Bassett Creek Watershed Management Commission

Regular Meeting
Thursday March 21, 2019
8:30 – 11:00 a.m.
Council Conference Room, Golden Valley City Hall, Golden Valley, MN
AGENDA

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

2. **CITIZEN FORUM ON NON-AGENDA ITEMS -** *Citizens 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**
   - A. Approval of Minutes – February 21, 2019 Commission Meeting
   - B. Acceptance of March 2019 Financial Report
   - C. Approval of Payment of Invoices
     - i. Keystone Waters, LLC – February 2019 Administrative Services
     - ii. Keystone Waters, LLC – February 2019 Printing Expenses
     - iii. Barr Engineering – February 2019 Engineering Services
     - iv. Triple D Espresso – February 2019 Meeting Refreshments
     - v. Wenck – February 2019 WOMP Monitoring
     - vi. Lawn Chair Gardener – February 2019 Administrative and Education Services
     - vii. Freshwater – Facilitation of Lake Leaders Meeting (Oct 2018)
     - viii. Metro Watershed Partners – 2019 Partner Contribution
     - ix. Metro Conservation Districts – 2019 Children's Water Festival Contribution
   - D. Approval to Reimburse Commissioner Scanlan 2019 Water Summit
   - E. Approval of Golden Valley 2019 Pavement Management Program Project
   - F. Approval of Southwest Light Rail Transit Project
   - G. Approval to Appoint Golden Valley Staff Drew Chirpich to Education Committee
   - H. Approval to Execute Agreement with Hennepin County for AIS Prevention Grant

5. **BUSINESS**
   - A. Consider Approval of Crane Lake Feasibility Study (30 min)
     - i. City Cover Letter
     - ii. Commission Review Memo
     - iii. Feasibility Study
   - B. Receive Presentation on 2018 Lake Monitoring Results (30 min)
   - C. Consider Approval of Resolution 19-07 in Support of Chloride Limited Liability Legislation (5 minutes)
   - D. Consider Recommendations from Education Committee (20 min)
     - i. 2019 Education Budget
     - ii. Contract with Lawn Chair Gardener
     - iii. Update on 50th Anniversary Event Planning
   - E. Consider Approval of Final Report for Bassett Creek Main Stem Restoration Project (2015CR) (10 min)

F. Consider Approval of Final Reimbursement Request for Bassett Creek Main Stem Restoration Project (2015CR) (5 min)
G. Consider Approval to Amend Agreement with City of Crystal for Winnetka Pond Dredging Project (5 min)
H. Consider Resolution 19-08 to Approve St. Louis Park Surface Water Management Plan (5 min)
I. Consider Resolution of Appreciation for Alternate Commissioner John Byrnes (5 min)

6. COMMUNICATIONS (10 minutes)

A. Administrator's Report
   i. AIS Prevention Grant
   ii. 2019 Water Summit
B. Chair
C. Commissioners
D. TAC Members
   i. Four Seasons Mall Update
   ii. Next Meeting March 26th
E. Committees
F. Legal Counsel
G. Engineer
   i. Flood Forecast

7. INFORMATION ONLY (Information online only)

A. Administrative Calendar
B. CIP Project Updates http://www.bassettcreekwmo.org/projects
C. Grant Tracking Summary and Spreadsheet
D. Harrison Neighborhood Met Council Grant Final Report
E. Metro Watershed Partners 2018 Report
F. CCX News Story on Winnetka Pond Dredging Project
G. Gustavus Adolphus Nobel Conference: Climate Change

8. ADJOURNMENT

Upcoming Meetings & Events

- BCWMC Technical Advisory Committee Meeting: Tuesday March 26th, 1:30 – 3:00 p.m., Golden Valley City Hall
- Bassett Creek Watershed Management Commission Meeting: Thursday April 18th. 8:30 a.m., Golden Valley City Hall
- 2019 Water Summit: May 9th and 10th, Science Museum of Minnesota, St. Paul (https://freshwater.org/2019-water-summit/)
- Bassett Creek Watershed 50th Anniversary Tour and Celebration Event: Thursday June 27th, Brookview Community Center, Golden Valley

Bassett Creek Watershed Management Commission

AGENDA MEMO
Date: March 13, 2019
To: BCWMC Commissioners
From: Laura Jester, Administrator
RE: Background Information for 3/21/19 BCWMC Meeting

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

4. **CONSENT AGENDA**
   A. Approval of Minutes – February 21, 2019 Commission Meeting- **ACTION ITEM with attachment**
   B. Acceptance of March Financial Report - **ACTION ITEM with attachment (more details online)**
   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 – February 2019 Administrative Services
      ii. Keystone Waters, LLC – February 2019 Printing Expenses
      iii. Barr Engineering – February 2019 Engineering Services
      iv. Triple D Espresso – February 2019 Meeting Refreshments
      v. Wenck – February 2019 WOMP Monitoring
      vi. Lawn Chair Gardener – February 2019 Administrative and Education Services
      vii. Freshwater – Facilitation of Lake Leaders Meeting (Oct 2018)
      viii. Metro Watershed Partners – 2019 Partner Contribution
      ix. Metro Conservation Districts – 2019 Children's Water Festival Contribution

   D. Approval to Reimburse Commissioner Scanlan 2019 Water Summit – **ACTION ITEM no attachment** – *The proposed 2019 Education Budget includes $1,200 for commissioner training and registration as it has in the past. Commissioner Scanlan plans to attend the May 9th and 10th Water Summit in St. Paul and is requesting reimbursement of $160 for registration. Staff recommends approval.*

   E. Approval of Golden Valley 2019 Pavement Management Program Project – **ACTION ITEM with attachment** *– The proposed linear project is located at various locations in the Medicine Lake Direct, Bassett Creek Main Stem, and Sweeney Lake subwatersheds in Golden Valley. It includes street reconstruction, storm sewer improvements, sanitary sewer repairs, water main replacement, and associated site work resulting in 11.03 acres of disturbance and a reduction of impervious surfaces by 0.25 acres. Because it does not create over an acre of impervious surface, only erosion and sediment control requirements pertain to the project. Staff recommends approval with comments included in the attached memo*.

   F. Approval of Southwest Light Rail Transit Project – **ACTION ITEM with attachment** – *The proposed SWLRT project is a 16-mile extension of the Green Line/Central Corridor LRT. Approximately two miles of the proposed SWLRT project corridor falls within the Bassett Creek watershed. The Commission previously approved different pieces of this project starting in March 2016. Since then, several design revisions have occurred resulting in revisions to drainage areas, discharge points, water quality treatment, etc. After another review, staff recommends conditional approval with comments in the attached memo.*

   G. Approval to Appoint Golden Valley Staff Drew Chirpich to Education Committee – **ACTION ITEM no attachment** – *Golden Valley staff member Drew Chirpich would like to participate on the Education Committee again this year. Staff recommends approval of the appointment.*

H. Approval to Execute Agreement with Hennepin County for AIS Prevention Grant – **ACTION ITEM with attachment** – *The Commission received an AIS Prevention Grant from Hennepin County for $10,000. Staff is seeking approval to execute the grant agreement once its in final form. The Commission attorney reviewed the agreement and recommended some changes (attached draft includes those changes). Hennepin County legal department is currently reviewing.*

5. BUSINESS

A. Consider Approval of Crane Lake Feasibility Study (30 min) – **ACTION ITEM with attachments** (full documentation online) – *At the meeting last September, the Commission reviewed and discussed the draft feasibility study for this project to be constructed in conjunction with the Ridgedale Drive Reconstruction Project in Minnetonka. The cover letter from the City of Minnetonka outlines the project budget and the city's proposed financial contribution. A memo with comments from the Commission Engineer is attached along with the revised feasibility study was developed by the city's consultant. City and BCWMC staff recommend implementing Option 3.*

i. City Cover Letter
ii. Commission Review Memo
iii. Feasibility Study

B. Receive Presentation on 2018 Lake Monitoring Results (30 min) – **ACTION ITEM with attachments** – *The Commission monitored Westwood Lake and Parkers Lake in 2018. Meg Rattei will give a brief presentation of the monitoring results. Please see the attached reports.*

C. Consider Approval of Resolution 19-07 in Support of Chloride Limited Liability Legislation (5 minutes) **- ACTION ITEM with attachment** – *This item was tabled at the February meeting. HF1502 and SF1667 are working their way through the legislature. While attending the Road Salt Symposium, I became aware (from the Stop Over Salting group) that a few local governments and organizations have passed resolutions supporting the chloride limited liability legislation. Given that this is such an important topic in the watershed, I thought the attached resolution would be appropriate for the Commission to consider. Last year the Commission submitted letters to bill authors supporting the legislation.*

D. Consider Recommendations from Education Committee (20 min) – **ACTION ITEM with attachments** - *The Education Committee met on March 7th to discuss the 2019 Education Budget, activities proposed by Dawn Pape (Lawn Chair Gardener) for chloride-related education, and plans for the 50th anniversary event. Commissioner de Lambert was elected committee chair. The committee recommends approval of the attached budget and approval of the attached contract with Dawn Pape. The committee and staff will also update the Commission on the 50th anniversary plans.*

i. 2019 Education Budget - **attachment**
ii. Contract with Lawn Chair Gardener - **attachment**
iii. Update on 50th Anniversary Event Planning – **no attachment**

E. Consider Approval of Final Report for Bassett Creek Main Stem Restoration Project (2015CR) (10 min) – **ACTION ITEM with attachment** – *Design plans for this project were approved by the Commission in June 2015 and construction (phase 1) took place in the winter of 2015/2016. Vegetation establishment and management (phase 2) continued from 2016 through 2018. The project is now complete and the city is requesting approval of the attached final report. Staff recommends approval.*

F. Consider Approval of Final Reimbursement Request for Bassett Creek Main Stem Restoration Project (2015CR) (5 min) – **ACTION ITEM with attachment (additional documentation online)** – *As noted in Item 5E, this project was completed at the end of last year. The City of Golden Valley is requesting a final reimbursement of $114,601.05. This project ended up being under budget by $384,652.71. Staff*

recommends approval of the reimbursement and recommends that the remaining project funds of $384,652.71 be added to the Commission's Closed Project Account.

G. Consider Approval to Amend Agreement with City of Crystal for Winnetka Pond Dredging Project (5 min) – **ACTION ITEM with attachment** – *At their meeting last month, the Commission approved additional funding for this project contingent on the funds being available in the Commission's Closed Project Account. If Items 5E and 5F are approved above, the Closed Project Account has a balance of $383,926.77. Staff recommends approval of the increase to the project budget and the amendment to the agreement with the City of Crystal.*

H. Consider Resolution 19-08 to Approve St. Louis Park Surface Water Management Plan (5 min) – **ACTION ITEM with attachment** (additional documents online) – *The Commission Engineer reviewed the St. Louis Park Surface Water Management Plan and provided comments to the city on December 3rd. The city revised the plan according to the Commission's comments and the plan is consistent with the Bassett Creek Watershed Management Plan and requirements. Staff recommends approval of the attached resolution approving St. Louis Park's Surface Water Management Plan with the caveat that if additional changes are made to the plan to satisfy other watershed requirements, the provisions applicable to the BCWMC remain unchanged.*

I. Consider Resolution of Appreciation for Alternate Commissioner John Byrnes (5 min) – **ACTION ITEM with attachment** – *Unfortunately, Alt. Commissioner Byrnes is moving to Minnetonka and will no longer be able to represent Plymouth on the Commission. John has been an active member of the Commission and his service is greatly appreciated. Staff recommends approval of the attached resolution.*

6. COMMUNICATIONS (10 minutes)

A. Administrator's Report – **INFORMATION ITEM with attachment**
   i. AIS Prevention Grant
   ii. 2019 Water Summit
B. Chair
C. Commissioners
D. TAC Members
   i. Four Seasons Mall Update
   ii. Next Meeting March 26th
E. Committees
F. Legal Counsel
G. Engineer
   i. Flood Forecast

7. INFORMATION ONLY (Information online only)

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E. Metro Watershed Partners 2018 Report
F. CCX News Story on Winnetka Pond Dredging Project
G. Gustavus Adolphus Nobel Conference: Climate Change

8. ADJOURNMENT

Item 4A.
BCWMC 3-21-19

Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting
Thursday, February 21, 2019
8:30 a.m.
Golden Valley City Hall, Golden Valley MN

1. CALL TO ORDER and ROLL CALL

On Thursday, February 21, 2019 at 8:33 a.m. in the Council Conference Room at Golden Valley City Hall (7800 Golden Valley Rd.), Chair de Lambert called the meeting of the Bassett Creek Watershed Management Commission (BCWMC) to order.

Commissioners and city staff present:

City	Commissioner	Alternate Commissioner	Technical Advisory Committee Members (City Staff)
Crystal	Dave Anderson	*Vacant Position*	Mark Ray
Golden Valley	Stacy Harwell	*Absent*	Eric Eckman and Jeff Oliver
Medicine Lake	Clint Carlson	*Absent*	*Absent*
Minneapolis	Michael Welch	*Vacant Position*	Liz Stout
Minnetonka	Mike Fruen	*Absent*	Chris LaBounty
New Hope	*Absent*	*Absent*	Megan Hedstrom
Plymouth	Jim Prom	John Byrnes	Ben Scharenbroich
Robbinsdale	Michael Scanlan	*Absent*	Richard McCoy and Marta Roser
St. Louis Park	Jim de Lambert	*Absent*	Erick Francis
Administrator	Laura Jester, Keystone Waters		
Engineer	Karen Chandler, Jen Koehler, Patrick Brockamp, and Mary Sands with Barr Engineering		
Recorder	Dawn Pape, Lawn Chair Gardener Creative Services		
Legal Counsel	Dave Anderson, Kennedy & Graven		
Presenters/ Guests/Public	Chuck Schmidt, New Hope resident		

2. CITIZEN FORUM ON NON-AGENDA ITEMS

Mr. Schmidt asked if the water level in Winnetka Pond will be the same after the dredging project as before the project. Commission Engineer Chandler confirmed that it would be the same.

3. APPROVAL OF AGENDA

MOTION: Commissioner Scanlan moved to approve the agenda. Commissioner Prom seconded the motion. Upon a vote, the motion carried 8-0. [City of New Hope absent from the vote]

4. CONSENT AGENDA

The following items were approved as part of the consent agenda: January 21, 2019 Commission meeting minutes, acceptance of the 2018 fiscal year-end (January 2019) financial report and the February 2019 financial report, payment of invoices, approval to resolution 19-03 designating depositories for BCWMC Funds, approval to designate Finance and Commerce as the Official News Publication of the BCWMC, approval of agreement with Three Rivers Park District for curly-leaf pondweed control and financial contribution for inspections at Medicine Lake, approval of County State Aid Highway (CSAH) 9 (Rockford Road) and I-494 Interchange Project, approval to Reimburse Commissioner Fruen for MAWD Conference registration.

The general and construction account balances reported in the FY2018 Year-end Financial Report (January 2019) are as follows:

Checking Account Balance	$ 586,572.33
TOTAL GENERAL FUND BALANCE	$ 586,572.33
TOTAL CASH & INVESTMENTS ON-HAND (01/31/19)	$3,729,542.76
CIP Projects Levied – Budget Remaining	($3,874,557.20)
Closed Projects Remaining Balance	($145,014.44)
2012-2016 Anticipated Tax Levy Revenue	$ 3,896.47
2017 Anticipated Tax Levy Revenue	$ 3,148.89
2018 Anticipated Tax Levy Revenue	$ 10,316.57
Anticipated Closed Project Balance	($127,652.51)

MOTION: Commissioner Carlson moved to approve the consent agenda. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 8-0. [City of New Hope absent from the vote]

5. ORGANIZATIONAL MEETING

A. Elect Officers

Chair de Lambert noted that he is not seeking nomination for the chair again this year. However, Commissioner Scanlan is willing to continue as secretary and Commissioner Harwell is willing to continue as treasurer. Commissioner Prom expressed interest in becoming chair. Commissioner Scanlan nominated Commissioner Welch as vice chair. Commissioner Welch explained that typically the position of vice chair is a stepping stone to being chair and that he is willing to serve if no one else steps forward, but he is not willing to serve as chair in the future. Commissioner Welch

nominated Commissioner Prom as chair, himself as vice chair, Commissioner Scanlan as secretary, and Commissioner Harwell as treasurer.

MOTION: Commissioner Carlson moved to elect the full slate of nominees. Commissioner Fruen seconded the motion. Upon a vote, the motion carried 8-0. [City of New Hope absent from the vote]

Commissioner Welch recognized Chair de Lambert's contributions noting that he has been very fair and even handed. Commissioner de Lambert said it had been a pleasure to serve and that he would remain an active participant.

Commissioner Prom chaired the remainder of the meeting.

B. Review 2019 Commission Calendar and Areas of Work

Administrator Jester highlighted important dates that should be on the commissioners' calendars for the upcoming year as well as the work of committees. Commissioners indicated the calendar/areas of work document should remain a living document to be updated and included in the monthly meeting materials.

C. Appoint Committee Members

The following appointments were made to Commission committees:

i. Administrative Services Committee: Commissioners Scanlan, Prom, Harwell, Welch, de Lambert
ii. Budget Committee: Commissioners Scanlan, Anderson, Prom, and Alternate Commissioners Byrnes and McDonald Black
iii. Education Committee: Commissioners Scanlan, Harwell, Fruen, and de Lambert; and Alternate Commissioners Byrnes and Noon
iv. Technical Advisory Committee Liaison: Commissioner Scanlan

D. Review Open Meeting Law

Administrator Jester reminded commissioners that Commission business should not be discussed if there is less than a quorum and that includes discussions via email. She noted that one easy way to comply with the law is to never "reply all" to a Commission email. Commissioner Harwell asked if she could Skype into a committee meeting. There was a brief discussion on the complexities of that practice and the instances where it is allowed.

E. Review Year End Financial Report (Feb 1, 2018 - Jan 31, 2019)

Administrator Jester reported that the Commission ended the year in the black. She noted that although some line items were over budget, the overall budget was $41,000 under budget. There were no questions from the Commission.

6. BUSINESS

A. Review 50% Design Plans for DeCola Ponds B & C Improvement Project

Engineer Koehler reviewed the 50% design plans on behalf of the City of Golden Valley. She reminded the Commission that the primary goal of this project is flood mitigation and that additional benefits include water quality improvements and habitat restoration. Engineer Koehler gave a detailed timeline of the steps in the design process. At the May 2018 meeting, the Commission approved the final feasibility study for this project. In August of 2018, the Commission ordered the project and approved an agreement with the City of Golden Valley to implement the project.

The 50% designs include 24 acre-feet of additional flood storage, 2 acres of open water expansion, 8.5 lbs/yr of phosphorus removal, 3 acres of restored wetland and upland habitat, Medicine Lake Road 100-year flood depth reduced by approximately 2 ft, and reduction of flood level on ponds from 0.1'-0.5'. Engineer Koehler noted the

EAW process is complete and that a dewatering permit will be needed along with (possibly) a Phase I archeological study.

Engineer Koehler noted the estimated cost of the whole project is $4.1 million with multiple funding sources including Minnesota DNR, Hennepin County, City of Golden Valley, and BCWMC. She reported on the public engagement activities, including an open house held on February 6th.

There was a brief discussion about the new trails. Engineer Koehler noted the trails will be impervious because ADA compliance and accessibility is important to daily users. Commissioner Welch offered that there are alternatives to bituminous that still meet ADA requirements. Mr. Eckman added that a lot of imperviousness has already been removed in that area, but that he would explore alternatives. There was some discussion on project permitting, draw down and tree removal. The restoration plan will be more complete with the 90% design, which will likely be presented at the April meeting.

MOTION: Commissioner Scanlan moved to approve the 50% design plans as presented. Commissioner Prom seconded the motion.

Discussion: Commissioner Welch inquired about the cost vulnerability if the project gets delayed a year. Mr. Eckman responded that there is not a timing issue with the DNR grant. Commissioner Scanlan asked if there are potential funding changes. Engineer Koehler said based on current planning and funding secured, she feels comfortable with the budget.

Commissioner Welch noted that Administrator Jester may need to be involved with public relations because it's going to be a large project with much disruption to a popular park. Administrator Jester answered that she is happy to fulfill this role, but also noted that the City of Golden Valley has been handling communications with the public and local residents very well up to this point. Commissioner Harwell asked if there will be educational signage. Commissioner Prom agreed that this would be a good opportunity for education.

Upon a vote, the motion carried 8-0, with the City of New Hope absent from the vote.

B. Consider Providing Additional Funds for Winnetka Pond Dredging Project

TAC member Mark Ray explained that during the construction of this project, contaminated sediment was unexpectedly found in Winnetka Pond that will require expensive disposal. He reported the City of Crystal can contribute $25,000 toward the extra costs, but is still requesting additional funds for this project so that it can be built as originally designed. He noted the city is requesting an additional $114,301 for the project from the BCWMC and the ability to use the city's $9,050 in Channel Maintenance Funds toward the project.

Commission Engineer Chandler introduced the project manager (Patrick Brockamp) and brownfields expert (Mary Sands). Engineer Chandler explained that MPCA-recommended sediment testing was done during the feasibility study but the contamination was not discovered and the project was bid as the sediment being "unregulated fill." She reported that after the project started, diesel range organics (DRO) were found, so considerably more testing was performed. It was finally determined that the upper two feet of sediment for a significant portion of the pond was contaminated and that after negotiating with the contractor, the additional costs would be $148,351.

Administrator Jester reported that the Commission's Closed Project Account should have approximately $215,000 available after the 2015 Main Stem Restoration Project is closed within the next 30 – 60 days.

Commissioner Carlson asked that if the contamination was discovered during the feasibility study, would its disposal have been less expensive. Engineer Chandler replied no. Commissioner Carlson asked if there could have been more testing beforehand. Engineer Chandler explained that testing isn't very expensive but there are so many contaminants to test for it's impossible to test for them all. There was further discussion about what level of testing might be warranted for future projects.

Mr. Scharenbroich estimated that it is $56/cubic yard to dispose of contaminated soil. He found this cost to reasonable because it can easily be $100/cubic yard.

MOTION: Commissioner de Lambert moved to approve providing additional funds for the Winnetka Pond Dredging Project based on the contingency that the closed project account has funds available. Commissioner Scanlan seconded the motion.

Discussion: Commissioner Carlson wondered if the contamination could be left in place. Engineers Chandler and Sands explained that since it's now known to be there, it should be removed.

Commissioner Welch asked what the plan is for the future. Mark Ray said they will try to determine the source of the contamination, but it likely happened prior to the 1960s. Commissioner Welch asked if the MPCA will require further investigation. Engineer Sands responded that DRO is ubiquitous and not highly toxic. She noted it's likely that the city will only be required to determine the extent (boundaries) for remediation. There was some discussion about whether the city can put additional funding toward disposal.

Upon a vote, the motion carried 8-0, with the City of New Hope absent from the vote.

C. Consider Agreements with Wenck and City of Minneapolis for Bassett Creek Valley Study

i. Contract with Wenck Associates
ii. Bassett Creek Valley Study Proposal
iii. Agreement with City of Minneapolis

Administrator Jester reminded Commissioners that the City of Minneapolis, the Commission engineers and herself, the MPRB, and other partners have been discussing the complicated nature of the Bassett Creek Valley and the likely redevelopment for the area. She noted the City wishes to have Wenck Associates, Inc. perform a Floodplain and Stormwater Management Study for the Bassett Creek Valley Development area to evaluate options to unlock the potential in natural resources, recreation, and redevelopment by integrating floodplain and stormwater management into a regional solution for the area. She noted the City wishes for the Commission to hire Wenck to complete this study and then the City will reimburse the Commission for the total cost of the study along with other Commission expenses related to the study (less $2,000). She reported the contract with Wenck and agreement with the City were reviewed by Commission legal counsel and the study proposal was reviewed by Commission Engineers.

TAC member Liz Stout reiterated that it is not appropriate to look at this area parcel by parcel because there are significant floodplain issues. Commissioner Harwell asked about the models that will be used. Ms. Stout and Engineer Chandler explained the Commission's model, the City's model and the P8 model will all be used.

