission and city staff to the Harrison Neighborhood Association's Glenwood Revitalization Team committee and through a public open house on the project. Construction was to begin summer of 2018 but was delayed until due to the unanticipated need for a field based cultural and historical survey of the project area required by the Army Corps of Engineers and ongoing negotiations with Pioneer Paper.

Construction began in November 2020 with clearing and grubbing to have access to the creek and to remove trees from the work area. In the Fruen Mill Reach work was completed per design plans on the south side of the creek, including stabilizing

the existing MPRB trail, installing riprap toe protection and grading the bank. In the Cedar Lake Road to Irving Avenue Reach, the City was unable to come to an agreement with Pioneer Paper to get the amount of access needed to install the VRSS on the north side of the creek. The property owner allowed access to the streambank but instead of installing VRSS through this reach the City installed riprap toe protection, removed debris, completed bank grading and live staking and seeding, and installed the in-stream rock vanes to divert flows away from the steep banks. In Irving Avenue to the tunnel reach, the work was completed according to design plans with the installation of live staking, rock vanes within the stream channel, removal of brush and invasive species, and the installation of live stakes and fascines to encourage native plant growth and minimize bank erosion. Construction was completed in December 2020. An ERF grant report and RAP report are currently being developed. Vegetation was established in the spring. Project Website: www.bassettcreekwmo.org/projects/all-projects/bassett-creek-main-stem-erosion-repair-project-cedar-lake-ro

2014 Schaper Pond Diversion Project and Carp Management, Golden Valley (SL-3) (No change since September): 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. Evaluation results and recommendations will be presented at this meeting. Project webpage: http://www.bassettcreekwmo.org/index.php?cID=277.

Sweeney Lake Water Quality Improvement Project, Golden Valley (SL-8) (No change since March): This project was added to the 2020 CIP list after receiving a federal 319 grant from the MPCA. It is partially a result of the carp surveys completed through the Schaper Pond Diversion Project and a study of the year-round aeration on Sweeney Lake. This project will treat curly-leaf pondweed in spring 2020, will remove carp in summer 2020, and will perform an alum treatment on Sweeney Lake in late summer 2020. The project was officially ordered by the Commission after a public hearing in September 2019. A public open house on this project was held via Webex on April 8th with approximately 20 people joining. The open house presentation and a question and answer document are available online. The curly-leaf pondweed herbicide treatment was completed in May. Carp Solutions performed carp tracking and setting nets in early June. The first round of netting resulted in 334 carp removed from Sweeney Lake (mean length 620 mm, mean weight 3.1 kg), representing an estimated 29% of the total population. From Schaper Pond 82 carp removed which likely represents about 17% of the initial population. After another round of carp removals in late July, 118 additional carp were netted from Sweeney. Based on preliminary estimates, approximately 40% of the carp population was removed from Sweeney this summer. The carp biomass was reduced from approximately 129 kg/ha to 79 kg/ha, which is below the threshold where adverse impacts on water quality are expected. The first round of alum treatment was completed in late October. A grant report and payment request were submitted at the end of January. A report on the results of the carp removals and recommendations for future management were presented at the February 2021 meeting. Long term carp management evaluation will happen through the Schaper Pond Diversion Project funding. A one-page overview of 2020 activities and outcomes was developed for the Sweeney Lake Association and posted online in March. The project website: Sweeney Lake Water Quality Improvement Project, SL-8).

2014 Twin Lake In-lake Alum Treatment, Golden Valley (TW-2): (No change since June 2018) 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 on May 20th. There were no complaints or comments from residents during or since the treatment. Water monitoring continues to determine if and when a second alum treatment is necessary. Lake monitoring results from 2017 were presented at the June 2018 meeting. Commissioners agreed with staff recommendations to keep the CIP funding

remaining 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 September): 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 draft agreement is expected at a future meeting. Project webpage: http://www.bassettcreekwmo.org/index.php?cID=282.

2021 Parkers Lake Drainage Improvement Project (PL-7) (Item 7Di): 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 design and construct the project. The city hired WSB for project design which is currently underway. 60% design plans were approved at the June meeting. 90% plans were approved at the August meeting. The city of Plymouth recently received bids which will be shared verbally during communications at this meeting. www.bassettcreekwmo.org/projects/all-projects/parkers-lake-drainage-improvement-project

2021 Parkers Lake Chloride Reduction Project (PL-7) (Item 5B): 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 this project. 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. The first technical stakeholders meeting was held July 26th. Staff will provide an update on the project at this meeting. Project website: www.bassettcreekwmo.org/projects/all-projects/parkers-lake-drainage-improvement-project

2021 Mt. Olivet Stream Restoration Project (ML-20) (Item 7Di): 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 design and construct the project. The city hired WSB for project design which is currently underway. 60% design plans wer approved in June. 90% plans were approved at the August. The city of Plymouth recently received bids which will be shared verbally during communications at this meeting. www.bassettcreekwmo.org/projects/all-projects/mt-olivet-stream-restoration-project