Commissioner Welch noted that the holistic approach to the redevelopment is warranted, but expressed concern about how Wenck can avoid conflict of interest with their other clients, i.e. Wellington. Chris Meehan with Wenck responded that a regional solution is important, even for the current client. He said it's good to have many partners working together. Commissioner Anderson suggested conditional approval of the contract with Wenck, with the condition that the agreement between the Commission and Minneapolis is fully executed..

MOTION: Commissioner Welch moved to approve the contract with Wenck on condition that the reimbursement agreement with Minneapolis is fully executed. Commissioner Prom seconded the motion. Upon a vote, the motion carried 8-0. [City of New Hope absent from the vote]

D. Consider Applying for 319 Grant for Sweeney Lake Alum Treatment & Carp Management

Administrator Jester explained that the Commission has the rare opportunity to apply for 319 grant funds for up to $700,000 for an alum treatment in Sweeney Lake and carp management in Schaper Pond. She noted the City of Golden Valley and the TAC agreed the grant application was a good idea.

MOTION: Commissioner Scanlan moved to authorize staff to apply for the 319 Grant. Commissioner Welch seconded the motion. Upon a vote, the motion carried 8-0 [City of New Hope absent from the vote]

E. Consider Recommendations from CIP Prioritization Committee and Technical Advisory Committee

Commission Engineer Chandler explained that starting last April, the CIP Prioritization Committee met 6 times to determine if and how capital projects in the watershed can be prioritized for implementation. She reported the committee recommends the use of a scoring matrix to help rank potential CIP projects against each other when developing the 5-year CIP. She reported the TAC discussed and considered the committee's recommendations and added a few recommendations of their own. She then walked through the TAC and CIP Committee's detailed notes and process. She noted the TAC requested that the scoring matrix be revisited within the next three years.

Commissioners Prom and Welch explained that this matrix is a useful tool that the committee worked hard to develop. Commissioner Welch noted that a committee or workgroup might also be useful, along with more involvement from the administrator, in identifying possible CIP projects. He noted that opportunities to collaborate with redevelopment projects might still fall through the cracks due to the timing.

MOTION: Commissioner Welch moved to adopt the matrix as a tool to develop the 5-year CIP and to accept recommendations of CIP Committee and the Technical Advisory Committee. Commissioner Scanlan seconded. Upon a vote, the motion carried 8-0. [City of New Hope absent from the vote]

F. Consider Resolution 19-04 to Approve Robbinsdale Local Surface Water Management Plan

Commission Engineer Chandler reported that the Robbinsdale Local Surface Water Management Plan was reviewed and is consistent with the Bassett Creek Watershed Management Plan and requirements. Staff recommended approval of the resolution.

Commissioner Welch asked if Robbinsdale City Council will adopt their local controls so the city's ordinances are consistent with the watershed plan. Mr. McCoy responded that it is up to the elected officials. Commissioner Welch further inquired whether the city plan has a schedule for ordinances to be adopted. Engineer Chandler confirmed that it does and that it is in the resolution.

MOTION: Commissioner Scanlan moved to approve the Robbinsdale Local Surface Water Management Plan. Commissioner Anderson seconded the motion. Upon a vote, the motion carried 8-0. [City of New Hope absent from the vote]

G. Consider Resolution 19-05 to Approve Medicine Lake Local Water Management Plan 2018 Update

Commission Engineer Chandler reported that the Medicine Lake Local Water Management Plan Update was reviewed and is consistent with the Bassett Creek Watershed Management Plan and requirements. Staff recommended approval of the resolution.

MOTION: Commissioner Anderson motioned to Approve Medicine Lake Local Water Management Plan 2018 Update. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 8-0. [City of New Hope absent from the vote]

Commissioner Welch requested that the agenda of a future Commission meeting include an update on the adoption of local ordinances as required by the BCWMC Plan.

H. Identify Date and Format for 50th Anniversary Event

Administrator Jester reported that last year the Education Committee developed various ideas for commemorating the Commission's 50th Anniversary and that one favorite idea was to hold an event including a light meal,

presentation, display of historical documents, and optional watershed tour for elected and appointed officials. She asked for recommendations on a date and format for the event so that planning can begin.

After some discussion there was consensus that June 27th is the preferred date with a late afternoon tour followed by an evening reception.

I. Review Letters of Interest Proposals from Legal and Engineering Firms

Administrator Jester reminded commissioners that in January, the Commission submitted a solicitation for proposals for legal and technical engineering services in order to comply with State Law. She reported the Commission received one proposal (from Kennedy & Graven) for legal services and three proposals for engineering services from Barr Engineering, RESPEC, and ProSource. She noted that since the proposals are not public documents, they were not included with meeting materials but were emailed to commissioners. Staff recommended that the Commission continue to use their current consultants.

There was some discussion about whether or not the TAC should provide a recommendation on the engineering proposals. There was consensus that TAC review wasn't needed in this case; that the Commission wasn't seriously considering interviewing other engineering firms.

MOTION: Commissioner Harwell moved that upon appropriate solicitation, the Commission continue to contract with Barr Engineering Co., and Kennedy & Graven for their engineering and legal consulting, respectively. Commissioner de Lambert seconded the motion.

Discussion: Commissioner Scanlan mentioned that he knows of a competitor that speaks highly of Barr Engineering. Commissioner Carlson noted that the Commission should be careful not to "bury its head in the sand" and to keep looking closely at expenses. Many other Commission members spoke in favor of Barr and noted excellent work.

Upon a vote, the motion carried 8-0. [City of New Hope absent from the vote]

J. Consider Approval of Resolution 19-06 Consenting to Representation from Kennedy & Graven and Acknowledging Potential Conflicts

Administrator Jester noted that at the December meeting, the Commission discussed the possible need for a resolution acknowledging there to be potential conflicts of interest regarding legal representation and consenting to continued representation by Kennedy & Graven.

Commissioner Welch said this is not how conflicts of interest should be handled. Commission Attorney Dave Anderson weighed in by saying they have a legal obligation to notify their clients if conflicts of interest arise and that to date there aren't any conflicts of interest. He noted this resolution is a way to acknowledge the possibility of a conflict of interest and that Attorney Gilchrist was going to suggest the other cities adopt similar resolutions. It was noted that the current resolution opens the Commission to liability. Attorney Anderson said that Commissioner Welch raised a good point and that the resolution is not necessary, but was a good faith approach to show transparency. Commissioner Anderson stated that he is not sure that this is the best way to proceed.

[Harwell departed.]

MOTION: Commissioner Scanlan moved to approve Resolution 19-06 Consenting to Representation from Kennedy & Graven and Acknowledging Potential Conflicts. There was no second. Motion failed.

K. Consider Approval of Resolution 19-07 of Support for Chloride Limited Liability Legislation

Administrator Jester said she learned from the Stop Over Salting group while attending the Road Salt Symposium that a few local governments and organizations have passed resolutions supporting the chloride limited liability legislation. She noted that given that this is such an important topic in the watershed, she thought the attached

resolution would be appropriate for the Commission to consider. She reported that last year the Commission submitted letters to bill authors supporting the legislation.

MOTION: Commissioner Prom moved to table Resolution 19-07 supporting chloride limited liability legislation. Commissioner Scanlan seconded. Upon a vote, the motion carried 6-1, with the City of St. Louis Park voting against the motion and the cities of New Hope and Golden Valley absent from the vote.

6. COMMUNICATIONS

A. **Administrator's Report**

Administrator Jester commented on the following items:

i. Reminder to complete conflict of interest forms
ii. Report on Road Salt Symposium
iii. Commission received part of their AIS grant and the other parts are being funded in different ways

B. **Chair**

Chair Prom stated he appreciates the position.

C. **Commissioners**

i. Commissioner Carlson attended an informative meeting about AIS held at Barr Engineering offices. He noted a new method of controlling zebra mussels with light and he's seeking more information about it.
ii. Commissioner Scanlan reminded everyone that community members watch the actions of the Commission.

D. **TAC Members**

i. Mark Ray is the new TAC chair. The next meeting is March 8th. Commissioners Welch and Prom may attend that meeting.

E. **Committees**

i. Nothing to report

F. **Legal Counsel**

i. Nothing to report

G. **Engineer**

Engineer Chandler reported that the BCWMC's request to drawdown the Mississippi River for a tunnel inspection was denied and that there will be no tunnel inspection in February.

7. INFORMATION ONLY (Information online only)

A. CIP Project Updates http://www.bassettcreekwmo.org/projects
B. Grant Tracking Summary and Spreadsheet
C. Local News Story on Winnetka Pond Dredging
D. WCA Notice of Decision, Plymouth

8. ADJOURNMENT

The meeting adjourned at 11:35 a.m.

_____

Signature/Title Date

_____

Signature/Title Date

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report **(UNAUDITED)**
Fiscal Year: February 1, 2019 through January 31, 2020
MEETING DATE: March 21, 2019

Item 4B.
BCWMC 3-21-19
More details online

BEGINNING BALANCE		**14-Feb-19**			**580,715.58**
ADD:					
	General Fund Revenue:				
	Interest less Bank Fees			60.59	
	Assessments:				
	2019 - Assessments				
	Plymouth			237,986.00	
	Medicine lake			3,846.00	
	WOMP Reimbursement			4,500.00	
	Permits:				
	David Cossi		BCWMC 2019-03	500.00	
	NFF Real Estate		BCWMC 2019-01	1,500.00	
	S E H		BCWMC 2019-02	1,500.00	
	ERM		BCWMC 2019-04	1,500.00	
	Reimbursed Construction Costs			136,577.01	
			Total Revenue and Transfers In		**387,969.60**
DEDUCT:					
	Checks:				
	3170 Barr Engineering		Feb Engineering	47,795.49	
	3171 Keystone Waters		Feb Admin	6,164.86	
	3172 Lawn Chair Gardener		Feb Admin Services	1,128.72	
	3173 Triple D Espresso		Mar Mtg	111.75	
	3174 Wenck Associates		Feb WOMP	1,014.00	
	3175 Freshwater Society		AIS/APM	2,000.00	
	3176 Metro Watershed Partners		Partnership	3,500.00	
	3177 Metro Conservation Districts		Partnership	350.00	
	3178 City of Golden Valley		2015 Bassett Creek CR2(	114,601.05	
	3162 VOID Check		VOID Check	(100.00)	
			Total Checks/Deductions		**176,565.87**
	Outstanding from previous month:				
	3157 Metro Blooms		Harrison Project	2,159.81	
	3161 Triple D Expresson		Meeting Exp	111.75	
VOID	3162 Mike Fruen		Conference Reimb	100.00	
	3163 MN Assoc of Watershed		Annual Dues	500.00	
ENDING BALANCE		**13-Mar-19**			**792,119.31**

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report **(UNAUDITED)**
Fiscal Year: February 1, 2019 through January 31, 2020
MEETING DATE: March 21, 2019

	2019/2020 BUDGET	CURRENT MONTH	YTD 2019/2020	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSEMENTS TO CITIES	529,850	241,832.00	445,884.00	83,966.00
PROJECT REVIEW FEES	60,000	0.00	0.00	60,000.00
WOMP REIMBURSEMENT	5,000	4,500.00	4,500.00	500.00
METROPOLITAN COUNCIL - LRT		0.00	0.00	
HENNEPIN COUNTY GRANT-AIS PREVENTION GRANT		0.00	0.00	
TRANSFERS FROM LONG TERM FUND & CIP	76,000	0.00	0.00	76,000.00
REVENUE TOTAL	**670,850**	**246,332.00**	**450,384.00**	**220,466.00**
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	130,000	5,056.50	5,056.50	124,943.50
DEV/PROJECT REVIEWS	80,000	7,251.15	7,251.15	72,748.85
NON-FEE/PRELIM REVIEWS	15,000	3,136.50	3,136.50	11,863.50
COMMISSION AND TAC MEETINGS	12,000	1,400.00	1,400.00	10,600.00
SURVEYS & STUDIES	20,000	0.00	0.00	20,000.00
WATER QUALITY/MONITORING	78,000	5,268.14	5,268.14	72,731.86
WATER QUANTITY	10,000	1,089.74	1,089.74	8,910.26
WATERSHED INSPECTIONS -EROSION CONTROL	0	0.00	0.00	0.00
ANNUAL FLOOD CONTROL INSPECTIONS	48,000	1,462.50	1,462.50	46,537.50
REVIEW MUNICIPAL PLANS	4,000	1,050.00	1,050.00	2,950.00
WOMP	20,500	1,014.00	1,014.00	19,486.00
XP-SWMM MODEL UPDATES/REVIEWS	0	0.00	0.00	0.00
APM / AIS WORK	32,000	2,105.00	2,105.00	29,895.00
ENGINEERING & MONITORING TOTAL	**449,500**	**28,833.53**	**28,833.53**	**420,666.47**
PLANNING				
Next Generation Plan Development	12,000	0.00	0.00	12,000.00
MAINTENANCE FUNDS TOTAL	**12,000**	**0.00**	**0.00**	**12,000.00**
ADMINISTRATION				
ADMINISTRATOR	69,200	5,850.00	5,850.00	63,350.00
LEGAL COSTS	17,000	0.00	0.00	17,000.00
AUDIT, INSURANCE & BONDING	3,500	0.00	100.00	3,400.00
FINANCIAL MANAGEMENT	18,000	0.00	0.00	18,000.00
MEETING EXPENSES	1,500	111.75	223.50	1,276.50
ADMINISTRATIVE SERVICES	15,000	1,443.58	1,443.58	13,556.42
ADMINISTRATION TOTAL	**124,200**	**7,405.33**	**7,617.08**	**116,582.92**
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	1,300	0.00	0.00	1,300.00
WEBSITE	3,000	0.00	0.00	3,000.00
PUBLIC COMMUNICATIONS	1,000	0.00	0.00	1,000.00
EDUCATION AND PUBLIC OUTREACH	25,000	(100.00)	5,145.00	19,855.00
WATERSHED EDUCATION PARTNERSHIPS	15,850	3,850.00	4,350.00	11,500.00
OUTREACH & EDUCATION TOTAL	**46,150**	**3,750.00**	**9,495.00**	**36,655.00**
MAINTENANCE FUNDS				
EROSION/SEDIMENT (CHANNEL MAINT)	25,000	0.00	0.00	25,000.00
LONG TERM MAINTENANCE (moved to CF)	25,000	0.00	0.00	25,000.00
MAINTENANCE FUNDS TOTAL	**50,000**	**0.00**	**0.00**	**50,000.00**
TMDL WORK				
TMDL IMPLEMENTATION REPORTING	10,000	0.00	0.00	10,000.00
TMDL WORK TOTAL	**10,000**	**0.00**	**0.00**	**10,000.00**
TOTAL EXPENSES	**691,850**	**39,988.86**	**45,945.61**	**645,904.39**

BCWMC Construction Account
Fiscal Year: February 1, 2018 through January 31, 2020 **(UNAUDITED)**
March 2019 Financial Report

Cash Balance 02/28/2019				
Cash		1,189,137.55		
	Total Cash		1,189,137.55	
Investments:				
Minnesota Municipal Money Market (4M Fund)		2,500,000.00		
2018-19 Dividends		40,405.21		
2019-20 Dividends				
Dividends-Current		4,248.67		
	Total Investments		2,544,653.88	
	Total Cash & Investments			3,733,791.43
Add:				
Interest Revenue (Bank Charges)		234.55		
	Total Revenue			234.55
Less:				
CIP Projects Levied - Current Expenses - TABLE A		(115,426.05)		
Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B		(5,214.46)		
	Total Current Expenses			(120,640.51)
	Total Cash & Investments On Hand 03/13/19			**3,613,385.47**

Total Cash & Investments On Hand	3,613,385.47
Current Anticipated Levy -2019 (July 19/Dec 19/Jan 20)	1,436,000.00
CIP Projects Levied - Budget Remaining - **TABLE A**	(4,682,820.63)
Closed Projects Remaining Balance	**366,564.84**
2012 - 2017 Anticipated Tax Levy Revenue - **TABLE C**	7,045.36
2018 Anticipated Tax Levy Revenue - TABLE C	10,316.57
Anticipated Closed Project Balance	**383,926.77**
Proposed & Future CIP Project Amount to be Levied - **TABLE B**	0.00

TABLE A - CIP PROJECTS LEVIED

			Approved Budget	Current Expenses	2019 YTD Expenses	**INCEPTION** To Date Expenses	Remaining Budget	Grant Funds Received
Lakeview Park Pond (ML-8) (2013)			196,000	0.00	0.00	11,589.50	184,410.50	
Four Seasons Mall Area Water Quality Proj (NL-2)			990,000	0.00	0.00	162,907.34	827,092.66	
2014								
Schaper Pond Enhance Feasibility/Project (SL-1)(SL-3)			612,000	825.00	825.00	376,879.86	235,120.14	
Briarwood / Dawnview Nature Area (BC-7)			250,000	0.00	0.00	250,000.00	0.00	
Twin Lake Alum Treatment Project (TW-2)			163,000	0.00	0.00	91,037.82	71,962.18	
2015								
Main Stem 10th to Duluth (CR2015)	Close Project		1,503,000	114,601.05	114,601.05	1,118,347.29		
2016								
Northwood Lake Pond (NL-1)[2]		822,140						
Budget Amendment		611,600	1,433,740	0.00	0.00	1,447,143.38	(13,403.38)	700,000
2017								
Main Stem Cedar Lk Rd-Dupont (2017CR-M)	2017 Levy	400,000	1,064,472	0.00	0.00	132,029.25	932,442.75	
	2018 Levy	664,472						
Plymouth Creek Restoration (2017 CR-P)	2017 Levy	580,930	863,573	0.00	0.00	594,690.16	268,882.84	200,000
	2018 Levy	282,643						
2018								
Bassett Creek Park & Winnetka Ponds Dredging (BCP-2)			1,000,000	0.00	0.00	132,812.80	867,187.20	
2019								
Decola Ponds B&C Improvement(BC-2,BC-3,BC-8)			1,031,500	0.00	0.00	85,810.06	945,689.94	34,287
Westwood Lake Water Quality Improvement Project(Feasibility)			404,500	0.00	0.00	41,064.20	363,435.80	
			9,511,785	115,426.05	115,426.05	4,444,311.66	4,682,820.63	

TABLE B - PROPOSED & FUTURE CIP PROJECTS TO BE LEVIED

	Approved Budget - To Be Levied	Current Expenses	2019 YTD Expenses	**INCEPTION** To Date Expenses	Remaining Budget
2020					
Bryn Mawr Meadows (BC-5)	0	0.00	0.00	95,503.56	(95,503.56)
Jevne Park Stormwater Mgmt Feasibility (ML-21)	0	5,081.46	5,081.46	35,535.75	(35,535.75)
Crane Lake Improvement Proj (CL-3)	0	133.00	133.00	5,295.35	(5,295.35)
2020 Project Totals	0	5,214.46	5,214.46	136,334.66	(136,334.66)
Total Proposed & Future CIP Projects to be Levied	0	5,214.46	5,214.46	136,334.66	(136,334.66)

BCWMC Construction Account
Fiscal Year: February 1, 2018 through January 31, 2020 **(UNAUDITED)**
March 2019 Financial Report

TABLE C - TAX LEVY REVENUES

	County Levy	**Abatements / Adjustments**	**Adjusted Levy**	**Current Received**	**Year to Date Received**	**Inception to Date Received**	**Balance to be Collected**	BCWMO Levy
2019 Tax Levy	1,436,000.00		1,436,000.00		0.00	0.00	1,436,000.00	1,436,000.00
2018 Tax Levy	1,346,815.00		1,346,815.00		1,336,498.43	1,336,498.43	10,316.57	947,115.00
2017 Tax Levy	1,303,600.00	(10,691.48)	1,292,908.52		(1,377.77)	1,289,759.63	3,148.89	1,303,600.00
2016 Tax Levy	1,222,000.00	(9,526.79)	1,212,473.21		(1,390.89)	1,209,824.67	2,648.54	1,222,000.00
2015 Tax Levy	1,000,000.00	32.19	1,000,032.19		306.34	999,238.04	794.15	1,000,000.00
2014 Tax Levy	895,000.00	(8,533.75)	886,466.25		152.14	885,788.66	677.59	895,000.00
2013 Tax Levy	986,000.00	(10,510.52)	975,489.48		756.95	975,713.29	(223.81)	986,000.00
				0.00			**1,453,361.93**	

OTHER PROJECTS:

	Approved Budget	**Current Expenses / (Revenue)**	**2019 YTD Expenses / (Revenue)**	**INCEPTION To Date Expenses / (Revenue)**	**Remaining Budget**
TMDL Studies					
TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
TOTAL TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
Flood Control Long-Term					
Flood Control Long-Term Maintenance	690,573.00	15,936.50	15,936.50	357,386.91	
Less: State of MN - DNR Grants			0.00	(97,542.00)	
	690,573.00	15,936.50	15,936.50	259,844.91	430,728.09
Annual Flood Control Projects:					
Flood Control Emergency Maintenance	500,000.00	0.00	0.00	0.00	500,000.00
Annual Water Quality					
Channel Maintenance Fund	400,000.00	0.00	0.00	255,619.60	144,380.40
Metro Blooms Harrison Neighborhood CWF Grant Project	134,595.00	0.00	0.00	23,876.84	110,718.16
BWSR Grant				(67,298.00)	(67,298.00)
	134,595.00	0.00	0.00	(43,421.16)	
Total Other Projects	1,860,168.00	15,936.50	15,936.50	512,510.50	1,145,763.50

Cash Balance 02/28/2019		**1,058,710.05**
Add:		
Transfer from GF		0.00
Less:		
Current (Expenses)/Revenue		(15,936.50)
Ending Cash Balance	**03/13/19**	**1,042,773.55**
Additional Capital Needed		(102,990)

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BARR

Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co. (Barr)
Subject: Item 4E – Golden Valley 2019 Pavement Management Program (PMP) Project – Golden Valley, MN
BCWMC March 21, 2019 Meeting Agenda
Date: March 12, 2019
Project: 23270051 2019 2179

4E Golden Valley 2019 Pavement Management Program (PMP) Project – Golden Valley, MN BCWMC 2019-02

Summary:

Proposed Work: Street reconstruction, stormwater improvements, sanitary sewer repairs, water main replacement, and associated site work

Basis for Review at Commission Meeting: Linear project with more than five acres of disturbance

Impervious Surface Area: Decrease 0.25 acres

Recommendation: Conditional Approval

General Background & Comments

The proposed linear project is located at various locations in the Medicine Lake Direct, Bassett Creek Main Stem, and Sweeney Lake subwatersheds in Golden Valley, MN. The proposed linear project includes street reconstruction, storm sewer improvements, sanitary sewer repairs, water main replacement, and associated site work resulting in 11.03 acres of disturbance. The proposed linear project reduces the net impervious surfaces by 0.25 acres, from 5.89 acres (existing) to 5.64 acres (proposed).

Floodplain

The proposed project does not involve work in the BCWMC 100-year floodplain; therefore, BCWMC floodplain review is not required.

Wetlands

The City of Golden Valley is the local government unit (LGU) responsible for administering the Wetland Conservation Act; therefore, BCWMC wetland review is not required.

Stormwater Management

The proposed linear project does not create one or more acres of net new impervious surfaces; therefore, BCWMC rate control review is not required.

Water Quality Management

The proposed linear project does not create one or more acres of net new impervious surfaces; therefore, BCWMC water quality review is not required.

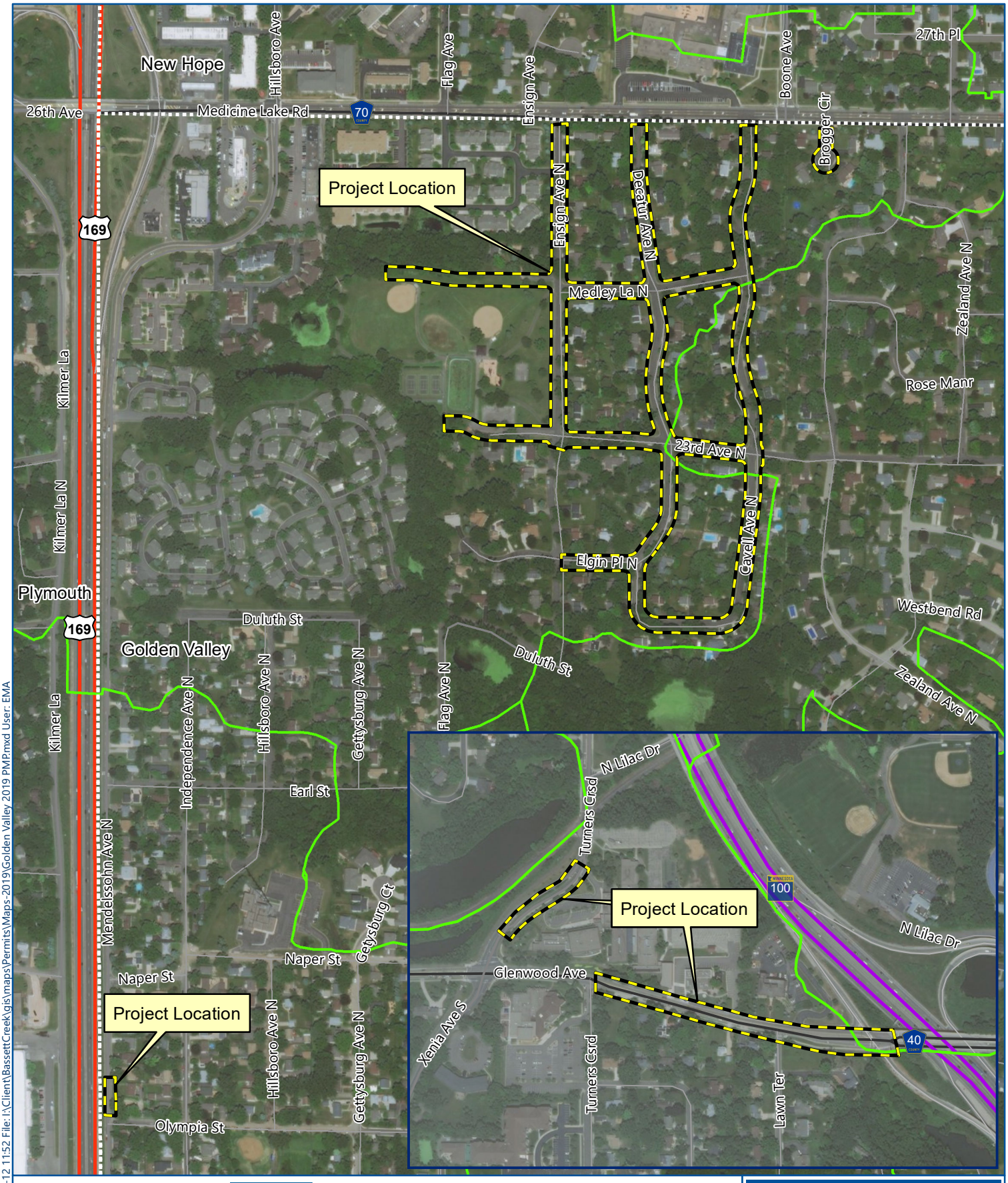
Erosion and Sediment Control

The proposed linear project results in more than one acre of land disturbance; therefore, the proposed linear project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include rock construction entrances, sediment control logs, silt fence, and storm drain inlet protection. Permanent erosion and sediment control features include stabilization with seed, sod, hydraulic mulch, and erosion control blankets.

Recommendation

Conditional approval based on the following comments:

1. On sheets E3-E10, the locations of the rock construction entrances must be shown.
2. On Sheet D4, the cut-off berm shown in the *Rock Construction Entrance* detail must be modified to include a minimum height of 2 feet above the adjacent roadway (with maximum side slopes of 4:1) to intercept sediment-laden runoff.
3. On Sheet E2, the fifth note under *Erosion Prevention Measures and Timing* must be revised to require stabilization within seven (7) days after construction activity has ceased, due to the project's location within one mile of a special and/or impaired water body.
4. Inlet protection must be provided at the existing catch basins at the following locations:
    a. At the northeast corner of the intersection of 23rd Avenue North and Cavell Avenue North (along north side of 23rd Avenue North).
    b. At the northeast corner of the intersection of Medley Lane and Decatur Avenue North (along the north side of Medley Lane).
    c. At the southeast corner of the intersection of Medley Lane and Decatur Avenue North (along the south side of Medley Lane).
5. The applicant should consider installation of sump manholes or other treatment or pretreatment BMPs to remove sediment and pollutants prior to discharge.
6. Revised plans (paper copy and final electronic files) must be provided to the BCWMC Engineer for final review and approval.



Project Location
Municipality
BCWMC Legal Boundary
Major Subwatershed
Bassett Creek

BARR

N

Feet
0 200 400

Bassett Creek Watershed Management Commission

GOLDEN VALLEY 2019 PAVEMENT MANAGEMENT PROGRAM (PMP) PROJECT
Golden Valley, MN

LOCATION MAP

Item 4F.
BCWMC 3-21-19

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Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co. (Barr)
Subject: Item 4F – Southwest Light Rail Transit (SWLRT) Project – Minneapolis, MN
BCWMC March 21, 2019 Meeting Agenda
Date: March 14, 2019
Project: 23270051 2018 3006

4F Southwest Light Rail Transit (SWLRT) Project – Minneapolis, MN BCWMC 2016-17

Summary:

Proposed Work: Construction of a new LRT project along a corridor from Minneapolis to Eden Prairie, including stations, tracks, and park & ride features

Basis for Review at Commission Meeting: Linear project with more than 5 acres of disturbance and revised drainage to the new Bassett Creek tunnel

Impervious Surface Area: Increase approximately 2.6 acres

Recommendation: Conditional Approval

General Background & Comments

The proposed SWLRT project is a 16-mile extension of the Green Line/Central Corridor LRT. Approximately two miles of the proposed SWLRT project corridor falls within the boundaries of the Bassett Creek watershed, in the City of Minneapolis. Within the Bassett Creek watershed, the project includes freight rail, light rail, paved trails, associated support facilities, and two stations. The three project segments within the Bassett Creek watershed are Segments E4-1A, E4-1B, and E4-2 (see attached map).

The Commission originally became involved with this project when the City of Minneapolis requested that the BCWMC consider approval of a new direct connection to the new Bassett Creek tunnel associated with the SWLRT project (March 9, 2016 letter). The Commission reviewed and conditionally approved the connection to the new Bassett Creek tunnel at its March 17, 2016 meeting. Conditions of the March 17, 2016 conditional approval are included in the recommendations.

A condition of the March 17, 2016 conditional approval was that "drawings and supporting information must be submitted to the BCWMC Engineer for separate review as part of the BCWMC project review program." The SWLRT project team submitted drawings and supporting information on May 2, 2016 and the Commission reviewed the submittal at its June 16, 2016 meeting. The Commission did not approve the project plans at their June 16, 2016 meeting, but they directed BCWMC staff to submit comments to the project proposer and to bring revised SWLRT project plans to the Commission at a future meeting. The SWLRT project team submitted revised plans in response to the BCWMC's comments on October 27, 2016 and the Commission reviewed and approved revised grading, drainage and erosion control plans at

its December 15, 2016 meeting. The Commission also extended the review approval through December 31, 2021.

Several plan revisions have occurred on the SWLRT project since the BCWMC approval in December 2016, including the addition of a corridor protection barrier between the BNSF and SWLRT tracks and expansion of the project area to include the construction of the Northstar Tail Track. These updates have resulted in revisions to drainage areas, BMP design, discharge points, rate control, and water quality treatment. This memorandum reflects the most recent submittal from the SWLRT project team.

Table 1 summarizes the three project segments within the Bassett Creek watershed. As noted in the table, the proposed project would result in a net increase of 2.6 acres in impervious area over existing conditions.

Table 1: Summary of Project Segments, Scope, Watershed Areas, and Imperviousness

Project Segment	General Scope	Existing Watershed Area (ac)	Existing Impervious Area (ac)	Proposed Watershed Area (ac)	Proposed Impervious Area (ac)	Impervious Change from Existing (ac)
E4-1A	Reconstruction of bike/pedestrian trail, LRT tracks, Bryn Mawr Station and pedestrian bridge, passenger drop off lane, sidewalk additions and safety improvements at Wayzata Boulevard and Penn Avenue, corridor protection barrier	59.5	12.5	58.3	14.3	+1.8
E4-1B	Conversion of existing corridor to a combined parallel LRT and freight rail, construction of recreation trails, pedestrian bridge from Luce Line Trail to Bassett Creek Valley (BCV) Station, BCV station, and passenger drop off lane, corridor protection barrier	37.4	25.3	37.5	23.0	-2.3
E4-2	Conversion of existing corridor to a combined parallel LRT and freight rail, pedestrian trail, Northstar tail track, Glenwood LRT Bridge, replacement of adjoining Glenwood Avenue bridge decks, Corridor protection barrier	11.9	4.9	11.9	7.8	+3.1

Wetlands

The City of Minneapolis is the local government unit (LGU) responsible for administering the Wetland Conservation Act; therefore, BCWMC wetland review is not required.

Floodplain

The proposed project does not involve work in the BCWMC 100-year floodplain; therefore, BCWMC floodplain review is not required.

Modifications to the Bassett Creek Tunnels

The 2015 Requirements document (in effect at time of 2016 approval) stated that proposed projects located within the jurisdiction of the BCWMC or the MWMO shall be submitted for BCWMC review and approval if the proposed project will increase the area tributary to the new Bassett Creek tunnel, add connections or outlets to the new Bassett Creek tunnel, or change the rate of runoff in the new Bassett Creek tunnel for the 10-year, 50-year, or 100-year event.

As part of the proposed linear project, the SWLRT requested (via the City of Minneapolis) to divert drainage from the old Bassett Creek tunnel to the new Bassett Creek tunnel for some of the proposed stormwater BMPs in Segment E4-2 near Glenwood Avenue. The Commission approved this diversion and new tunnel connection at its March 17, 2016 meeting.

Stormwater Management

At the time the SWLRT project received BCWMC approval, the BCWMC's 2015 Requirements document was in effect. The 2015 Requirements document stated that linear projects on sites without restrictions that create one or more acres of net new impervious surfaces must manage stormwater such that peak flow rates leaving the site are equal to or less than the existing rates leaving the site for the 2-, 10-, and 100-year events, based on Atlas 14 precipitation amounts and using a nested 24-hour rainfall distribution. As shown below, the proposed stormwater management system meets the BCWMC rate control requirements.

Under existing conditions, the watersheds within Segments E4-1A, E4-1B, and portions of E4-2 ultimately drain to Bassett Creek (and the new Bassett Creek tunnel). Portions of the existing watersheds within Segment E4-2 are within the jurisdiction of the Mississippi Watershed Management Organization (MWMO) and drain to the old Bassett Creek tunnel; however under proposed conditions, all watersheds within Segment E4-2 will be connected to the new Bassett Creek tunnel (see additional discussion below).

Table 2 summarizes the existing and proposed peak discharges from the project area within Segment E4-1A to Bassett Creek.

Table 2: Summary of existing and proposed peak discharge rates for Segment E4-1A

Discharge Point	2-year peak discharge		10-year peak discharge		100-year peak discharge	
	Existing (cfs)	Proposed (cfs)	Existing (cfs)	Proposed (cfs)	Existing (cfs)	Proposed (cfs)
Bryn Mawr Meadows Park storm sewer [1]	5.24	0	16.71	0	48.47	0
MnDOT Pond (Penn Pond), upstream of Bryn Mawr Meadows Park storm sewer [1]	11.41	14.34	20.38	34.56	41.84	89.76
Subtotal discharge to Bryn Mawr Meadows Park/MnDOT Pond	**16.65**	**14.34**	**37.09**	**34.56**	**90.31**	**89.76**
Linden Yard	3.76	3.01	9.26	5.91	23.51	12.67
Mount View Avenue	0.75	0.75	1.17	1.17	2.06	2.06

[1] The Minnesota Department of Transportation (MnDOT), the City of Minneapolis, and the Minneapolis Park and Recreation Board (MPRB) have approved rerouting the existing drainage through the Bryn Mawr Meadows Park Storm Sewer to the MnDOT Pond (Penn Pond).

Table 3 summarizes the existing and proposed peak discharges from the project area within Segment E4-1B to Bassett Creek:

Table 3: Summary of existing and proposed peak discharge rates for Segment E4-1B

Discharge Point	2-year peak discharge		10-year peak discharge		100-year peak discharge	
	Existing (cfs)	Proposed (cfs)	Existing (cfs)	Proposed (cfs)	Existing (cfs)	Proposed (cfs)
SWLRT corridor	19.91	6.14	32.82	14.41	68.59	45.22
Minneapolis run-on	23.78	16.77	42.01	38.55	82.81	79.62

Table 4 summarizes the existing and proposed peak discharges within Segment E4-2 to the old Bassett Creek tunnel and to the new Bassett Creek Tunnel.

Table 4: Summary of existing and proposed peak discharge rates for Segment E4-2

Discharge Point	2-year peak discharge		10-year peak discharge		100-year peak discharge	
	Existing (cfs)	Proposed (cfs)	Existing (cfs)	Proposed (cfs)	Existing (cfs)	Proposed (cfs)
Project drainage area to old Bassett Creek tunnel [1]	8.62	-	19.43	-	46.29	-
Project drainage area diverted from old Bassett Creek tunnel to new Bassett Creek tunnel [1]	-	8.42	-	19.31	-	42.66
Project drainage area to new Bassett Creek tunnel [2]	1.79	0.78	3.69	2.61	8.26	2.65
Segment E4-2 discharge to Bassett Creek	**10.41**	**9.20**	**23.12**	**21.92**	**54.55**	**45.31**

[1] The BCWMC previously evaluated and approved the requested connection to the new Bassett Creek tunnel near Glenwood Avenue at its March 17, 2016 meeting.
[2] This includes the project drainage area tributary to the New Bassett Creek Tunnel from existing conditions and proposed conditions but does not include the project drainage area diverted to the New Bassett Creek Tunnel in proposed conditions.

Water Quality Management

Within the Bassett Creek watershed, the SWLRT linear project creates one acre or greater of new and/or fully reconstructed impervious surfaces. The BCWMC 2015 Requirements document (in effect at time of 2016 approval) stated that the proposed linear project must capture and retain the larger of 1) 0.55 inches of runoff from the new and fully reconstructed impervious surfaces, or 2) 1.1 inches of runoff from the net increase in impervious area. Per the MIDS design sequence flow chart, the volume reduction techniques considered to "capture and retain" runoff are infiltration, rainwater harvesting and reuse, bioretention, permeable pavement, tree boxes, grass swales and/or additional techniques included in the MIDS calculator or the Minnesota Stormwater Manual (i.e., infiltration practices). If the applicant is unable to meet the performance goal due to site restrictions, the 2015 Requirements document stated that the applicant must use the MIDS flexible treatment options approach, following the MIDS design sequence flow chart.

According to the stormwater management plan, 0.55 inches of runoff from the new and fully reconstructed impervious surfaces results in the larger "capture and retain" volume for all three SWLRT segments within the Bassett Creek watershed. The applicant proposed volume reduction BMPs, including infiltration basins and underground infiltration systems, within the SWLRT segments and the Bassett Creek watershed. However due to limited area within the right-of-way, extensive contamination, and areas of high groundwater, the proposed linear project is unable to achieve the MIDS volume reduction goal.

For segments E4-1A, E4-1B, and E4-2, the applicant is pursuing Flexible Treatment Option 2 (FTO #2), in accordance with the MIDS Design Flow Chart. FTO #2 includes achieving volume reduction to the maximum extent practicable, removing 60 percent of the annual total phosphorus load from the new and

fully reconstructed impervious surfaces, and considering relocation of project elements to address varying soil conditions and other constraints across the site. Table 5 summarizes the MIDS volume reduction goal and volume reduction provided for segments E4-1A, E4-1B, and E4-2.

Table 5: Summary of required and provided volume reduction within the Bassett Creek Watershed

Segment	Volume Reduction Required (cubic feet)	Volume Reduction Provided (cubic feet)
E4-1A	13,916	4,731
E4-1B	18,647	9,646
E4-2	14,614	9,692
Bassett Creek Watershed	**47,177**	**24,069**

The applicant used the MIDS calculator to evaluate the proposed stormwater BMPs. Table 6 summarizes the average annual TP loading and removal for each of the project segments.

Table 6: Summary of average annual TP removal for project segments

Segment	TP Loading (lbs/year)	Required TP Removal (lbs/year)	TP Removal Provided (lbs/year)	TP Removal Provided (%)
E4-1A	16.08	9.65	11.32	70
E4-1B	29.02	17.41	17.81	61
E4-2	14.58	8.75	9.29	64
Bassett Creek Watershed	**59.68**	**35.81**	**38.41**	**64**

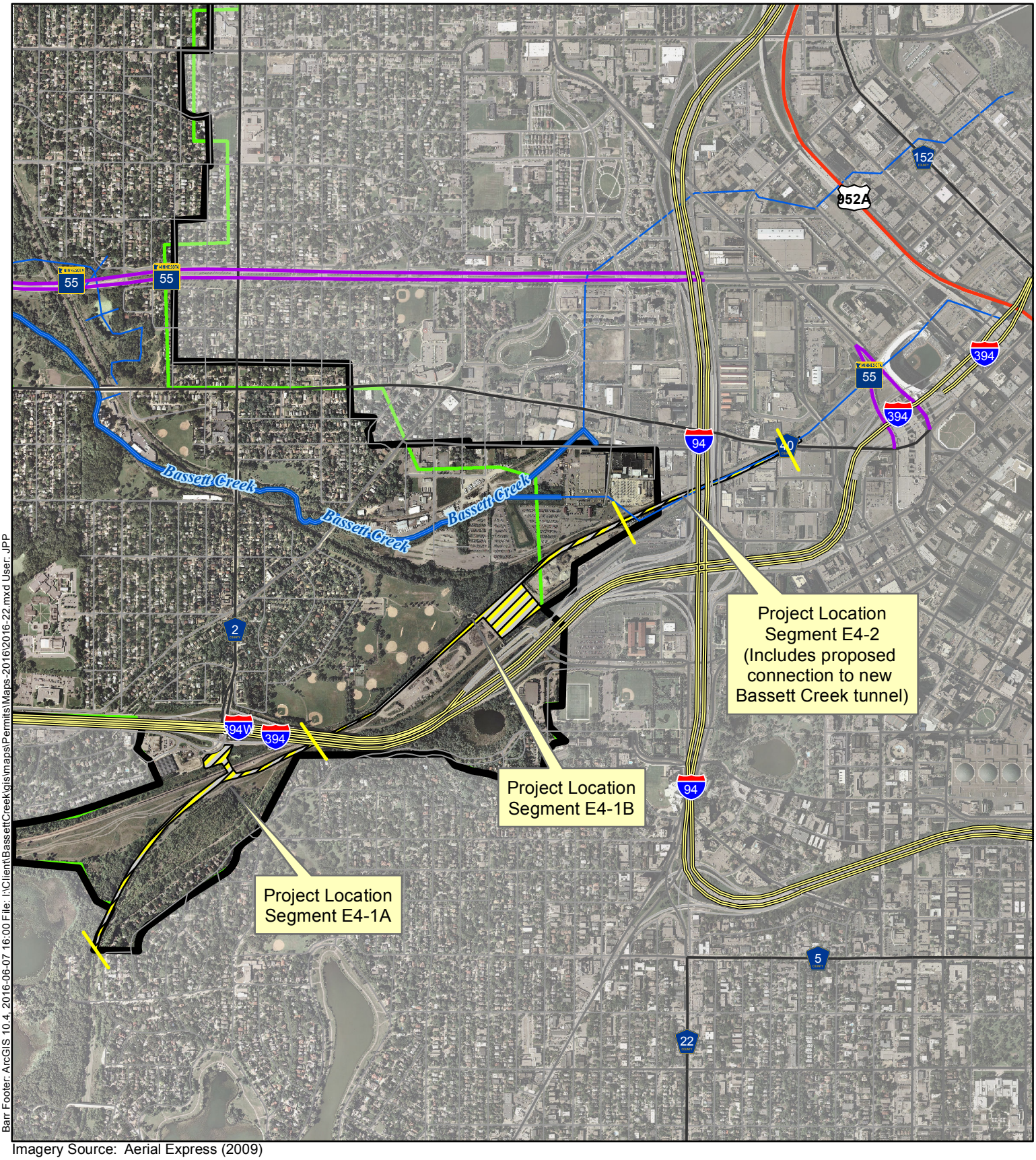
Erosion and Sediment Control

The proposed linear project involves more than one acre of land disturbance, therefore the proposed linear project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion control features include: silt fence, sediment control logs, floating silt fence, rock construction entrances, erosion control blanket, and inlet protection.

Recommendation

Conditional approval based on the following comments:

1. Approval for the connection to the new Bassett Creek tunnel connection and/or change in tributary area to the new Bassett Creek tunnel must be obtained from MnDOT.
2. Stormwater Management Plans for each project segment within the BCWMC jurisdiction were submitted on March 14, 2019 and thorough review has not been completed. Additional comments provided as part of the review must be addressed to the satisfaction of the BCWMC Engineer prior to final approval.
3. Revised plans and supporting information (paper copy and final electronic files) must be provided to the BCWMC Engineer for final review and approval.



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Imagery Source: Aerial Express (2009)

- Project Location
- Bassett Creek
- WMC Boundary
- Major Subwatershed
- Municipality
- Stream

Feet

0 1,500 3,000

Bassett Creek Watershed Management Commission

LOCATION MAP
APPLICATION 2016-17
Southwest LRT
Minneapolis, MN

DRAFT GRANT AGREEMENT

This Agreement is between the COUNTY OF HENNEPIN, STATE OF MINNESOTA, A-2300 Government Center, Minneapolis, Minnesota 55487 ("COUNTY"), on behalf of the Hennepin County Environment and Energy Department, 701 4th Ave S Suite 700 Minneapolis, MN 55415, and Bassett Creek Watershed Management Commission, 7800 Golden Valley Rd, Golden Valley, MN, 55427 ("GRANTEE").

The parties agree as follows:

1. GRANT OF FUNDS

The COUNTY agrees to provide GRANTEE with funds in an amount not to exceed ten thousand ($10,000.00) subject to the conditions set forth in this Agreement. GRANTEE shall be paid upon completion of negotiated terms as agreed. Except for the payments expressly set forth herein, costs and expenses for travel, airfare, lodging, per diem, parking, mileage, ground transportation, and all other costs or reimbursable expenses shall be paid by the GRANTEE and not reimbursed by the COUNTY.

2. SCOPE OF ACTIVITIES

In furtherance of this Agreement, by April 1, 2020 the Grantee shall perform and carry out, in a satisfactory and proper manner the following activities: Expand detailed AIS lake surveys on at least 5 additional lakes within the boundaries of the Grantee's territory. One point intercept plant survey would be completed on each lake. Timing of these surveys will be in August 2019. Staff will recruit up to 10 volunteers from each of the identified 5 priority lake groups in 2019 who are willing to become a certified AIS Detector through the University of Minnesota's AIS Detector Training Program. Volunteers name and contact information will be provided to County staff. Grantee will develop lake-specific AIS prevention education materials for lakeshore residents and will coordinate dissemination of materials by volunteers. All work will be consistent with grant application submitted to the County dated 1/14/2019. A final report of all activities will be submitted to County staff.

Where applicable, works of authorship created by GRANTEE for COUNTY in performance of this Agreement shall be considered "works made for hire" as defined in the U.S. Copyright Act. All right, title and interest in all copyrightable material which GRANTEE may conceive or originate either individually or jointly with others, and which arises out of the performance of this Agreement, are the property of COUNTY. GRANTEE assigns to COUNTY all right, title, interest and copyrights in and to the copyrightable material. GRANTEE shall also, upon request of COUNTY, execute all papers and perform all other acts necessary to assist COUNTY to obtain and register copyrights in those materials.

GRANTEE warrants that, when legally required, GRANTEE shall obtain the written consent of both the owner and licensor to reproduce, publish, and/or use any material supplied to COUNTY including, but not limited to, software, hardware, documentation, and/or any other item. GRANTEE further warrants that any material or item delivered by GRANTEE will not violate the United States copyright law or any property right of another.

3. PAYMENT

Payment for services shall be made directly to GRANTEE after completion of the services and upon the presentation of a claim as provided by law governing COUNTY's payment of claims and/or invoices. GRANTEE can submit invoices monthly for services rendered on a GRANTEE letterhead or invoice. Payment shall be made within thirty-five (35) days from receipt of the invoice.