2021 Main Stem Lagoon Dredging Project (BC-7) (See Item 4E): The feasibility study for this project was approved in May 2020 with Alternative 2-all (dredge all three lagoons to 6-foot depth) being approved. After a public hearing was held with no

public in attendance, the Commission ordered the project on September 17, 2020. Rather than entering an agreement with a separate entity to design and construct this project, the Commission will implement the project in close coordination with the MPRB. At their meeting in November, the Commission approved a timeline for implementation and the Commission Engineer was directed to prepare a scope of work for project design and engineering. The engineering scope and budget were approved at the May 2021 meeting. Design and permitting should get underway in summer 2021. Dredging of all three lagoons is planned for winter 2022/2023. A grant agreement for the $250,000 Watershed Based Implementation Funding grant was approved at the January meeting. The project work plan was approved by BWSR. In the spring the Commission approved a grant agreement for a Hennepin County Opportunity Grant for this project. An Environmental Assessment Worksheet is on the consent agenda for approval to submit to the RGU. Project website: www.bassettcreekwmo.org/projects/all-projects/bassett-creek-main-stem-lagoon-dredging-project

2021 Cost-share Purchase of High Efficiency Sweeper (ML-23) (No change since Dec): Because the Commission had not entertained a project like this in the past (to cost share equipment purchase), this proposed project was discussed by the Commission in February and April, 2020 after being recommended for approval by the TAC. The Commission approved a policy regarding the use of CIP funds for equipment purchases at their April 2020 meeting. The project was added to the CIP through a Watershed Plan Amendment adopted in August 2020 and was officially ordered by the Commission on September 17, 2020 after a public hearing. The Commission entered an agreement with the city of Plymouth which includes reporting requirements for street sweeper use and effectiveness. The first report is expected fall 2021.

2022 Medley Park Stormwater Treatment Facility: 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. www.bassettcreekwmo.org/projects/all-projects/medley-park-stormwater-treatment-facility

2022 SEA School-Wildwood Park Flood Reduction Project (BC-2, 3, 8, 10): 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 and comment 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. www.bassettcreekwmo.org/projects/all-projects/sea-school-wildwood-park-flood-reduction-project.

Administrator Report September 7 – October 12, 2021

Subject	Work Progress
Education	• Coordinated volunteers for SEA School "Walk for Water" event and Bassett's Creek Park Buckthorn Pull • Developed map (with Commission Engineer) and handout for biking tour, distributed invitation and gathered RSVPs, corresponded with Utepils, attended tour • Assisted Plymouth staff with water softener education materials for WMWA • Reviewed/edited water education column • Corresponded with Bassett Creek paddlers and facilitated meeting with them and Golden Valley staff with goal of producing creek paddling and access map • Picked up/dropped off education materials for various events (New Hope City Days, SEA School Walk for Water, church event in Robbinsdale) • Updated website with CIP announcements, volunteer events, etc. • Met with Minneapolis GreenCorps member re: chloride reduction strategies • Attended WMWA meeting
CIP	• Bryn Mawr Water Quality Improvement Project: Attended public open house; participated in project partner meeting with Commission engineers, and all partners and their consultants • Sweeney Lake Water Quality Improvement Project: Corresponded with Met Council re: chloride samples via CAMP volunteers • Main Stem Lagoon Dredging Project: Corresponded with Commission Engineer re: EAW approval/submittal, reviewed draft EAW • SEA School-Wildwood Flood Reduction Project: Reviewed and commented on draft presentation for Water Resources Conference
Henn Co. Chloride Initiative	• Reviewed and edited proposal for marketing plan development for consideration by HCCI (after input from HCCI subgroup) • Developed and distributed HCCI meeting agenda and materials; facilitated HCCI meeting • Met with Edina staff and S.O.S. volunteer to further refine marketing plan proposal • Developed Request for Proposals for marketing firm, gathered names/recommendations for firms, met with HCCI subgroup to review and finalize RFP
MAWD	• Drafted and sent letter re: BCWMC position on existing resolutions • Drafted letter with comments on WBIF policy, got chair signature and sent to BWSR
Environmental Justice	• Attended Watershed Partners meeting to hear about engagement during development of Hennepin County Climate Action Plan • Reviewed spreadsheet developed by Alt. Commissioner McDonald Black re: DFC intern
Administration	• Made updates to 2015 Watershed Management Plan per approved amendment; posted updated documents online and sent materials to Plan holders • Developed agenda; reviewed and submitted invoices; reviewed financial report; drafted minutes; reviewed memos and documents for Commission meeting; disseminated Commission meeting information to commissioners, staff, and TAC; updated online calendar; participated in pre-meeting call with Chair Cesnik and Commissioner Engineer; drafted meeting follow up email
Partners	• Attended first meeting of Met Council Water Policy Plan Advisory group • Reviewed and submited progress report for Lawns to Legumes project implemented by Metro Blooms
2025 Watershed Plan	• Met with Commission Engineers Chandler and Williams to scope timeline, anticipated issues, public engagement for development of 2025 Plan
Other Issues & Projects	• Corresponded with Minneapolis staff, Commission Engineer, Commission Attorney re: proposed development over Bassett Creek Tunnel access including phone calls, emails, meetings • Corresponded with various residents re: vegetation at DeCola Ponds, water levels in Hidden Lakes neighborhood, biofilm on Sweeney Lake, etc. • Corresponded with Commission Engineer to review potential COI item (Barr Engineering's environmental work for MPRB in Bryn Mawr Park)