GRANTEE shall not provide services under this Agreement without receiving a purchase order or purchase order number supplied by COUNTY. All invoices shall display a Hennepin County purchase order number and be sent to the central invoice receiving address supplied by COUNTY.

4. PROFESSIONAL CREDENTIALS

INTENTIONALLY OMITTED

5. INDEPENDENT CONTRACTOR

GRANTEE shall select the means, method, and manner of performing the services. Nothing is intended nor should be construed as creating or establishing the relationship of a partnership or a joint venture between the parties or as constituting GRANTEE as the agent, representative, or employee of COUNTY for any purpose. GRANTEE is and shall remain an independent contractor for all services performed under this Agreement. GRANTEE shall secure at its own expense all personnel required in performing services under this Agreement. GRANTEE's personnel and/or subcontractors engaged to perform any work or services required by this Agreement will have no contractual relationship with COUNTY and will not be considered employees of COUNTY. COUNTY shall not be responsible for any claims related to or on behalf of any of GRANTEE's personnel, including without limitation, claims that arise out of employment or alleged employment under the Minnesota Unemployment Insurance Law (Minnesota Statutes Chapter 268) or the Minnesota Workers' Compensation Act (Minnesota Statutes Chapter 176), or claims of discrimination arising out of state, local or federal law, against GRANTEE, its officers, agents, contractors, or employees. Such personnel or other persons shall neither accrue nor be entitled to any compensation, rights, or benefits of any kind from COUNTY, including, without limitation, tenure rights, medical and hospital care, sick and vacation leave, workers' compensation, unemployment compensation, disability, severance pay, and retirement benefits.

6. NON-DISCRIMINATION

In accordance with COUNTY's policies against discrimination, neither party shall exclude any person from full employment rights nor prohibit participation in or the benefits of any program, service or activity on the grounds of any protected status or class including but not limited to race, color, creed, religion, age, sex, disability, marital status, sexual orientation, public assistance status, or national origin. No person who is protected by applicable federal or state laws against discrimination shall be subjected to discrimination.

7. INDEMNIFICATION

Each PARTY shall defend, indemnify, and hold harmless the other PARTY, its present and former officials, officers, agents, volunteers and employees from any liability, claims, causes of action, judgments, damages, losses, costs, or expenses, including reasonable attorney's fees, resulting directly or indirectly from any act or omission of the Party, a subcontractor, anyone directly or indirectly

employed by them, and/or anyone for whose acts and/or omissions they may be liable in the performance of the services required by this Agreement, and against all loss by reason of the failure of the Party to perform any obligation under this Agreement. For clarification and not limitation, this obligation to defend, indemnify and hold harmless includes but is not limited to any liability, claims or actions resulting directly or indirectly from alleged infringement of any copyright or any property right of another, the employment or alleged employment of Party personnel, the unlawful disclosure and/or use of protected data, or other noncompliance with the requirements of the provisions set forth herein.

8. INSURANCE

A. With respect to the services provided pursuant to this Agreement, GRANTEE shall at its sole expense, procure and maintain insurance of the types, and in the form and amounts described below from insurer(s) authorized to transact business in the state where services or operations will be performed by GRANTEE. Such insurance and required coverage shall be in forms acceptable to COUNTY. The insurance requirements described below shall be maintained uninterrupted for the duration of this Agreement and beyond such term when so required, and shall cover GRANTEE, and others for whom and/or to whom GRANTEE may be liable, for liabilities in connection with work performed by or on behalf of COUNTY, its agents, representatives, employees or contractors. GRANTEE is required to have and keep in force the following minimum insurance coverages or GRANTEE's actual insurance limits for primary coverage and excess liability or umbrella policy limits, whichever is greater:

(1) Commercial General Liability (CGL) on an occurrence basis with contractual liability coverage (this coverage shall be written on the most current ISO (Insurance Services Office, Inc.) CGL form or its equivalent provided XCU (explosion, collapse and underground) is not excluded):

	Limits
General Aggregate	$2,000,000
Products - Completed Operations Aggregate	2,000,000
Personal and Advertising Injury	1,500,000
Each Occurrence - Combined Bodily Injury and Property Damage	1,500,000

B. An umbrella or excess policy is an acceptable method to provide the required commercial general insurance coverage.

Coverage shall not include any exclusion or other limitations related to:

(1) Scope of services;

(2) Delays in project completion and cost overruns;

(3) Persons or entities authorized to notify the carrier of a claim or potential claim; or

(4) Mold, fungus, asbestos, pollutants or other hazardous substances.

The above establishes minimum insurance requirements. It is the sole responsibility of GRANTEE to determine the need for and to procure additional insurance which may be needed in connection with this Agreement. Upon written request, GRANTEE shall promptly submit copies of insurance policies to COUNTY.

GRANTEE shall not commence work until it has obtained required insurance and filed with COUNTY a properly executed Certificate of Insurance establishing compliance. The certificate(s) must name Hennepin County as the certificate holder, and as an additional insured for the commercial general liability coverage required herein. A self-insured retention (SIR) is not acceptable, unless expressly agreed to in writing by COUNTY. The funding of deductibles and self-insured retentions maintained by GRANTEE, if allowed by COUNTY, shall be the sole responsibility of GRANTEE. If the certificate form contains a certificate holder notification provision, the certificate shall state that the insurer will endeavor to mail to COUNTY thirty (30) day prior written notice in the event of cancellation/termination of any described policies. If GRANTEE receives notice of cancellation/termination from an insurer, GRANTEE shall fax or email a copy of the notice to COUNTY within two business days.

GRANTEE shall furnish to COUNTY updated certificates during the term of this Agreement as insurance policies expire. If GRANTEE fails to furnish proof of insurance coverages, COUNTY may withhold payments and/or pursue any other right or remedy allowed under contract, law, equity, and/or statute.

GRANTEE's required insurance shall be primary insurance and any insurance or self-insurance maintained by COUNTY shall be in excess of and non-contributory with GRANTEE'S insurance. GRANTEE waives all rights against COUNTY, its officials, officers, agents, volunteers, and employees for recovery of damages to the extent that damages are covered by insurance of GRANTEE. If necessary, GRANTEE agrees to endorse the required insurance policies to permit waivers of subrogation in favor of COUNTY.

9. DUTY TO NOTIFY

GRANTEE shall promptly notify COUNTY of any claim, action, cause of action or litigation brought against GRANTEE, its employees, officers, agents or subcontractors, which arises out of the services described in this Agreement. GRANTEE shall also notify COUNTY whenever GRANTEE has a reasonable basis for believing that GRANTEE and/or its employees, officers, agents or subcontractors, and/or COUNTY, might become the subject of a claim, action, cause of action, administrative action, criminal arrest, criminal charge or litigation arising out of and/or related to the services described in this Agreement.

10. DATA

A. GRANTEE, its officers, agents, owners, partners, employees, volunteers and subcontractors shall, to the extent applicable, abide by the provisions of the Minnesota Government Data Practices Act, Minnesota Statutes, chapter 13 (MGDPA) and all other applicable state and federal laws, rules, regulations and orders relating to data or the privacy, confidentiality or security of data. For clarification and not limitation, COUNTY hereby notifies GRANTEE that the requirements of Minnesota Statutes section 13.05, subd. 11, apply to this Agreement. GRANTEE shall promptly notify COUNTY if GRANTEE becomes aware of any potential claims, or facts giving rise to such claims, under the MGDPA or other data, data security, privacy or confidentiality laws, and shall also comply with the other requirements of this Section.

Classification of data, including trade secret data, will be determined pursuant to applicable law and, accordingly, merely labeling data as "trade secret" by GRANTEE does not necessarily make the data protected as such under any applicable law.

B. In addition to the foregoing MGDPA and other applicable law obligations, GRANTEE shall comply with the following duties and obligations regarding County Data and County Systems (as each term is defined herein). As used herein, “County Data” means any data or information, and any copies thereof, created by GRANTEE or acquired by GRANTEE from or through COUNTY pursuant to this Agreement, including but not limited to handwriting, typewriting, printing, photocopying, photographing, facsimile transmitting, and every other means of recording any form of communication or representation, including electronic media, email, letters, works, pictures, drawings, sounds, videos, or symbols, or combinations thereof.

If GRANTEE has access to or possession/control of County Data, GRANTEE shall safeguard and protect the County Data in accordance with generally accepted industry standards, all laws, and all applicable COUNTY policies, rules and direction. To the extent of any inconsistency between accepted industry standards and COUNTY policies, rules and directions, GRANTEE shall notify COUNTY of the inconsistency and follow COUNTY direction. GRANTEE shall immediately notify COUNTY of any known or suspected security breach or unauthorized access to County Data, then comply with all responsive directions provided by COUNTY. The foregoing shall not be construed as eliminating, limiting or otherwise modifying GRANTEE’s indemnification obligations herein.

C. COUNTY may, in its sole discretion, grant GRANTEE limited access to COUNTY computer/data systems including but not limited to COUNTY computers, networks, databases, applications and/or environments (“County Systems”) exclusively for the purposes of performing services hereunder. County Systems may be owned by COUNTY or may be licensed by COUNTY from a third party. If COUNTY grants access to County Systems, GRANTEE and all GRANTEE personnel with access to County Systems shall comply with COUNTY data practices and security policies, rules and directions when accessing and using County Systems. Compliance with such requirements is supplemental to GRANTEE’s duty to comply with applicable laws and regulations and GRANTEE’s ordinary duty of care in such situations.

For clarification and not limitation of the foregoing, GRANTEE’s access to County Systems shall be subject to the following: (i) GRANTEE shall notify all personnel with access to County Systems of the obligations imposed by this Agreement; (ii) personnel performing on behalf of GRANTEE shall complete COUNTY approved data practices and security training as required by COUNTY; (iii) if GRANTEE utilizes its own systems, software or equipment in the performance of this Agreement, the same shall meet COUNTY’s technical operating and security system requirements, including but not limited to installing and/or maintaining COUNTY approved firewalls, proxies, filters and other monitors and controls; (iv) GRANTEE shall immediately notify COUNTY of any known or suspected County System incidents or breaches, then comply with all responsive directions provided by COUNTY; and (v) if any GRANTEE personnel with access to County Systems no longer requires said access and/or is no longer performing services hereunder, GRANTEE shall immediately notify COUNTY and ensure that said individual no longer has access to County Systems, including but not limited to deleting, eliminating and destroying all access points, usernames, passwords and/or other applicable credentials. Any notice required by the

foregoing shall be provided to the COUNTY Contract Administrator (as identified in the CONTRACT ADMINISTRATION provisions below).

D. Upon expiration, cancellation or termination of this Agreement:

(1) At the discretion of COUNTY and as specified in writing by the Contract Administrator, GRANTEE shall deliver to the Contract Administrator all County Data so specified by COUNTY.

(2) COUNTY shall have full ownership and control of all such County Data. If COUNTY permits GRANTEE to retain copies of the County Data, GRANTEE shall not, without the prior written consent of COUNTY or unless required by law, use any of the County Data for any purpose or in any manner whatsoever; shall not assign, license, loan, sell, copyright, patent and/or transfer any or all of such County Data; and shall not do anything which in the opinion of COUNTY would affect COUNTY's ownership and/or control of such County Data.

(3) Except to the extent required by law or as agreed to by COUNTY, GRANTEE shall not retain any County Data that are confidential, protected, privileged, not public, nonpublic, or private, as those classifications are determined pursuant to applicable law. In addition, GRANTEE shall, upon COUNTY's request, certify destruction of any County Data so specified by COUNTY.

11. RECORDS - AVAILABILITY/ACCESS

Subject to the requirements of Minnesota Statutes section 16C.05, subd. 5, COUNTY, the State Auditor, or any of their authorized representatives, at any time during normal business hours, and as often as they may reasonably deem necessary, shall have access to and the right to examine, audit, excerpt, and transcribe any books, documents, papers, records, etc., which are pertinent to the accounting practices and procedures of GRANTEE and involve transactions relating to this Agreement. GRANTEE shall maintain these materials and allow access during the period of this Agreement and for six (6) years after its expiration, cancellation or termination.

12. SUCCESSORS, SUBCONTRACTING AND ASSIGNMENTS

A. GRANTEE binds itself, its partners, successors, assigns and legal representatives to COUNTY for all covenants, agreements and obligations herein.

B. GRANTEE shall not assign, transfer or pledge this Agreement and/or the services to be performed, whether in whole or in part, nor assign any monies due or to become due to it without the prior written consent of COUNTY. A consent to assign shall be subject to such conditions and provisions as COUNTY may deem necessary, accomplished by execution of a form prepared by COUNTY and signed by GRANTEE, the assignee and COUNTY. Permission to assign, however, shall under no circumstances relieve GRANTEE of its liabilities and obligations under the Agreement.

C. Permission to subcontract, however, shall under no circumstances relieve GRANTEE of its liabilities and obligations under the Agreement. Further, GRANTEE shall be fully responsible for the acts, omissions, and failure of its subcontractors in the performance of the specified contractual services, and of person(s) directly or indirectly employed by subcontractors. Contracts between GRANTEE and each subcontractor shall require that the subcontractor's services be performed in accordance with this Agreement. GRANTEE shall make contracts between GRANTEE and subcontractors available upon request. For clarification and not limitation of the provisions herein, none of the following constitutes

assent by COUNTY to a contract between GRANTEE and a subcontractor, or a waiver or release by COUNTY of GRANTEE's full compliance with the requirements of this Section: (1) COUNTY's request or lack of request for contracts between GRANTEE and subcontractors; (2) COUNTY's review, extent of review or lack of review of any such contracts; or (3) COUNTY's statements or actions or omissions regarding such contracts.

D. As required by Minnesota Statutes section 471.425, subd. 4a, GRANTEE shall pay any subcontractor within ten (10) days of GRANTEE's receipt of payment from COUNTY for undisputed services provided by the subcontractor, and GRANTEE shall comply with all other provisions of that statute.

E. GRANTEE shall notify COUNTY in writing if another person/entity acquires, directly or indirectly, more than 50 percent of the voting power of the shares entitled to vote for directors of GRANTEE. Notice shall be given within ten (10) days of such acquisition and shall specify the name and business address of the acquiring person/entity. COUNTY reserves the right to require the acquiring person/entity to promptly become a signatory to this Agreement by amendment or other document so as to help assure the full performance of this Agreement.

13. MERGER, MODIFICATION AND SEVERABILITY

A. The entire Agreement between the parties is contained herein and supersedes all oral agreements and negotiations between the parties relating to the subject matter. All items that are referenced or that are attached are incorporated and made a part of this Agreement. If there is any conflict between the terms of this Agreement and referenced or attached items, the terms of this Agreement shall prevail.

B. GRANTEE and/or COUNTY are each bound by its own electronic signature(s) on this Agreement, and each agrees and accepts the electronic signature of the other party.

C. Any alterations, variations or modifications of the provisions of this Agreement shall only be valid when they have been reduced to writing as an amendment to this Agreement signed by the parties. Except as expressly provided, the substantive legal terms contained in this Agreement including but not limited to Indemnification, Insurance, Merger, Modification and Severability, Default and Cancellation/Termination or Minnesota Law Governs may not be altered, varied, modified or waived by any change order, implementation plan, scope of work, development specification or other development process or document.

D. If any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions will not be affected except that if the payment provision obligating the County to pay the GRANTEE in section 1 is deemed invalid, illegal or unenforceable then the GRANTEE need not perform the services required in section 2.

14. DEFAULT AND CANCELLATION/TERMINATION

A. If GRANTEE fails to perform any of the provisions of this Agreement, fails to administer the work so as to endanger the performance of the Agreement or otherwise breaches or fails to comply with any of the terms of this Agreement, it shall be in default. Unless GRANTEE's default is excused in writing by COUNTY, COUNTY may upon written notice immediately cancel or terminate this Agreement in its

entirety. Additionally, failure to comply with the terms of this Agreement shall be just cause for COUNTY to delay payment until GRANTEE's compliance. In the event of a decision to withhold payment, COUNTY shall furnish prior written notice to GRANTEE.

If County fails to perform any of the provisions of this Agreement or otherwise breaches or fails to comply with any of the terms of this Agreement, it shall be in default. Unless COUNTY'Ss default is excused in writing by GRANTEE, GRANTEE may upon written notice immediately cancel or terminate this Agreement in its entirety. Additionally, failure to comply with the terms of this Agreement shall be just cause for GRANTEE to delay performance until COUNTY's compliance. In the event of a decision to withhold performance, GRANTEE shall furnish prior written notice to COUNTY.

B. Notwithstanding any provision of this Agreement to the contrary, GRANTEE shall remain liable to COUNTY for damages sustained by COUNTY by virtue of any breach of this Agreement by GRANTEE. Upon notice to GRANTEE of the claimed breach and the amount of the claimed damage, COUNTY may withhold any payments to GRANTEE for the purpose of set-off until such time as the exact amount of damages due COUNTY from GRANTEE is determined. Following notice from COUNTY of the claimed breach and damage, GRANTEE and COUNTY shall attempt to resolve the dispute in good faith.

C. The above remedies shall be in addition to any other right or remedy available to COUNTY under this Agreement, law, statute, rule, and/or equity.

D. COUNTY's failure to insist upon strict performance of any provision or to exercise any right under this Agreement shall not be deemed a relinquishment or waiver of the same, unless consented to in writing. Such consent shall not constitute a general waiver or relinquishment throughout the entire term of the Agreement.

E. This Agreement may be canceled/terminated with or without cause by either party upon thirty (30) day written notice.

F. If this Agreement expires or is cancelled or terminated, with or without cause, by either party, at any time, GRANTEE shall not be entitled to any payment, fees or other monies except for payments duly invoiced for then-delivered and accepted deliverables/milestones pursuant to this Agreement.

G. If this Agreement expires or is cancelled or terminated, with or without cause, by either party, at any time, GRANTEE shall not be entitled to any payment, fees or other monies except for payments duly invoiced for then-delivered and accepted deliverables/milestones pursuant to this Agreement. In the event GRANTEE has performed work toward a deliverable that COUNTY has not accepted at the time of expiration, cancellation or termination, GRANTEE shall not be entitled to any payment for said work including but not limited to incurred costs of performance, termination expenses, profit on the work performed, other costs founded on termination for convenience theories or any other payments, fees, costs or expenses not expressly set forth in this Agreement.

H. GRANTEE has an affirmative obligation, upon written notice by COUNTY that this Agreement may be suspended or cancelled/terminated, to follow reasonable directions by COUNTY before incurring or making further costs, expenses, obligations or encumbrances arising out of or related to this Agreement.

15. SURVIVAL OF PROVISIONS

The following provisions survive, cancellation or termination: SERVICES TO BE PROVIDED (as to ownership of property); INDEPENDENT CONTRACTOR; INDEMNIFICATION; INSURANCE; DUTY TO NOTIFY; DATA; RECORDS-AVAILABILITY/ACCESS; DEFAULT AND CANCELLATION/TERMINATION; MEDIA OUTREACH; and MINNESOTA LAW GOVERNS.

16. CONTRACT ADMINISTRATION

In order to coordinate the services of GRANTEE with the activities of the Environment and Energy department so as to accomplish the purposes of this Agreement, Tony Brough, Senior Environmentalist, or successor ("Contract Administrator"), shall manage this Agreement on behalf of COUNTY and serve as liaison between COUNTY and GRANTEE.

Laura Jester shall manage the agreement on behalf of GRANTEE. GRANTEE may replace such person but shall immediately give written notice to COUNTY of the name, phone number and email/fax number (if available) of such substitute person and of any other subsequent substitute person.

Phone: 952-270-1990

Email: laura.jester@keystonewaters.org

17. COMPLIANCE AND NON-DEBARMENT CERTIFICATION

A. GRANTEE shall comply with all applicable federal, state and local statutes, regulations, rules and ordinances currently in force or later enacted.

B. If the source or partial source of funds for payment of services under this Agreement is federal, state or other grant monies, GRANTEE shall comply with all applicable conditions of the specific referenced or attached grant.

C. GRANTEE certifies that it is not prohibited from doing business with either the federal government or the state of Minnesota as a result of debarment or suspension proceedings.

18. PAPER RECYCLING

COUNTY encourages grantee to develop and implement an office paper and newsprint recycling program.

19. NOTICES

Unless the parties otherwise agree in writing, any notice or demand which must be given or made by a party under this Agreement or any statute or ordinance shall be in writing, and shall be sent registered or certified mail. Notices to COUNTY shall be sent to the County Administrator with a copy to the originating COUNTY department at the address given in the opening paragraph of this Agreement. Notice to GRANTEE shall be sent to the address stated in the opening paragraph of this Agreement or to the address stated in GRANTEE's Form W-9 provided to COUNTY.

20. CONFLICT OF INTEREST

GRANTEE affirms that to the best of GRANTEE's knowledge, GRANTEE's involvement in this Agreement does not result in a conflict of interest with any party or entity which may be affected by the terms of this Agreement. Should any conflict or potential conflict of interest become known to GRANTEE, GRANTEE shall immediately notify COUNTY of the conflict or potential conflict, specifying the part of this Agreement giving rise to the conflict or potential conflict, and advise COUNTY whether GRANTEE will or will not resign from the other engagement or representation. Unless waived by COUNTY, a conflict or potential conflict may, in COUNTY's discretion, be cause for cancellation or termination of this Agreement.

21. MEDIA OUTREACH

GRANTEE shall not use the term “Hennepin County”, or any derivative thereof in advertising, external facing communication and/or marketing, including but not limited to advertisements of any type or form, promotional ads/literature, client lists and/or any other form of outreach, without the written approval of the Hennepin County Public Affairs/Communications Department, or their designees.

22. MINNESOTA LAWS GOVERN

The laws of the state of Minnesota shall govern all questions and interpretations concerning the validity and construction of this Agreement and the legal relations between the parties and their performance. The appropriate venue and jurisdiction for any litigation will be those courts located within the County of Hennepin, state of Minnesota. Litigation, however, in the federal courts involving the parties will be in the appropriate federal court within the state of Minnesota.

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COUNTY ADMINISTRATOR APPROVAL

Reviewed for COUNTY by

the County Attorney's Office:

{{Sig_es_:signer3:signature}}

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Reviewed for COUNTY by:

{{Sig_es_:signer4:signature}}

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Document Assembled by:

{{Sig_es_:signer1:signature}}

{{userstamp1_es_:signer1:stamp}}

COUNTY OF HENNEPIN

STATE OF MINNESOTA

By:

{{Sig_es_:signer5:signature}}

{{userstamp5_es_:signer5:stamp}}

COUNTY warrants that the person who executed this Agreement is authorized to do so on behalf of COUNTY as required by applicable articles, bylaws, resolutions or ordinances.*

GRANTEE

GRANTEE warrants that the person who executed this Agreement is authorized to do so on behalf of GRANTEE as required by applicable articles, bylaws, resolutions or ordinances.*

By: _____

Its: _____

*GRANTEE represents and warrants that it has submitted to COUNTY all applicable documentation (articles, bylaws, resolutions or ordinances) that confirms the signatory's delegation of authority. Documentation is not required for a sole proprietorship.

Item 5Ai.
BCWMC 3-21-19

CITY OF MINNETONKA

14600 Minnetonka Blvd. | Minnetonka, MN 55345 | 952-939-8200 | eminnetonka.com

Mar. 14, 2019

Laura Jester
16145 Hillcrest Lane
Eden Prairie, MN 55346

RE: 2020 Crane Lake Improvements Funding

Ms. Jester and BCWMC Commissioners:

Thank you for your continued consideration in funding the above referenced water quality improvement project within the city of Minnetonka. We were excited to present the feasibility report for optional water quality improvements in this area, and as a partner in this project are proposing to contribute funds to see that improvements are constructed. Attached to this letter is a detailed breakdown of the estimated project costs and proposed funding.

The city recommends the commission consider funding option 3 as it maximizes the benefits in this area amongst the alternatives. As inidicated in the feasibility study this option provides for the removal of an additional 10-20 lbs/yr of TSS and 3-5.5 lbs/yr of TP from options 1 and 2. We understand that the cost for this option currently exceeds budgeted amounts, but are hopeful that the city's contribution to the project will assist the project in moving forward.

If you have any questions please don't hesitate to contact Will, Sarah, or myself.

Sincerely,

Chris LaBounty, P.E.
Engineering Project Manager
City of Minnetonka

Cc: Will Manchester, City Engineer
Sarah Schweiger, Water Resource Coordinator
Andrew Plowman, Sr. Project Manager (WSB)

2020 Crane Lake Improvement Cost & Funding Summary
BCWMC CIP No. CL-3

Cost Summary by Project Option

	Option 1	Option 2	Option 3
Construction Costs	**$ 337,200.00**	**$ 357,200.00**	**$ 416,400.00**
Storm Sewer Infrastructure	*$ 189,700.00*	*$ 189,700.00*	*$ 189,700.00*
BMP Structure + Pumps	*$ 147,500.00*	*$ 167,500.00*	*$ 226,700.00*
Indirect Costs (25%)	**$ 84,300.00**	**$ 89,300.00**	**$ 104,100.00**
BCWMC Administrative Fund	*$ 7,600.00*	*$ 7,600.00*	*$ 9,500.00*
Feasibility Study	*$ 21,000.00*	*$ 21,000.00*	*$ 21,000.00*
BCWMC Engineer Review	*$ 15,000.00*	*$ 17,000.00*	*$ 20,000.00*
Engineering	*$ 31,000.00*	*$ 33,000.00*	*$ 37,500.00*
Construction Inspection	*$ 9,700.00*	*$ 10,700.00*	*$ 16,100.00*
Contingency (15%)	**$ 50,600.00**	**$ 53,527.00**	**$ 62,337.00**
TOTAL COST	**$ 472,100.00**	**$ 500,027.00**	**$ 582,837.00**

Funding Summary by Project Option

	Option 1	Option 2	Option 3
City Contribution	**$ 172,100.00**	**$ 200,027.00**	**$ 204,337.00**
Storm Infrastructure	*$ 112,800.00*	*$ 112,800.00*	*$ 112,800.00*
BMP Structure + Pumps	*$ 14,800.00*	*$ 34,800.00*	*$ 39,200.00*
Indirect Costs	*$ 27,800.00*	*$ 32,800.00*	*$ 32,800.00*
Contingency	*$ 16,700.00*	*$ 19,627.00*	*$ 19,537.00*
BCWMC Capital Funds	**$ 300,000.00**	**$ 300,000.00**	**$ 378,500.00**
Storm Infrastructure	*$ 76,900.00*	*$ 76,900.00*	*$ 76,900.00*
BMP Structure + Pumps	*$ 132,700.00*	*$ 132,700.00*	*$ 187,500.00*
Indirect Costs	*$ 56,500.00*	*$ 56,500.00*	*$ 71,300.00*
Contingency	*$ 33,900.00*	*$ 33,900.00*	*$ 42,800.00*
Total Funding	**$ 472,100.00**	**$ 500,027.00**	**$ 582,837.00**

Costs are based off of engineer's estimated costs and are rounded

Item 5Aii.
BCWMC 3-21-19

resourceful. naturally.
engineering and environmental consultants

BARR

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5A – Consider Approval of Revised Feasibility Study for Crane Lake Improvement Project (CIP 2020 CL-3) – Minnetonka, MN
BCWMC March 21, 2019 Meeting Agenda
Date: March 14, 2019
Project: 23270051 2019 640

5A Consider Approval of Revised Feasibility Study for Crane Lake Improvement Project (CIP 2020 CL-3) – Minnetonka, MN

Summary:

Proposed Work: Crane Lake Improvement Project (CIP 2020 CL-3) as part of Ridgedale Drive Reconstruction

Basis for Review at Commission Meeting: CIP Project Feasibility Study Review

Recommendations:

1) Approve the revised feasibility study.
2) Select Option 3 for implementation.
3) Provide partial BCWMC CIP funding for the project as proposed by City of Minnetonka in their letter to the BCWMC administrator.

Background

The Bassett Creek Watershed Management Commission's (BCWMC) 10-year Capital Improvement Program (CIP, Table 5-3 in the Plan, as amended) includes a project for retention of impervious area drainage in the Ridgedale Center area. The BCWMC approved the 5-year (working) CIP at their April 19, 2018 meeting, which included implementation of the Crane Lake Improvement Project (CIP #CL-3) in 2020, as part of the Ridgedale Drive reconstruction project. If approved, CIP #CL-3 will be partially funded by the BCWMC's ad valorem levy (via Hennepin County).

At their September 20, 2018 meeting, the Commission reviewed and provided comments regarding the City of Minnetonka's draft feasibility study for this project. In that study (*Stormwater Management Feasibility Analysis – 2019 Ridgedale Drive Reconstruction)*, the city evaluated eight best management practice (BMP) options for providing treatment from runoff from upstream watersheds within the project area. The city preferred three of the eight options – treat currently untreated stormwater runoff to Crane Lake, alum treatment in Ridgedale Pond, and divert high chloride snowmelt runoff to the sanitary sewer.

The city revised the feasibility study in response to the Commission's comments and provided it to the BCWMC Engineer for review and Commission approval. The following is a summary of the revised feasibility study and the Commission Engineer's recommended actions.

Feasibility Study Summary

The City of Minnetonka's revised feasibility study (*2020 Crane Lake Improvement Project (Water Quality Improvements to be Incorporation into the 2019 Ridgedale Drive Reconstruction Project)* (WSB, February 22, 2019; updated March 14, 2019)) examines the feasibility of several water quality improvement alternatives to treat runoff from Ridgedale Drive and the Sheraton Minneapolis West Hotel parking lot before discharging to Crane Lake. The Ridgedale Pond alum treatment and diversion of high chloride runoff options proposed in the September 2018 feasibility study are no longer under consideration. The water quality improvement option selected for implementation would be constructed as part of the city's Ridgedale Drive Reconstruction project, scheduled for construction in 2019.

The revised feasibility study identifies three water quality improvement options (see Figure 4 in the feasibility study), including:

- Option 1 – Construct an underground treatment system beneath the existing Sheraton Minneapolis West hotel parking lot
- Option 2 – Construct an underground treatment system beneath a proposed park just east of Ridgedale Drive.
- Option 3 – Construct an underground treatment system beneath a proposed park just east of Ridgedale Drive to act as pre-treatment (Option 2) before being pumped to a sand infiltration/filtration system in the Crane Preserve Park.

The revised feasibility study evaluated these three options at a high level, and based on input from City of Minnetonka staff, area property owners and city residents, the city eliminated Option 1, as it would be difficult to acquire the private property. The feasibility study further recommends implementation of Option 3, based on stakeholder input, including a design charrette. The recommended option is further discussed below. Provided below is Table 1 from Table 5 in the feasibility study, edited for clarity, summarizing the features, costs, and benefits of the three options.

Option 3 – Stormwater Treatment for Untreated Runoff to Crane Lake

According to the revised feasibility study, stormwater runoff from 13.3 acres currently flows to Crane Lake without treatment. This option includes the following major design elements: 1) underground treatment area with approximately 12,250 cubic feet (0.28 ac-ft) of dead pool storage, and 2) discharge of pretreated water from the underground treatment area to a sand filtration/infiltration system.

The underground treatment system would be constructed under a proposed public park that will be constructed in conjunction with the Ridgedale Drive Project. The underground system would receive 0.45 inches of runoff from the untreated watershed. Water from the dead pool storage would then be pumped from the underground system into a shallow (3- to 6-inch deep) filtration/infiltration garden with sand

media. The underground system would be a network of 60-inch diameter pipes, with an 84-inch diameter header pipe, to collect and settle sediment from runoff. The 84-inch diameter pipe would include an access to allow for removal of accumulated sediment. The pump would discharge at a low rate of 0.05 to 0.07 cubic feet per second (22 to 31 gallons per minute) to prevent the recirculation of sediment within the underground system.

The presence of clayey (tight) soils around the location of the filtration/infiltration garden is likely to inhibit infiltration. Because infiltration is preferred, the proposed draintile within the sand media would include a shut-off valve that would initially be in the closed position to allow infiltration to occur. If infiltration does not occur, the valve would be opened, and the garden would act as a filtration feature, draining to Crane Lake. Because of the uncertainty of the infiltration potential, the estimated treatment for Option 3 is presented as a range. The entire system is estimated to remove 72-75% of TSS (total suspended solids) and 47-60% of TP (total phosphorus) from the untreated runoff.

This option is located entirely on City of Minnetonka property. As an added benefit, the city anticipates that educational kiosks be constructed nearby due to its location in the park area. This aligns with the city and BCWMC goals of providing education opportunities related to stormwater management.

Table 1: Features, Costs, and Benefits of Recommended Options

Recommended Options		Watershed Area (acre)	Pollutant Addressed	Raw Loading (Pound/Year)	Existing Percent Removal (%)	Proposed Percent Removal[3] (%)	Annual Pollutant Removal[3] (Pound/Year)	Total Project Capital Cost ($)	Annualized 30-Year Life Cycle Cost ($/Year)	Annualized Cost per Pound of Pollutant Removed ($/Pound/Year)
Option 1	Construct an underground treatment system beneath the existing Sheraton Minneapolis West hotel parking lot	13.3	TSS	4,800	0	59	2,854	$472,027	$11,900[1]	$4.20
			TP	17.9	0	35	6.2			$1,920
Option 2	Construct an underground treatment system beneath a proposed park just east of Ridgedale Drive	13.3	TSS	4,800	0	59	2,854	$500,027	$12,800[1]	$4.50
			TP	17.9	0	35	6.2			$2,060
Option 3	Option 2 followed by treatment from a sand infiltration/filtration system in the Crane Preserve Park	13.3	TSS	4,800	0	72 to 75	3,434 to 3,599[4]	$582,837	$17,200[2]	$4.80 to $5.00
			TP	17.9	0	47 to 60	8.4 to 10.7[4]			$1,600 to $2,050

1 Assumes a 30-year maintenance cost of $150,000 (annual maintenance cost of $5,000 to clean the underground structure) – estimated costs are in 2019 dollars
2 Assumes a 30-year maintenance cost of $200,000 (annual maintenance cost of $5,000 to clean the underground structure and full replacement of filtration media twice at $25,000 per replacement) – estimated costs are in 2019 dollars
3 Treating the 13.3 acre, untreated drainage area (7.28 acres of impervious, 6.02 acres of pervious). The watershed's P8 model was provided and used by WSB to model and evaluate the BMP improvement options. The estimates shown were derived from P8.
4 Based on anticipated soil conditions, filtration is more likely than infiltration, which is the lesser of the two numbers shown.

Recommendation

The Commission Engineer recommends the following Commission actions:

1) Approve the revised feasibility study.
2) Select Option 3 for implementation. This option has the lowest cost per pound of TP removed. The surface filtration/infiltration garden in the proposed park would also provide an educational opportunity for the watershed. The shallow depth of the garden, low pumping rate from the underground system, and the educational kiosks on site would help raise awareness for park visitors regarding BCWMC and their role in protecting and improving water quality and ecological functions within the watershed.
3) Provide partial BCWMC CIP funding for the project as proposed by City of Minnetonka in their letter to the BCWMC administrator.

Item 5Aiii.
BCWMC 3-21-19
Full Document online

FEASIBILITY REPORT

2020 CRANE LAKE IMPROVEMENT PROJECT (WATER QUALITY IMPROVEMENTS TO BE INCORPORATION INTO 2019 RIDGEDALE DRIVE RECONSTRUCTION PROJECT)

MINNETONKA, MN

FEBRUARY 22, 2019, UPDATED MARCH 14, 2019

Prepared for:
Bassett Creek Watershed Management Commission
16145 Hillcrest Ln,
Eden Prairie, MN 55346

City of Minnetonka
14600 Minnetonka Blvd
Minnetonka, MN 55345

BCWMC CIP NO. CL-3

CITY PROJECT NO. 19501
WSB PROJECT NO. R-010557-000

STORMWATER MANAGEMENT FEASIBILITY

2020 CRANE LAKE IMPROVEMENT PROJECT
(WATER QUALITY IMPROVEMENTS TO BE INCORPORATION INTO 2019 RIDGEDALE DRIVE RECONSTRUCTION PROJECT)

Completed for
Bassett Creek Watershed Management Commission and City of Minnetonka

February 22, 2019, Updated March 14, 2019

Prepared By:

CERTIFICATION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Peter R. Willenbring, PE Reg. No. 15998

Jacob Newhall, PE Reg. No. 49170

TABLE OF CONTENTS

I. INTRODUCTION AND PURPOSE

This document has been prepared to identify, evaluate and determine the feasibility of implementing selected stormwater management improvements that the Basset Creek Watershed Management Commission (BCWMC) could undertake, in partnership with the City of Minnetonka, as part of the 2019 Ridgedale Drive Reconstruction Project **(See figure 1)** to provide stormwater treatment for untreated runoff currently directed to Crane Lake.

A previously completed analysis (Completed on September 10, 2018) evaluated Best Management Practice (BMP) options for providing additional removal of phosphorus (TP), suspended solids (TSS), and chlorides from runoff from upstream watersheds that currently receive treatment within the project area as well as those that currently receive no treatment. **(See Figure 3)**

Relative to the removal of phosphorus and suspended sediment, this study indicated that in areas that currently receive treatment, although increased pollutant removal could be provided by implementing additional BMP's in these areas, the level of treatment currently provided by the existing treatment systems is high, and the installation of the additional treatment BMP's upstream or downstream of the existing BMP's will provide only limited additional benefit. For this reason, the City of Minnetonka has determined it does not wish to pursue the construction of additional BMP's in the currently treated watershed areas, and no additional evaluation of these alternatives have been included in this document.

The previous study also evaluated BMP options for chloride removal in both the treated and untreated watersheds, using the sanitary sewer for disposal of chloride contaminated effluent when concentrations exceed selected thresholds. The City has contacted the Metropolitan Council Environmental Services (MCES) about the feasibility of implementing this alternative and is expecting to obtain a response from them regarding the viability of this option in May of 2019.The MCES has established a "chlorides team" to review all sources of chlorides in the sewer system and present findings to their executive team in the spring of 2019. Based on information/input provided to date by MCES and Bassett Creek Watershed managers, the City has determined it will not be further considering these options as part of this project, but may pursue chloride management options in the future as part of a separate study and or project.

Based on the above findings, the scope of work of this feasibility study has been limited to Identifying, evaluating and determining the feasibility of implementing selected storm water management improvements that could be constructed as part of the 2019 Ridgedale Drive Reconstruction Project and that could provide treatment for runoff generated from currently untreated watershed areas.

This study aligns with the Bassett Creek Watershed Management Plan and the Watershed's goals and policies contained in Section 4 of the Watershed Management Plan. Specifically, some of the goals being achieved with this project from Section 4.1 are listed here:

- Manage the surface water resources of the watershed to meet or exceed state standards and BCWMC water quality goals for wetlands, lakes, and streams.
- Protect and enhance fish and wildlife habitat in the BCWMC.
- Increase the quality and quantity of wetlands in the BCWMC
- Raise awareness of the BCWMC's existence and its role in protecting and improving water quality, minimizing flooding, and preserving the watershed's ecological functions and aesthetics

.

II. BACKGROUND

The 2019 Ridgedale Drive Reconstruction Project consists of the reconstruction and reconfiguration of Ridgedale Drive from its intersection with Plymouth Road on the southwest corner of the Ridgedale shopping center, then east and north to its intersection with I-394 on the northeast side of the shopping center. **(Figure 1)**

The current preferred alternative will change the roadway from an undivided multiple lane section to a single lane section with a landscape median and replace major intersections with roundabouts. This design will also reduce the amount of impervious surface over the project area by approximately two acres. These modifications alone will reduce TSS, TP, and chlorides loadings that reach adjacent BMPs and Crane Lake. These benefits to water quality will be achieved as part of this City funded project without any participation by the BCWMC.

The project area is almost entirely within the Bassett Creek Watershed and governed by stormwater rules promulgated by the Bassett Creek Watershed Management Commission (BCWMC). For linear reconstruction projects in this area that have a net reduction in impervious surface area, which is the case for this project, the Bassett Creek Watershed as well as City of Minnetonka rules do not require any additional storm water management features or improvements be integrated into the design. However, the incorporation of best reasonable storm water treatment technologies is encouraged if it is reasonable and practical to do so by these agencies and is desired by the owners of this project.

A review of soil information for the area indicate native soils generally have low infiltration potential. These conditions limit use of some BMP options that otherwise might be considered.

A 2016 water quality monitoring report for Crane Lake, prepared by the Bassett Creek Watershed Management Commission, indicates that for 2016, Crane Lake did meet MPCA and BCWMC water quality standards for chlorophyll a and total phosphorus, but does not meet applicable Minnesota Pollution Control Agency (MPCA) water quality standards for chlorides.

Water quality in Crane Lake has been monitored since 1977. Based on the information provided by the BCWMC, from 1977 to 2001, summer averages (June through September) of total phosphorus, chlorophyll a, and Secchi disc depth regularly failed to meet BCWMC/MPCA standards but have generally met standards since 2004. Total phosphorus and chlorophyll a concentrations have met the standard each year since 2004. Water clarity, measured by Secchi disc depth, has met the standard all years since 2004—except 2016 when dense plants restricted Secchi disc visibility. Chloride concentrations, which may impact the lake's zooplankton, were observed to increase over that time, with more recent concentrations found to be close to or slightly exceeding the 230mg/l chronic threshold level for impairment. Samples collected in July 2018 also found chloride concentrations in the south treatment pond of 450 mg/l.

Trend analyses, completed by the BCWMC, also show improvements in water quality over the last 20 years as measured by decreases in summer average total phosphorus and chlorophyll a concentrations, but these trends were not deemed statistically significant (95 percent confidence level). This analysis also indicated there has been no change in Secchi disc depth.

III. WATER QUALITY TREATMENT PROVIDED BY EXISTING SYSTEM

Runoff from the Ridgedale shopping center parking lot, is directed to either Ridgedale pond, or a pond on the northeast side of the shopping center where physical and biological processes provide treatment for the runoff. Runoff from areas along Ridgedale Drive downstream of this area direct runoff into small pretreatment ponds adjacent to a downstream lake/wetland referred to as Crane Lake. **(See figure 2)**

Information on the ability of Ridgedale Pond as well as the pond on the northeast side of the shopping center to treat stormwater from the watershed areas that direct runoff to the ponds was previously analyzed and provided in a report entitled *Crane Lake Water Quality and Sub-Watershed Assessment*. This report was prepared by Barr Engineering for the Bassett Creek Watershed Management Commission and dated June 2017. This report/study also included the development of a P8 water quality model for the area and information from this model was used in our evaluation of alternatives.

In addition to using the above information, an inspection and survey of Ridgedale pond was completed in 2018 (pond located on south side of shopping center) reflecting it has an average depth of approximately 5 feet, and approximately 20 acre-feet of dead-pool storage available to enhance treatment. This information was consistent with that included in the P8 model that was previously completed.

The P8 water quality analysis of the watershed and pond completed by the Bassett Creek Watershed Management Commission predicts the pond in its existing condition removes approximately 94% of the Total suspended solids (TSS) and 72% of the total phosphorus (TP) directed to it from the surrounding watershed. These removal percentages are on the high end of removal rates that can be achieved by BMPS that primarily use physical and biological removal mechanisms to provide treatment.

Monitoring data for Crane Lake completed by the Bassett Creek Watershed also indicated the in-lake Chloride concentration for the Basin was typically above 200 mg/l, and periodically exceeded the chronic threshold value for impairment of 230 mg/l. Chloride impairment has been identified as a significant concern by the Watershed. Based on a sample of water collected in early July 2018, The treatment pond on the south side of the shopping center was observed to have in-basin chloride concentrations of 450 mg/l. Under existing conditions, limited if any removal of chlorides is projected to be provided by the removal mechanisms present in the pond due to the soluble nature of this pollutant.

In addition to the above drainage areas that receive treatment by the two ponds, on the southeast side of Ridgedale, that is south and east of Ridgedale drive is a 13.3-acre watershed that directs untreated stormwater runoff to a downstream storm sewer that discharges this runoff directly into Crane lake. Except for treatment that a shallow ditch may provide for a small area in the watershed, no treatment is provided for runoff from this watershed at the current time**. (See figure 4)**

A. WATER QUALITY TREATMENT REQUIRED TO MEET CURRENT STANDARDS

No additional treatment is required for this project as the amount of impervious surface will be reduced as part of this project; however, providing additional treatment is encouraged if it is reasonable and practical to do so and desired by the owner of the project.

IV. OPTIONS FOR PROVIDING STORMWATER TREATMENT FOR UNTREATED RUNOFF

Three treatment options have been identified that have the potential to improve the quality of water currently discharged from the untreated watershed prior to its discharge into Crane Lake. **Figure 4** shows the proposed location of these treatment options**.**

If should be noted that as part of each of these options, a separate storm sewer will need to be constructed to isolate and collect only the runoff from this untreated area, and then convey this runoff to a treatment system prior to discharge into Crane Lake. The cost for this storm sewer is estimated at $265,000. A with a breakdown of the cost for this system provided in **Table 1.**

It is not anticipated that contamination will be encountered base on review of MPCA's "What's in my Neighborhood" as well as review with City Staff. However, when excavating in areas where fill was present, there is always a chance something could be encountered. Costs associated with contamination have not been included at this time.

A listing of the treatment options that were identified along with the cost and benefits related to these improvements is provided below:

1) INSTALL UNDERGROUND TREATMENT IN HOTEL PARKING LOT TO PROVIDE TREATMENT PRIOR TO DISCHARGE TO CRANE LAKE.

Description of Option: This option involves providing treatment for runoff from the untreated watershed using land on the east side of the parking lot located north of the hotel adjacent to Crane Lake.

The BMP would likely consist of an underground storage system to improve stormwater treatment prior to discharge into Crane Lake. Construction of these improvements would require reconstruction of a portion of the existing parking lot in order to allow for installation of the underground treatment. This system would allow for easy access so that the City could regularly complete maintenance to ensure the system continues to function as designed. However, the fact that the BMP would be located on private property would make the coordination of ongoing maintenance less desirable (even if in an easement).

Provided the City of Minnetonka can obtain the right to use this property for this purpose, the construction of an underground treatment system could be feasible in this area. It is important to note that an easement would need to be obtained from the property owner. The cost estimate shown does not include easement costs. The treatment system being located on private property would likely eliminate public education opportunities with this option.

Benefits provided: Based on an untreated influent loading for TSS of 4800 pounds/year and for TP of 17.9 pounds/year, with the BMP option described above, removal efficiencies for TSS and TP based on this design are estimated at 59% for TSS and 35% for TP. **(See Table 5)**

Estimated Cost: The estimated project cost to construct this improvement option including the untreated watershed collection system is estimated at $472,027. A breakdown of this cost estimate is provided in **Table 2.**

Life Cycle Cost: Based on a BMP cost of $206,500 and annual maintenance costs of $5,000/year, and a 30-year life expectancy, the life cycle cost for this improvement is estimated at $11,900 per year, and the cost per pound of TSS and TP removed is estimated at $4.20 per pound for TSS and $1,920 per pound for TP removed. Please be advised no cost for purchase or use of land has been factored into this computation.

2) INSTALL UNDERGROUND TREATMENT IN NEW PARK TO BE CONSTUCTED EAST OF RIDGEDALE DRIVE ADJACENT TO CRANE LAKE.

Description of Option: To make use of available public land in the area, this option proposes to construct an underground treatment under a proposed public park that will be constructed in conjunction with the Ridgedale Drive Project. The treatment area, to be constructed on the West side of Crane lake, was sized and configured in such a manner to allow it to be integrated into the park components of this project in such a manner that will allow for both this stormwater use, as well as proposed park uses.

The underground storage system would be installed to improve stormwater treatment prior to discharge to Crane Lake. This system would allow for easy access so that the City could regularly complete maintenance to ensure the system continues to function as designed. The preliminary thought is to use an 84" pipes isolator/pretreatment row and then 60" pipes for the remaining storage.

This option is located entirely on City of Minnetonka property. As an added benefit, it is anticipated that educational kiosks can be incorporated with this project due to its location in the park area. This aligns with the City and Watershed goals of education related to stormwater management.

Benefits provided: This option (2) will provide 0.28 ac-ft of dead pool storage (the first 0.45 inches of runoff from the untreated watershed). Based on P8 modelling results, this underground storage area will be able to remove 35% of the TP and 59% of the TSS directed to it from the untreated watershed of 13.3 acres. **(See Table 5)**

Estimated Cost: The estimated project cost for this improvement option including the untreated watershed collection system is estimated at $500,027. A breakdown of this cost estimate is provided in **Table 3.**

Life Cycle Cost: Based on a BMP cost of $234,500 and annual maintenance costs of $5,000/year, and a 30-year life expectancy, the life cycle cost for this improvement is estimated at $12,800 per year, and the cost per pound of TSS and TP removed is estimated at $4.50 per pound for TSS and $2,060 per pound for TP removed.

3) INSTALL UNDERGROUND TREATMENT (OPTION 2) PLUS A FILTRATION/INFILTRATION SYSTEM TO PROVIDE ADDITIONAL TREATMENT.

Description of Option: As part of this option, water would be pumped from the dead pool treatment area within the underground stormwater treatment area (described in Option 2) and discharged into a filtration/infiltration garden, where additional treatment could be provided**. (see figure 4)**

The secondary filtration/infiltration feature of this option fits into the vision developed by the City and the park design team. The location and size of these features was laid out to meet the needs of the park. The approximate size of the filtration/infiltration area is 1250 square feet with a depth estimated to range between 3 and 6 inches deep. The goal is to draw the underground tank down in 48 to 72 hours. The pump is anticipated to discharge between 0.05 and 0.07 cfs to accommodate the 48 to 72-hour drawdown. The filtration/infiltration system will be designed to be an amenity to the park. A filtration rate of 1.6 in/hr through the media is assumed. The plan is to install a valve on the draintile of the filtration system. If construction reveals soils will allow for

some infiltration valve can be closed. If soils end up not being suitable the system will operate mainly as a filtration system (valve open). Based on borings it is not anticipated that infiltration is very likely but we don't want to eliminate that option at this time.

This option is located entirely on City of Minnetonka property. As an added benefit, it is anticipated that educational kiosks can be incorporated with this project due to its location in the park area. This aligns with the City and Watershed goals of education related to stormwater management.

Benefits provided: This treatment system (combines Option 2 and 3) and is estimated to increase the removal of TSS from 59% to 72-75% and TP from 35% to 47-60%. **(See Table 5)**

Estimated Cost: The estimated project cost for this improvement option including the untreated watershed collection system is estimated at $582,837. A breakdown of this cost estimate is provided in **Table 4.**

Life Cycle Cost: Based on a BMP cost of $317,310 and annual maintenance costs of $5,000/year, and a 30-year life expectancy, the life cycle cost for this improvement is estimated at $17,200 per year, and the cost per pound of TSS and TP removed is estimated at $4.80-$5.00 per pound for TSS and $1,600-$2,050 per pound for TP removed.

V. RECOMMENDATIONS

An in-depth review of the above options was completed by stakeholders that included representatives from City of Minnetonka Engineer, Public Works, and Parks and Recreation Department, property owners in the area, and residents within the city having an interest in the planning of the park. During this review, it was determined that relative to the implementation of option 1, it would be difficult to acquire a portion of the Hotel parking lot for this purpose without resistance from the property owner as well as costs of obtaining the easement. Discussions with the City of Minnetonka Parks and Recreation Department and other stake holders indicated that they would be interested in integrating option 2 or 3 into their park plans. Both options 2 and 3 include educational kiosks regarding the stormwater treatment in the park as an added benefit to allow park users to observe and better understand the design and function of stormwater treatment systems.

Based on the above information, as well as information collected during a design charrette that was held as part of the development of the park plan for this area, it was determined that Option 3 could be implemented, and more specifically, it is recommended that a BMP with the following elements be constructed: 1) Underground treatment area having approximately 12,250 cubic feet of dead pool storage, and 2) discharge of pretreated water to a filtration/infiltration system.

Permitting needs for the recommended improvements include a DNR Work in Public Waters Permit for the high flow outlet to Crane Lake from the underground storage system since the elevation is proposed to be at 920.0 (below the OHW of 920.4). The outlet from the filtration/infiltration area is estimated to be at 923.0 which is above the OHW. In addition, the City is planning on removing accumulated sediment and debris at the existing outfall to Crane Lake as part of the larger Ridgedale Drive project so a DNR Work in Public Waters Permit waters permit will be needed for that as well. Both the new outlet and the sediment clean out are located directly adjacent to one another. The sediment will be tested and disposed of according to MPCA guidance. A WCA (Wetland Conservation Act) no loss permit and an Army Corps general permit will be obtained for the sediment removal work.

Table 1: Cost Estimate: Storm Sewer Collection System for Untreated Drainage Area (For Use in Options 1, 2, or 3)

Description	Units	Quantity	Unit Price	Total
DES. SPEC 1	EACH	9	$1,200	$10,800
DES. SPEC 4	EACH	1	$10,000	$10,000
48-4020	LIN FT	47.5	$450	$21,375
60-4020	LIN FT	19.6	$650	$12,740
72-4020	LIN FT	21.3	$850	$18,105
84-4020	LIN FT	5.2	$1,000	$5,200
CASTINGS	EACH	18	$650	$11,700
CONNECT TO EX STORM SEWER	EACH	1	$750	$750
15" RCP CL V	LIN FT	584	$45	$26,280
24" RCP CL III	LIN FT	142	$65	$9,230
27" RCP CL III	LIN FT	670	$75	$50,250
30" RCP CL III	LIN FT	141	$80	$11,280
30" RCP APRON	EACH	1	$700	$700
RIPRAP CL III	CY	13	$85	$1,105
GEOTEX. TYPE 4	SQ YD	42	$4	$147
SUB TOTAL				$189,662
Engineer, Legal, Admin, Permitting (25%)				$47,416
Contingency (15%)				$28,449
COST FOR STORMSEWER COLLECTION STYSTEM				**$265,527**

Table 2: Cost Estimate: Underground Treatment in Hotel Parking Lot (Option 1)

Description	Units	Quantity	Unit Price	Total
DEWATERING	LS	1	$7,500	$7,500
UNDERGROUND STORAGE	LS	1	$140,000	$140,000
SUB TOTAL				$147,500
Engineer, Legal, Admin, Permitting (25%)				$36,875
Contingency (15%)				$22,125
COST FOR BMP				**$206,500**
COST FOR STORMSEWER COLLECTION SYSTEM				**$265,527**
TOTAL PROJECT COST				**$472,027**

***Does not include easement acquisition or replacement cost.**

Table 3: Cost Estimate: Underground Treatment in Park (Option 2)

Description	Units	Quantity	Unit Price	Total
DEWATERING	LS	1	$7,500	$7,500
UNDERGROUND STORAGE	LS	1	$140,000	$140,000
EDUCATIONAL KIOSKS	LS	1	$20,000	$20,000
SUB TOTAL				$167,500
Engineer, Legal, Admin, Permitting (25%)				$41,875
Contingency (15%)				$25,125
COST FOR BMP*				**$234,500**
COST FOR STORMSEWER COLLECTION SYSTEM				**$265,527**
TOTAL PROJECT COST				**$500,027**

Table 4: Cost Estimate: Underground Treatment in Park and Secondary Filtration/ Infiltration System (Option 3)

Description	Units	Quantity	Unit Price	Total
DEWATERING	LS	1	$7,500	$7,500
UNDERGROUND STORAGE	LS	1	$140,000	$140,000
4” PVC FORCE MAIN	LF	25	$50	$1,250
CONSTRUCT LIFT STATION	LS	1	$40,000	$40,000
6” PERF PE PIPE DRAIN	LF	120	$20	$2,400
GRANULAR FILTER MOD	CY	175	$65	$11,375
COURSE FILTER AGGREGATE MOD (CV)	CY	75	$55	$4,125
EDUCATIONAL KIOSKS	LS	1	$20,000	$20,000
SUB TOTAL				$226,650
Engineer, Legal, Admin, Permitting (25%)				$56,663
Contingency (15%)				$33,998
COST FOR BMP				**$317,310**
COST FOR STORMSEWER COLLECTION SYSTEM				**$265,527**
TOTAL PROJECT COST				**$582,837**

Wayzata Blvd

Ridgedale Dr

Plymouth Rd

Ridgedale Dr

YMCA Ln

Legend

- Areas Currently Provided with Pre-Treatment
- Areas without Pre-Treatment
- Existing BMP
- Storm Sewer

CITY OF MINNETONKA

Figure 2: Subwatersheds Served by Ridgedale Drive Drainage System

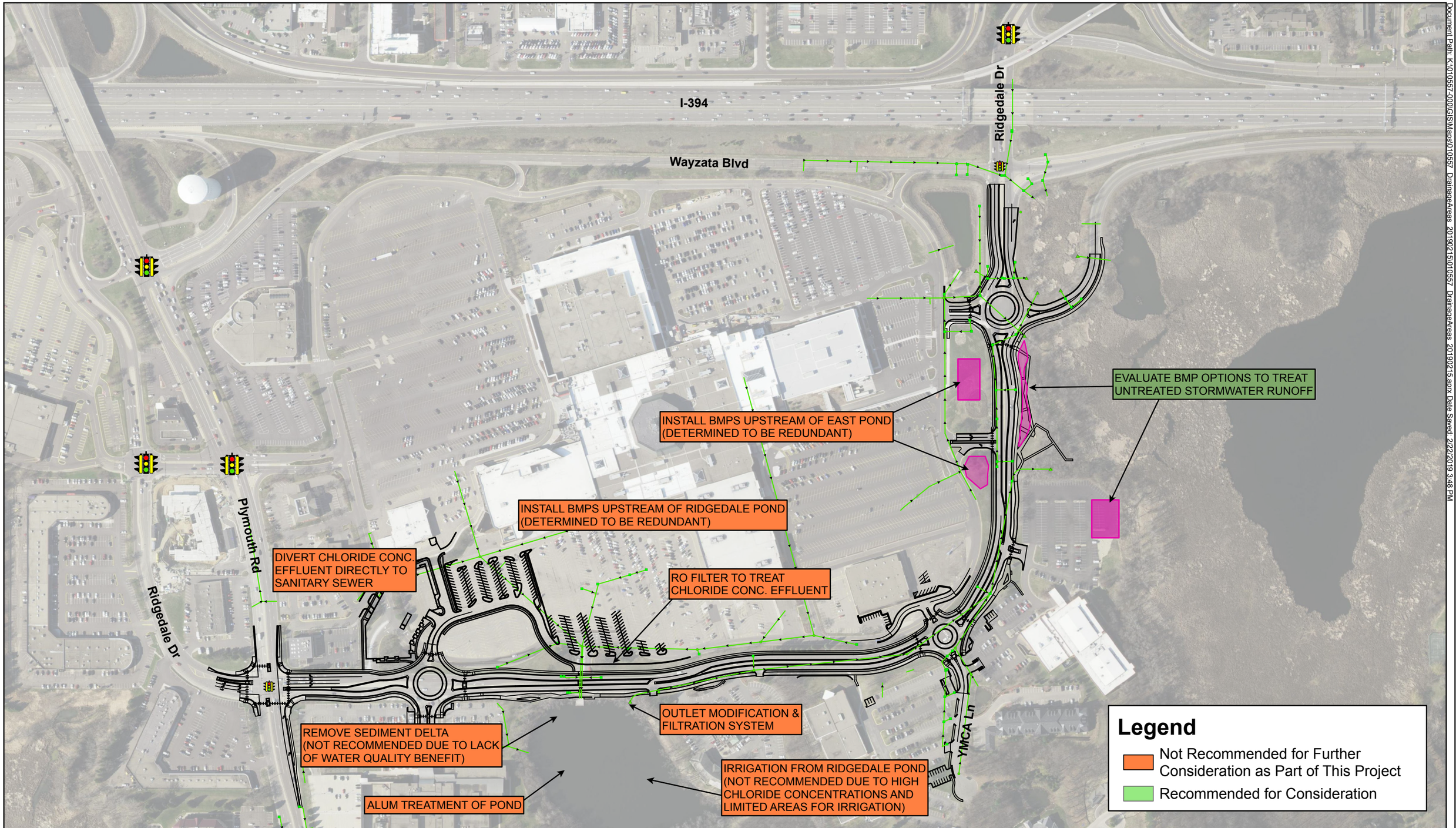
Ridgedale Drive Improvements (S.A.P. 142-153-008)
City of Minnetonka, Minnesota

N

0 350 Feet

1 inch = 300 feet

wsb



CITY OF MINNETONKA

Figure 3: Water Quality Treatment Options

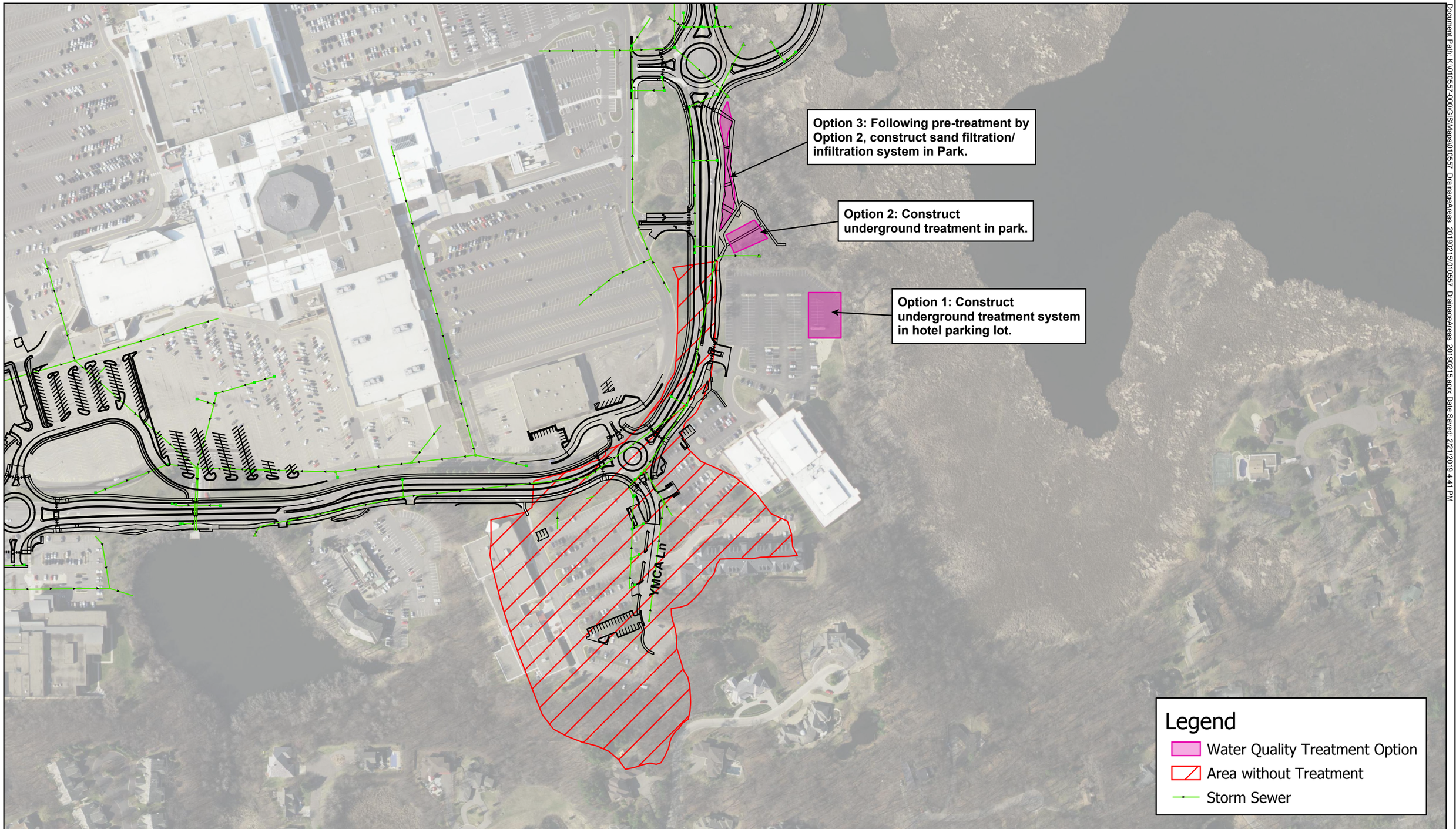
Ridgedale Drive Improvements (S.A.P. 142-153-008)
City of Minnetonka, Minnesota

N

0 300 Feet

1 inch = 300 feet

wsb



CITY OF MINNETONKA

Figure 4: Untreated Subwatershed and Treatment Options

Ridgedale Drive Improvements (S.A.P. 142-153-008)
City of Minnetonka, Minnesota

N

0 250 Feet
1 inch = 250 feet

wsb

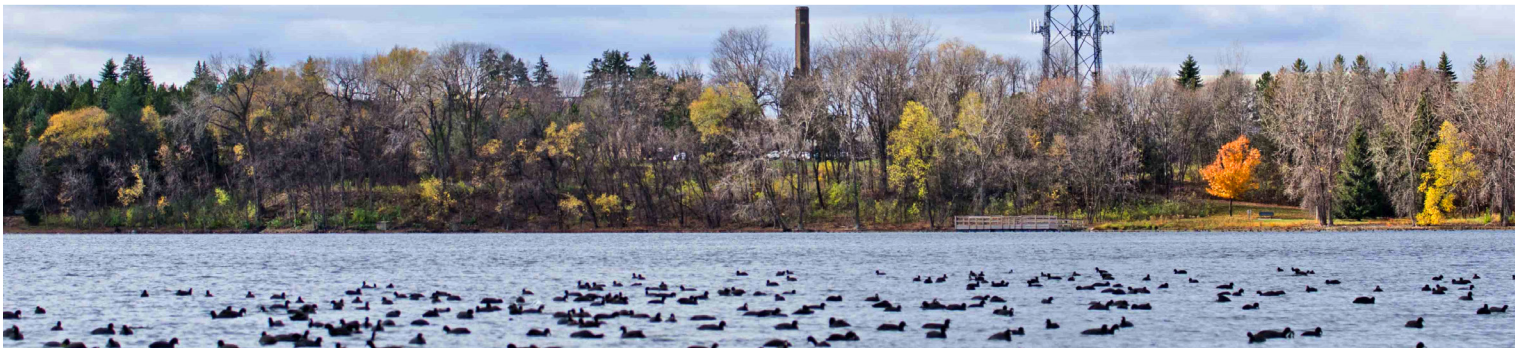
Table 5: Features, Costs, and Benefits of Improvement Options

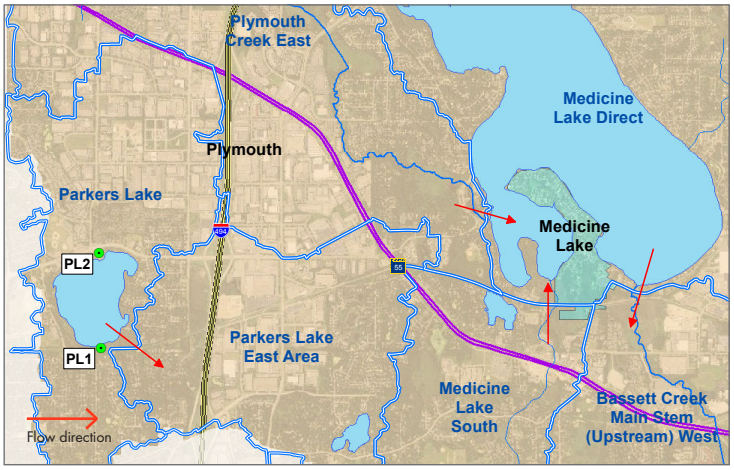
BMP Improvement Options	Watershed Area (ac)	Targeted Pollutants	Raw Loading (lb/yr)	Existing Removal %	Proposed Removal %[3]	Estimated Pollutant Removal (lb/year)[3]	Estimated Total Project Cost	Annualized 30-Year Life Cycle Cost (for BMP only)	BMP's Cost per lb of Pollutant Removed
1. Construct underground treatment system in hotel parking lot	13.3	TSS	4800	0	59	2854	$472,027.00	$11,900.00[1]	$4.20
		TP	17.9	0	35	6.2			$1,920
2. Construct underground treatment system in park	13.3	TSS	4800	0	59	2854	$500,027.00	$12,800.00[1]	$4.50
		TP	17.9	0	35	6.2			$2,060
3. Construct underground treatment system in park plus secondary filtration/infiltration system	13.3	TSS	4800	0	72 to 75	3434 to 3599[4]	$582,837.00	$17,200.00[2]	$4.80-$5.00
		TP	17.9	0	47 to 60	8.4 to 10.7[4]			$1,600-$2,050

[1]Assumes a 30-year maintenance cost of $150,000 (annual maintenance cost of $5,000 to clean the underground structure) – estimated costs are in 2019 dollars.
[2]Assumes a 30-year maintenance cost of $200,000 (annual maintenance cost of $5,000 to clean the underground structure and full replacement of filtration media twice at $25,000 per replacement) - estimated costs are in 2019 dollars.
[3]Treating the 13.3 acre, untreated drainage area (7.28 acres of impervious, 6.02 acres of pervious). The watershed's P8 model was provided and used by WSB to model and evaluate the BMP improvement options. The estimates shown were derived from P8.
[4]Based on anticipated soil conditions, filtration is more likely than infiltration, which is the lesser of the two numbers shown.

Parkers Lake 2018 water quality monitoring

Item 5B.
BCWMC
3-21-19





About Parkers Lake

BCWMC classification	Priority-1 deep lake
Watershed area	1,065 acres
Lake size	97 acres
Average depth	12 feet
Maximum depth	37 feet
Ordinary high water level	935.9 feet (NGVD29)
Normal water level	934.2 feet (NAVD88)
Downstream receiving waterbody	Medicine Lake
Location (city)	Plymouth
MPCA impairments	Chloride, mercury in fish tissue
Aquatic invasive species	Eurasian watermilfoil, curly-leaf pondweed
Public access	Yes (boat launch)

Monitoring water quality in Parkers Lake

The Bassett Creek Watershed Management Commission (BCWMC) has monitored water quality conditions in the watershed's 10 priority lakes since 1972. This monitoring is done to detect changes or trends in water quality and evaluate the effectiveness of efforts to preserve or improve water quality. A summary of 2018 monitoring efforts on Parkers Lake is provided below; more comprehensive information can be found on pages 2–7.

At a glance: 2018 monitoring results

In 2018, the BCWMC monitored Parkers Lake for:

- Water chemistry (nutrients, chlorophyll *a*, chloride).
- Water measurements (e.g., clarity, dissolved oxygen).
- Phytoplankton and zooplankton (microscopic plants and animals).
- Macrophytes (aquatic plants).

Results indicate that Parkers Lake meets Minnesota Pollution Control Agency (MPCA) and BCWMC water quality standards for Secchi disc (measure of clarity), total phosphorus, and chlorophyll *a*. The lake failed to meet water quality standards for chloride. According to the Minnesota Department of Natural Resources (MDNR) plant IBI, a measure of aquatic plant health, the lake's plant community did not meet standards in August 2018.

Recommendations

- Identify management measures to reduce chloride runoff from the lake's watershed, particularly on the north side of the lake
- Identify management measures to improve the quality of the lake's plant community and survey vegetation annually to facilitate early detection of aquatic invasive species
- Continue water quality and biological monitoring at a 3-year frequency

Water chemistry monitoring: 2018

Total phosphorus levels

While phosphorus is necessary for plant and algae growth, excessive phosphorus leads to excessive growth, decreased water clarity, and water quality impairment.

- **BCWMC/MPCA standard:** 40 micrograms per liter (µg/L) or less.
- **Range:** Total phosphorus concentrations ranged from a low of 17 µg/L in late August to a high of 39 µg/L in early September.
- **Summer average:** 28 µg/L (met BCWMC/MPCA standard).

Chlorophyll *a* levels

- Chlorophyll *a* is a pigment in algae and generally reflects the amount of algae growth in a lake. Clear lakes generally have chlorophyll *a* levels less than 15 micrograms per liter (µg/L).
- **BCWMC/MPCA standard:** 14 µg/L or less.
- **Range:** Chlorophyll *a* concentrations ranged from a low of 0.5 µg/L in mid-May to a high of 15 µg/L in July and October.
- **Summer average:** 11.8 µg/L (met BCWMC/MPCA standard.

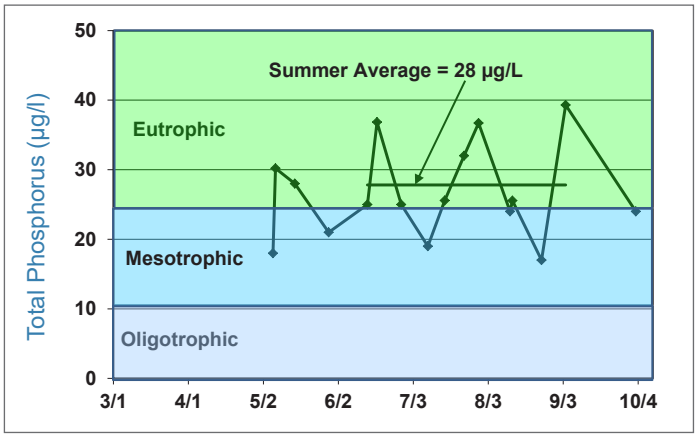
Water clarity

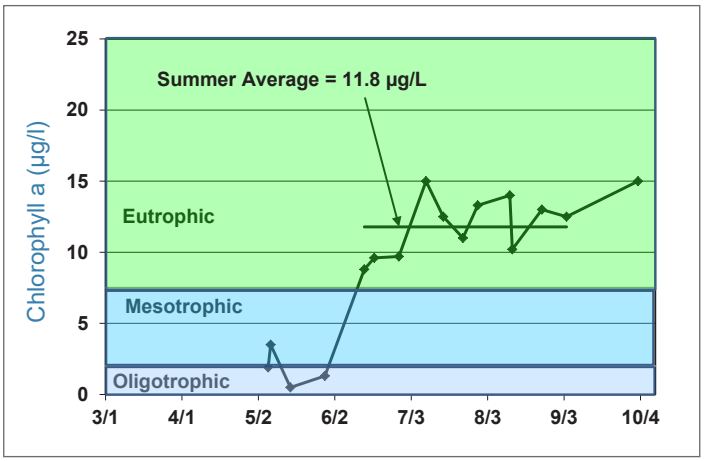
Water clarity is often affected by the amount of algae or other photosynthetic organisms in a lake. It is usually measured by lowering an 8-inch "Secchi" disc into the lake (see bottom photo); the depth at which the disc's alternating black-and-white pattern is no longer visible is considered a measure of the water's transparency.

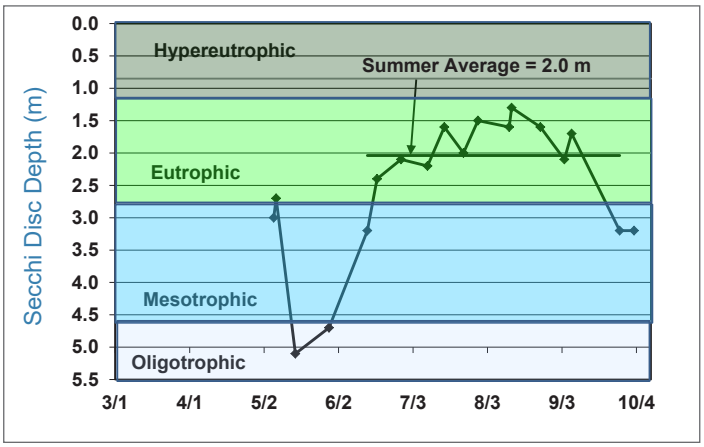
- **BCWMC/MPCA standard:** 1.4 meters or more.
- **Range:** From 5.1 meters in mid-May to 1.3 meters in mid-August.
- **Summer average:** 2.0 meters (met BCWMC/MPCA standard).

Definitions

- **Hypereutrophic:** Nutrient-rich lake conditions characterized by frequent and severe algal blooms and low transparency
- **Eutrophic:** Lake condition characterized by abundant accumulation of nutrients supporting dense growth of algae and other organisms; decay of algae can reduce lake oxygen levels
- **Mesotrophic:** Lake condition characterized by medium levels of nutrients and clear water
- **Oligotrophic:** Lake condition characterized by a low level of dissolved nutrients, high oxygen content, and sparse algae growth







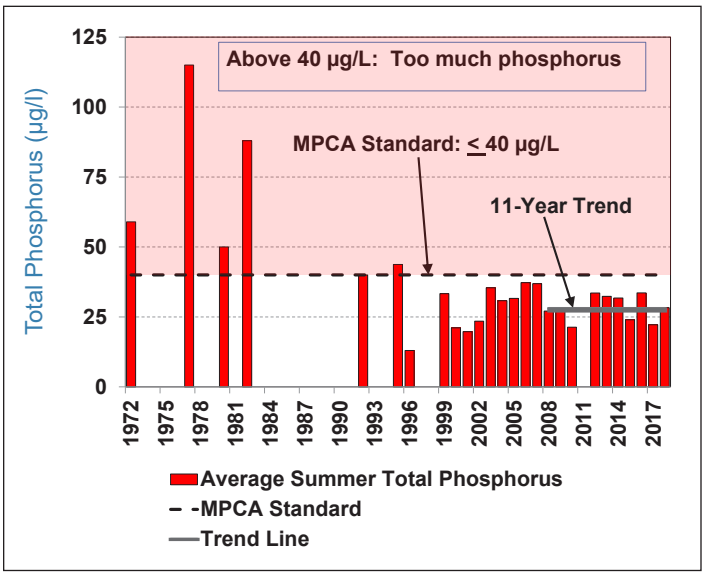
Water chemistry monitoring from 1972–2018: historical trends

Water quality in Parkers Lake has been monitored since 1972. Data includes information collected through the Citizen Assisted Monitoring Program (CAMP). Summer averages (June through September) of total phosphorus, chlorophyll a, and Secchi disc depth from 1972–2018 are shown in the figures at right. At least one of these parameters failed to meet BCWMC/MPCA standards from 1972 through 1999. Since 2000, summer average total phosphorus and Secchi disc values have met the BCWMC/MPCA standard. Summer average chlorophyll a concentrations failed to meet the standard in 2003, 2005, 2007, 2014, and 2015.

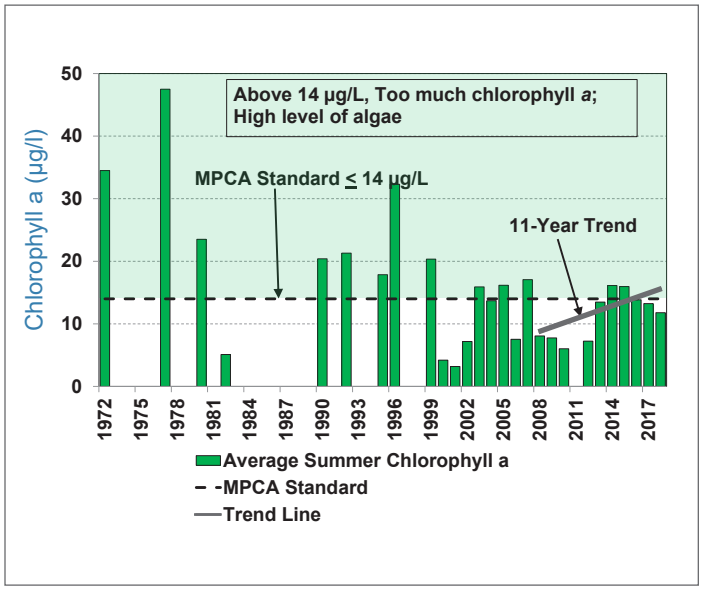
Overall, from 1972 through 2018, 94 percent of summer average Secchi disc depth and 81 and 52 percent of summer average concentrations of total phosphorus and chlorophyll a, respectively, met the BCWMC/MPCA standards. Summer averages of all three parameters met the BCWMC/MPCA standards in 2018.

In summary, trend analyses show no statistically significant change in water quality over the last 11 years as measured by an analysis of changes in summer average total phosphorus, chlorophyll *a*, and Secchi disc depth. While chlorophyll *a* has increased over the past 11 years at an annual rate of about 0.7 µg/L, this increase is not significant at the 95 percent confidence level.

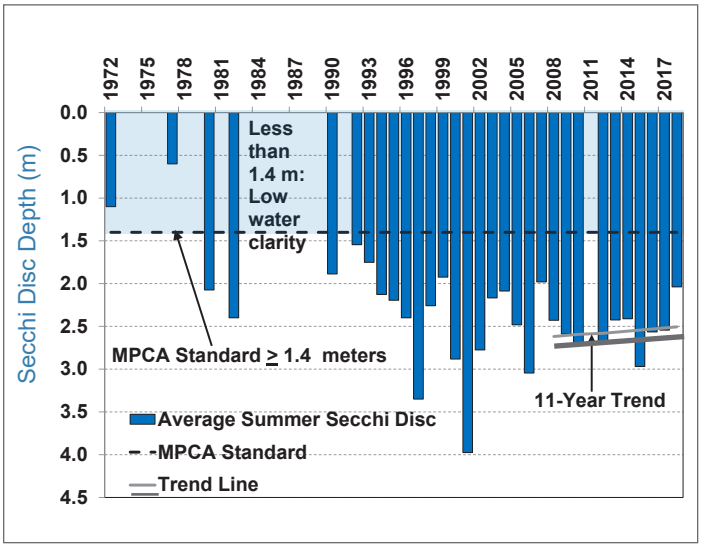
Total phosphorus trends



Chlorophyll *a* trends



Water clarity trends



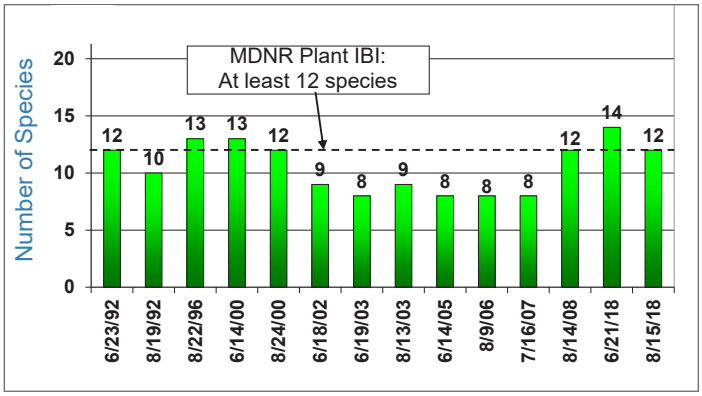
Macrophytes (aquatic plants)

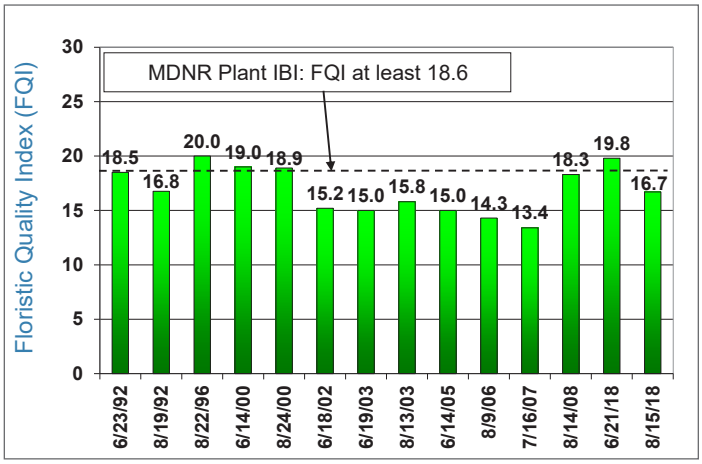
Lake Plant Eutrophication Index of Biological Integrity (IBI)

The MDNR recently developed metrics to determine the overall health of a lake's aquatic plant community. The Lake Plant Eutrophication Index of Biological Integrity (IBI) is used by the MPCA to determine whether a lake is meeting the federal Clean Water Act standards intended to protect aquatic life. The plant IBI includes two metrics: (1) the number of species in a lake and (2) the "quality" of the species, as measured by the floristic quality index (FQI).

Plant survey data from 1992 through 2018 were assessed to determine plant IBI trends. The figures at right show the Parkers Lake number of species and FQI scores for that period compared to the MDNR plant IBI impairment threshold.

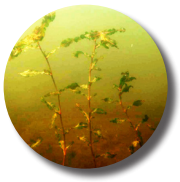
- **Number of species:** A deeper water lake, such as Parkers Lake, is considered impaired when it has fewer than 12 species. During the period examined, the number of species in Parkers Lake ranged from 8 to 14, meeting or exceeding the impairment threshold in June of 1992, August of 1996, both June and August of 2000, August of 2008, and both June and August of 2018. Fewer species were present from 2002 through 2007.
- **FQI values (quality of species):** The impairment threshold for deeper water lakes, as measured by FQI, is a minimum value of 18.6. During the period examined, FQI values ranged from 13.4 to 20.0, exceeding the impairment threshold in August of 1996, both June and August of 2000, and June of 2018. The lake's plant community was of poorer quality between 2002 and 2007.
- **2018 results:** In June both the number of species in the lake and FQI values met or exceeded the minimum IBI thresholds that define impairment. However, in August, the number of species met the minimum IBI threshold, but the FQI value failed to meet the minimum. As such, the waters would be considered impaired for aquatic plants.





Aquatic invasive species

In 2018, two aquatic invasive species were known to be present in Parkers Lake.



Curly-leaf pondweed (*Potamogeton crispus*): In 2018, curly-leaf pondweed (CLP) was found at 39 percent of sample points in June and 4 percent of sample points in August. The frequency reduction in August was due to a natural die-off which generally occurs in late June. In June, 76 percent of the sample points with CLP had a low density of plants (i.e., a density of 1 on a scale of 1–5); the remaining sample points were medium density (i.e., 2–3 on a scale of 1–5). In August, all sample points with CLP were low density. As a result, CLP did not cause problematic conditions for recreational lake users in 2018. However, when CLP dies off in June, it's decay adds phosphorus to the lake, which typically increases algae growth. This is evident in the graphs on page 2.

Eurasian watermilfoil (*Myriophyllum spicatum*): In 2018, Eurasian watermilfoil (EWM) was found at 61 percent of sample points in June and 71 percent of sample points in August. While EWM extent increased between June and August,

the number of sample points with a high EWM density declined. Nearly 20 percent of sample points with EWM in June had a high density of plants (i.e., a density of 4–5 on a scale of 1–5) compared with 10 percent in August. Most areas with EWM were low-to-medium density in both June and August. A medium density of plants (i.e., a density of 2–3 on a scale of 1–5) was observed at 45 percent of points with EWM in June and 49 percent in August. Low density (i.e., a density of 1 on a scale of 1–5) was observed at 38 percent of points with EWM in June and 42 percent in August. Thus, while some areas of the lake had problematic EWM conditions in both June and August, the majority of areas did not cause problematic conditions for recreational lake users.

Suitability of Parkers Lake for aquatic invasive species (AIS)

A large number of AIS currently residing in Minnesota have not, yet, been observed in Parkers Lake, but could be introduced in the future. For example, both zebra mussels and starry stonewort were recently found in nearby Medicine Lake. The risk of inadvertent transport of zebra mussels and starry stonewort from Medicine Lake to Parkers Lake is perceived to be high. To determine whether the water quality of Parkers Lake would support the introduction of six AIS—starry stonewort, zebra mussels, spiny waterflea, faucet snail, Chinese mystery snail, and rusty crayfish—a suitability analysis for each species was performed.

The analyses compared 2018 water quality in Parkers Lake with the unique water quality conditions required for each species, specifically evaluating total phosphorus, chlorophyll *a*, Secchi disc depth, trophic state index (TSI), water temperature, dissolved oxygen, specific conductance, calcium, magnesium, sodium, alkalinity, hardness, and calcium carbonate.

The results indicate the water quality of Parkers Lake meets the suitability requirements for five of the species: starry stonewort, zebra mussels, rusty crayfish, spiny waterflea, and faucet snail. If these five species were introduced to Parkers Lake, they would be expected to both survive and thrive. The water quality of Parkers Lake partially meets the requirements for the Chinese mystery snail. However, the sodium and specific conductance levels in the lake are too high to be suitable. From the analysis, it appears that if the Chinese mystery snail were introduced to Parkers Lake, it would either not survive or not thrive.

Phosphorus loading from sediment

The release of phosphorus stored in lake-bottom sediments when oxygen levels are low is described as internal phosphorus loading from sediment. Parkers Lake data indicate low oxygen levels (<2 mg/L) were found at depths from about 7 meters to the bottom throughout the 2018 monitoring period (Figure 1). Internal phosphorus loading from sediment during this period caused near-bottom phosphorus concentrations to increase consistently (Figure 2). Because the lake remained stratified (separated into layers) throughout the monitoring period, the high phosphorus concentrations were confined to the bottom of the lake. The surface water phosphorus concentrations remained within a range indicating good water quality and met the MPCA standard throughout the monitoring period.

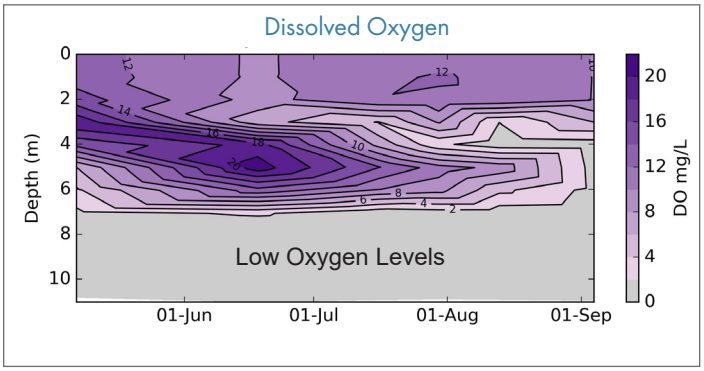


Figure 1

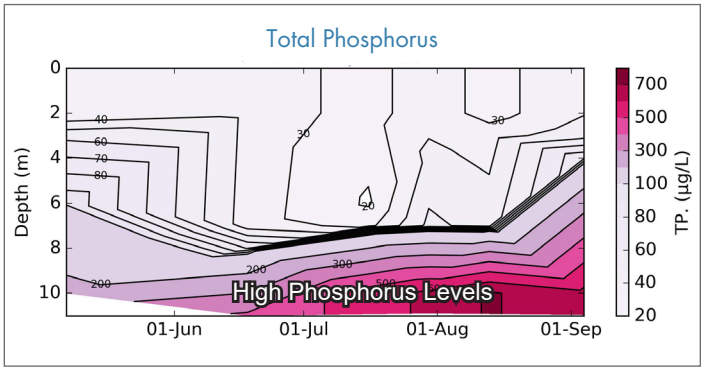


Figure 2

Phytoplankton and Zooplankton

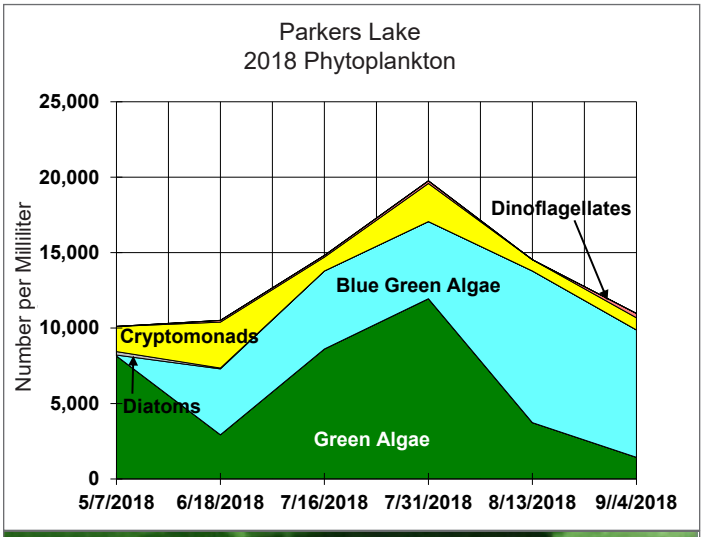
Samples of phytoplankton, microscopic aquatic plants, were collected from Parkers Lake to evaluate water quality and the quality of food available to zooplankton (microscopic animals). Phytoplankton numbers followed a pattern similar to chlorophyll *a*, both showing increases through mid-summer and decreases in late summer, reflecting the lake's good water quality. Cryptomonads and green algae, good sources of food for the lake's zooplankton, were present throughout the monitoring period and were dominant through mid-summer (see figure at right).

Blue-green algae, which are associated with water quality problems and can be a source of health concerns, were present throughout the monitoring period and were dominant in late summer. The World Health Organization (WHO) has established the following guidelines for assessing the risk posed to lake users by exposure to blue-green algae.

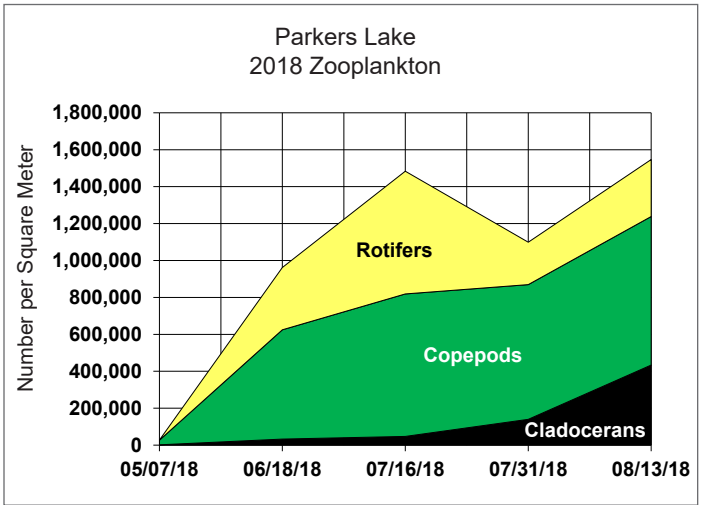
- Lakes with blue-green algae densities less than 20,000 cells per milliliter pose no risk to the health of humans or pets.
- Exposure to lakes with blue-green algae density levels between 20,000 and 100,000 cells per milliliter poses a low risk of adverse health impacts (i.e., skin irritation or allergenic effects such as watery eyes).
- Exposure to lakes with blue-green algae densities greater than 100,000 cells per milliliter poses a moderate health risk (i.e., long-term illness from algal toxins is possible).

In 2018, blue-green algae numbers were always within the no-risk category.

All three groups of zooplankton (rotifers, copepods, and cladocerans) were represented in 2018 (see figure at right). Small rotifers and copepods dominated the community. Because they do not graze as heavily on algae as the larger cladocerans, they generally have limited impact on the lake's water quality. This suggests that future Parkers Lake water quality efforts should focus on phosphorus management to reduce the nutrients that contribute to algae growth.



Chlamydomonas, a type of green algae found Parkers Lake



Keratella quadrata, a rotifer found in Parkers Lake

Chloride Levels

Chloride concentrations in area lakes have increased since the early 1990s when many government agencies switched from sand or sand/salt mixtures to salt for winter road maintenance. When snow and ice melts, the salt goes with it, washing into lakes, streams, wetlands, and groundwater. It only takes 1 teaspoon of road salt to permanently pollute 5 gallons of water. And, once in the water, there is no way to remove chloride. High levels of chloride are toxic to sensitive organisms and disrupt natural lake mixing, causing lower dissolved oxygen in bottom waters and associated impacts on benthic organisms and nutrient cycling.

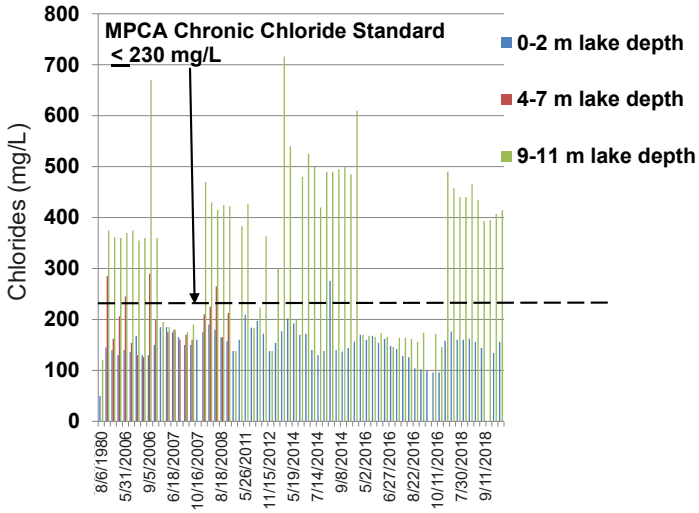
Because high concentrations of chloride can harm fish and plant life, the MPCA has established a chronic exposure chloride standard of 230 mg/L or less.

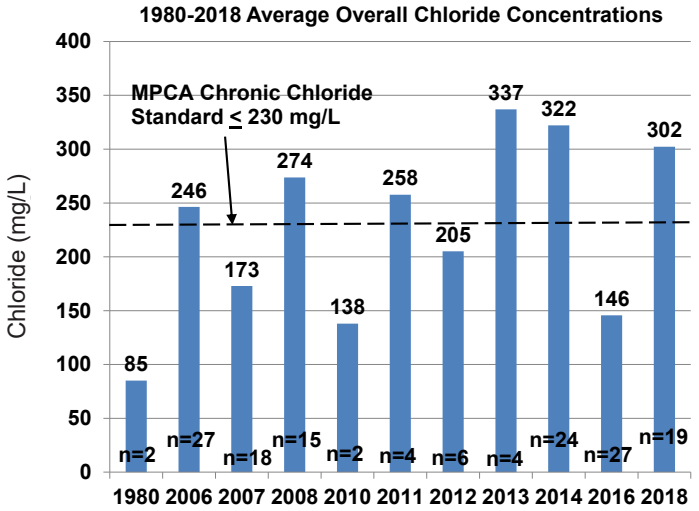
Chloride levels in 2018

- **Range of chloride concentrations in Parkers Lake:** The surface waters ranged from a high of 176 mg/L, measured in June, to a low of 156 mg/L, measured in September. The bottom waters ranged from a high of 490 mg/L in May to a low of 435 mg/L in September
- **Average concentration:** The average surface water concentration was 162 mg/L (meets MPCA chronic exposure standard); the average bottom water concentration was 455 mg/L (does not meet MPCA chronic exposure standard). The average chloride concentration for the entire lake was 302 mg/L, which does not meet the MPCA chronic exposure standard. Thus, Parkers Lake was impaired for chlorides.

Parkers Lake has been listed as impaired for chlorides since 2014. As shown in the figures at right, chloride concentrations in the lake's bottom waters (9–11 meter depths) have failed to meet the MPCA standard the majority of years from 2006 through 2018. When chloride concentrations in the deeper waters have exceeded the MPCA standard, annual chloride averages for the entire lake have also exceeded the MPCA standard. Exceptions occurred in 2007, 2010, 2012, and 2016 when lower chloride concentrations in the lake met the MPCA standard.

A study by the City of Plymouth[1] found that lower watershed chloride loading (or runoff) to Parkers Lake was correlated with lower chloride concentrations in the lake. The study focused on two of the lake's subwatersheds, PL2 in the north and PL1 in the south. The study found that chloride loading was significantly higher from PL2 than from PL1 (see table at right). Land use in PL2 consists primarily of multi-family residential and industrial areas, and 49% of the land is covered with impervious surfaces. These hard surfaces are typically roads and parking lots that receive salt applications in the winter, and the melting snow and rain run quickly off into storm sewers that reach the lake. Conversely, the area in PL1 consists mostly of single-family homes and only 19% of the land is covered with impervious surfaces. Methods should be sought to reduce the use of chlorides throughout the Parkers Lake watershed—particularly to the north.





	PL1		PL2	
Year	Chloride Loading (lbs/year)	Chloride Loading (lbs/acre)	Chloride Loading (lbs/year)	Chloride Loading (lbs/acre)
2013	3,239	12.6	105,991	561
2014	1,158	4.5	55,650	294
2015	1,052	4.1	161,814	856
2016	1,797	7.0	66,855	354
2017	4,904	19.0	122,460	648

[1] Timm, Amy, Justin Valenty, Jonathan Hess, and Brian Vlach. 2017. 2017 Water Quality Report. Prepared for the City of Plymouth by Three Rivers Park District.

A Thank You to Our Volunteers

Each year volunteers from across the watershed participate in the Citizen Assisted Monitoring Program (CAMP) coordinated and funded by the Metropolitan Council with assistance and additional funding from the BCWMC. These volunteers spend hours on their lakes collecting water samples and data that augment data collected through BCWMC routine monitoring. Their work is an important piece of the overall BCWMC monitoring program and their time and dedication are greatly appreciated!

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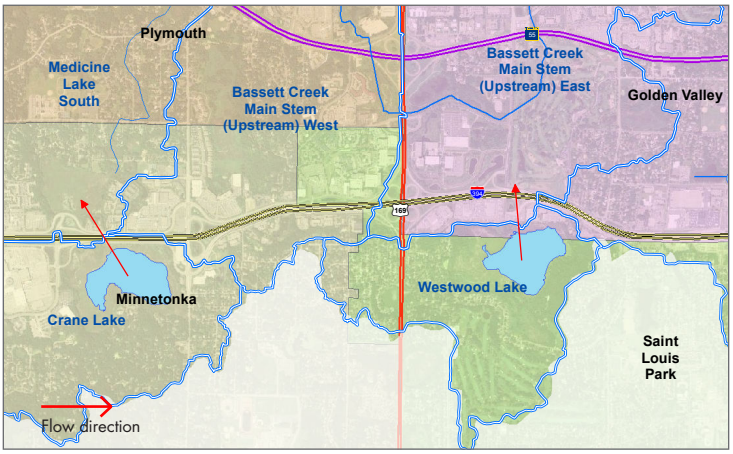
Cleaner, healthier water for a growing community

Item 5B.
BCWMC 3-21-19

Westwood Lake 2018 water quality monitoring



About Westwood Lake

BCWMC classification	Priority-1 shallow lake
Watershed area	463 acres
Lake size	38 acres
Average depth	4.2 feet
Maximum depth	6 feet
Ordinary high water level	887.8 feet (NGVD29)
Normal water level	887.6 feet (NAVD88)
Downstream receiving waterbody	Main stem Bassett Creek
Location (city)	St. Louis Park
MPCA impairments	None
Aquatic invasive species	Curly-leaf pondweed, purple loosestrife, narrow-leaved cattail, reed canary grass
Public access	Yes (canoe access in park)

Note: average and maximum depths are based on actual measurements taken during the 2018 plant surveys

Monitoring water quality in Westwood Lake

The Bassett Creek Watershed Management Commission (BCWMC) has monitored water quality conditions in the watershed's 10 priority lakes since 1972. This monitoring is done to detect changes or trends in water quality and evaluate the effectiveness of efforts to preserve or improve water quality. A summary of 2018 monitoring efforts on Westwood Lake is provided below; more comprehensive information can be found on pages 2–7.

At a glance: 2018 monitoring results

In 2018, the BCWMC monitored Westwood Lake for:

- Water chemistry (nutrients, chlorophyll *a*, chloride).
- Water measurements (e.g., clarity, dissolved oxygen).
- Phytoplankton and zooplankton (microscopic plants and animals).
- Macrophytes (aquatic plants).

Results indicate that Westwood Lake meets Minnesota Pollution Control Agency (MPCA) and BCWMC water quality standards for chlorides, Secchi disc (measure of clarity), total phosphorus, and chlorophyll *a*; trend analyses show no significant changes in these parameters over the past 10 years. According to the Minnesota Department of Natural Resources (MDNR) plant IBI, a measure of aquatic plant health, the lake's plant community is relatively healthy.

Recommendations

Because current watershed management practices are adequately protecting Westwood Lake water quality from degradation, the recommendation is to make no changes. Continuation of water quality and biological monitoring at a 3-year frequency is recommended to periodically assess the condition of the lake's water quality and biological community and identify trends. Annual vegetative suveys to monitor for aquatic invasive species are also recommended.

Water chemistry monitoring: 2018

Total phosphorus levels

While phosphorus is necessary for plant and algae growth, excessive phosphorus leads to excessive growth, decreased water clarity, and water quality impairment.

- BCWMC/MPCA standard: 60 micrograms per liter (µg/L) or less.
- Range: Total phosphorus concentrations ranged from a low of 16 µg/L in early July to a high of 28 µg/L in mid-July and late August.
- Summer average: 21 µg/L (met BCWMC/MPCA standard)

Chlorophyll *a* levels

Chlorophyll *a* is a pigment in algae and generally reflects the amount of algae growth in a lake. Clear lakes generally have chlorophyll *a* levels less than 15 micrograms per liter (µg/L).

- BCWMC/MPCA standard: 20 µg/L or less.
- Range: Chlorophyll *a* concentrations ranged from a low of 1.4 µg/L in early May to a high of 8.0 µg/L in late August.
- Summer average: 3.6 µg/L (met BCWMC/MPCA standard).

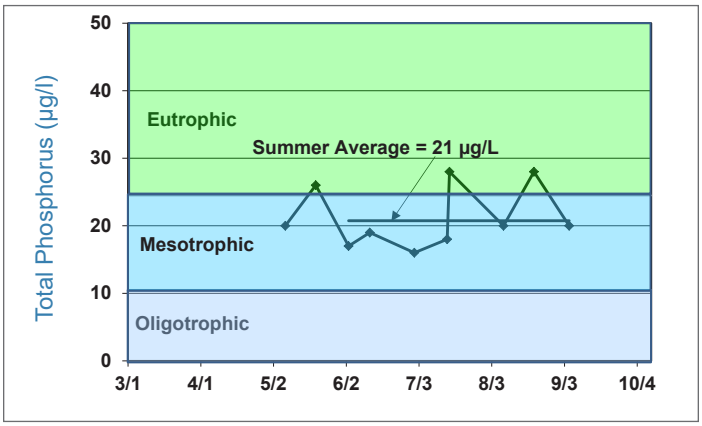
Water clarity

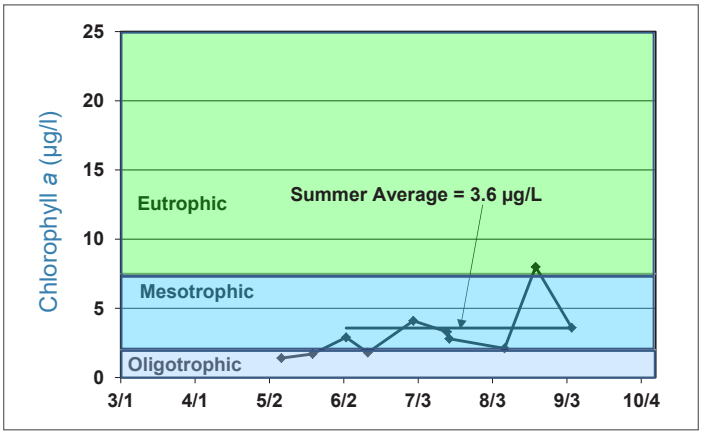
Water clarity is often affected by the amount of algae or other photosynthetic organisms in a lake. It is usually measured by lowering an 8-inch "Secchi" disc into the lake (see bottom photo); the depth at which the disc's alternating black-and-white pattern is no longer visible is considered a measure of the water's transparency.

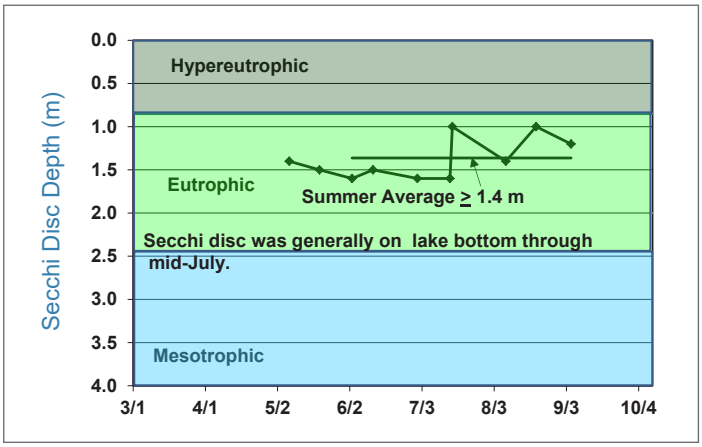
- BCWMC/MPCA standard: 1.0 meter or more.
- Range: From approximately 1.5–1.6 meters (lake bottom) during much of the monitoring period to 1.0 meter in late summer.
- Summer average: greater than 1.4 meters (met BCWMC/MPCA standard).

Definitions

- **Hypereutrophic:** Nutrient-rich lake conditions characterized by frequent and severe algal blooms and low transparency
- **Eutrophic:** Lake condition characterized by abundant accumulation of nutrients supporting dense growth of algae and other organisms; decay of algae can reduce lake oxygen levels
- **Mesotrophic:** Lake condition characterized by medium levels of nutrients and clear water
- **Oligotrophic:** Lake condition characterized by a low level of dissolved nutrients, high oxygen content, and sparse algae growth





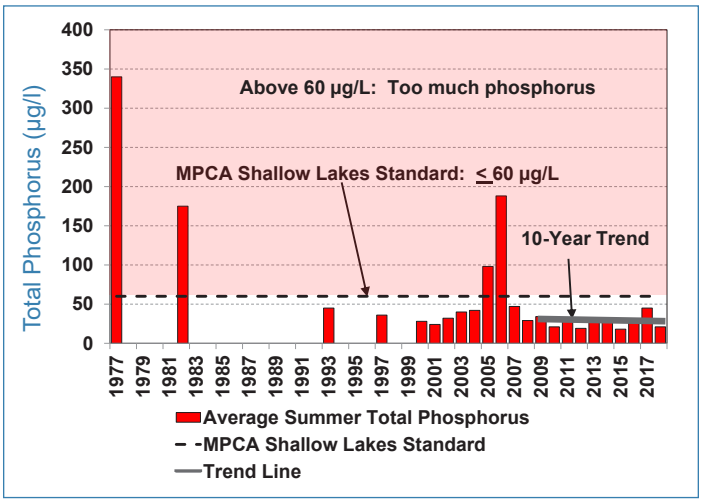


Water chemistry monitoring from 1972–2018: historical trends

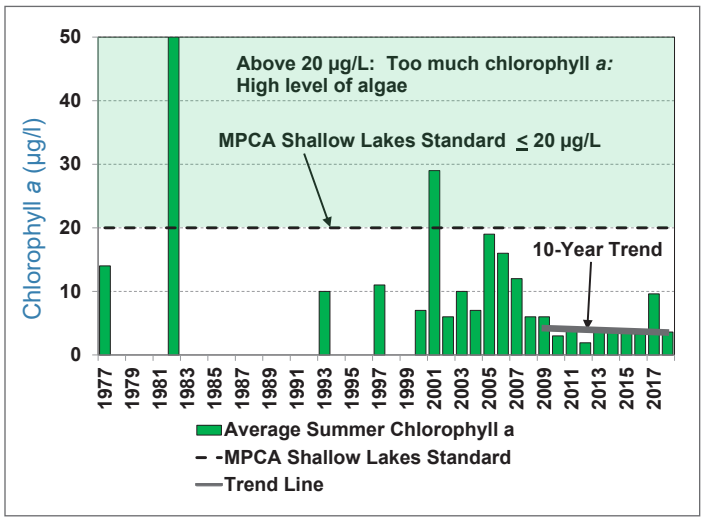
Water quality in Westwood Lake has been monitored since 1977. Data includes information collected through the Citizen Assisted Monitoring Program (CAMP). Summer averages (June through September) of total phosphorus, chlorophyll a, and Secchi disc depth from 1977–2018 are shown in the figures at right. In 1977 and 1982, these averages generally failed to meet BCWMC/MPCA standards; however, standards have generally been met since 1982. Exceptions include a high chlorophyll a value in 2001, high total phosphorus values in 2005 and 2006, and a low Secchi disc depth in 2017. Summer averages for total phosphorus, chlorophyll a, and Secchi depth met the BCWMC/MPCA standards in 2018.

In summary, although water quality appears to be improving slightly since 2009, this change is not significant. An analysis of changes in summer average total phosphorus, chlorophyll *a* concentrations, and Secchi disc depth over the last 10 years were not statistically significant (95-percent confidence level).

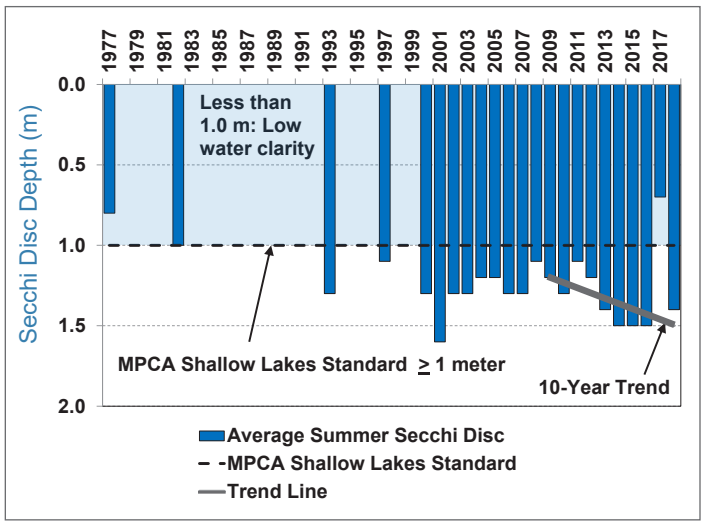
Total phosphorus trends



Chlorophyll *a* trends



Water clarity trends



Macrophytes (aquatic plants)

Lake Plant Eutrophication Index of Biological Integrity (IBI)

The MDNR recently developed metrics to determine the overall health of a lake's aquatic plant community. The Lake Plant Eutrophication Index of Biological Integrity (IBI) is used by the MPCA to determine whether a lake is meeting the federal Clean Water Act standards intended to protect aquatic life. The plant IBI includes two metrics: (1) the number of species in a lake and (2) the "quality" of the species, as measured by the floristic quality index (FQI).

Plant survey data from 1993 through 2018 were assessed to determine plant IBI trends. Trends show an improvement in the plant community that is likely a result of the trend toward improving water quality. The figures at right show the Westwood Lake number of species and FQI scores for that period compared to the MDNR plant IBI impairment threshold.

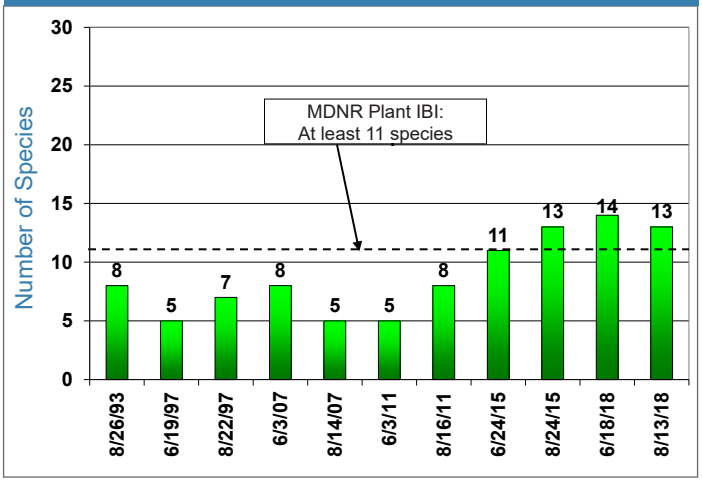
- **Number of species:** A shallow lake is considered impaired when it has fewer than 11 species. During the period examined, the number of species in Westwood Lake ranged from 5 to 14, exceeding the impairment threshold in 2015 and 2018.
- **FQI values (quality of species):** The impairment threshold for shallow lakes, as measured by FQI, is a minimum value of 17.8. During the period examined, FQI values ranged from 9.8 to 19.1, exceeding the threshold during August of 2015 and June and August of 2018.
- **2018 results:** Both the number of species in the lake and FQI values exceeded the minimum IBI thresholds that define impairment. As such, the waters are not currently considered impaired for aquatic plants. 2018 was the first year since monitoring began that the number of species and FQI values exceeded the minimum IBI thresholds during both June and August.

Species richness

<11 species: considered impaired

14 and 13: number of species in Westwood Lake in June and August 2018

Outcome: lake is not impaired and meets standards

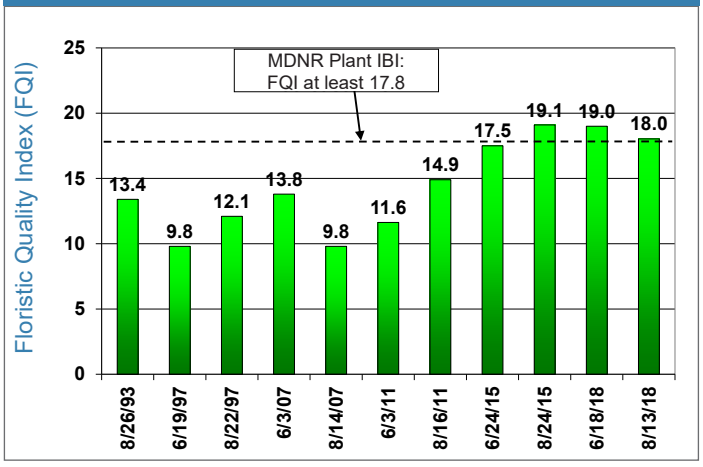


Species quality (FQI values)

17.8: impairment threshhold

19.0 and 18.0: Westwood Lake values, June and August 2018

Outcome: lake is not impaired and meets standards



Bearded stonewort in Westwood Lake

In 2015, *Lychnothamnus barbatus* (bearded stonewort), was first observed in Westwood Lake (and in Minnesota). Bearded stonewort is in the family *Characeae*, an algae that resembles rooted aquatic plants. This species was not seen in North America until 2012 and few populations have been documented in the world. Bearded stonewort obtains all of its nutrients from the water. This nutrient absorber can reduce phosphorus concentrations and improve water quality.

Bearded stonewort

Displacing another species in the *Characeae* family, *Chara contraria* (fetid stonewort), bearded stonewort expanded its extent by approximately an order of magnitude from 2015–2018 and was observed at 34 percent of sample locations in August of 2018. In 2018, giant canopied mats of bearded stonewort were observed in the north half of the lake and satellite clusters in the southern half. Because bearded stonewort obtains all of its nutrients from the water, the dense growth in Westwood Lake is helping improve water quality in the lake.

Aquatic invasive species

In 2018, four aquatic invasive species (AIS) were known to be present in Westwood Lake, although no species was considered problematic.

- Curly-leaf pondweed (*Potamogeton crispus*): Though prevalent, the curly-leaf pondweed coexisted with native plants at relatively low densities.
- Purple loosestrife (*Lythrum salicaria*): This emergent species was found in one location along the north central shoreline and three locations at the northwestern corner of the lake. It was found in six similar locations in August 2015. Galerucella beetles were present in 2015, causing heavy damage to the purple loosestrife plants and managing the infestation. In 2018, Galerucella beetles were again present and by August had killed most of the purple loosestrife plants in the lake.
- Narrow-leaved cattail (*Typha angustifolia*): Narrow-leaved cattail was observed at five locations along the north shoreline. It was observed in similar locations in 2015.
- Reed canary grass (*Phalaris arundinacea*): Reed canary grass was found for the first time since aquatic plant monitoring began in 1993. It was found at three locations along the north shoreline in June, but was only observed at one location in August.

Suitability of Westwood Lake for AIS

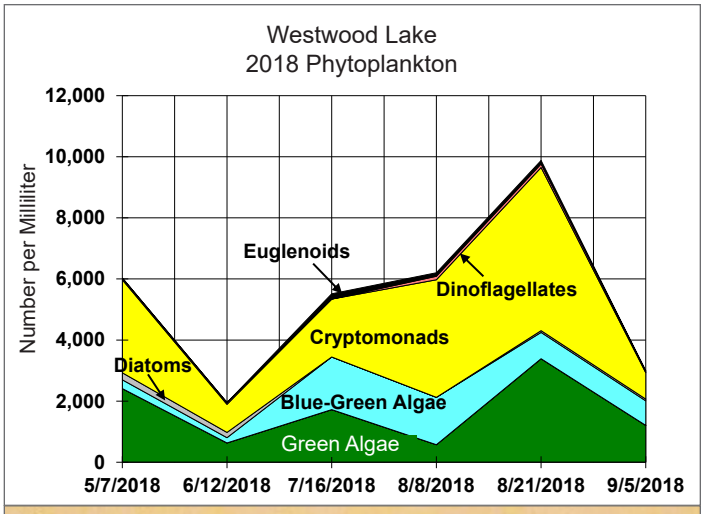
A large number of AIS residing in Minnesota have not, yet, been observed in Westwood Lake, but could be introduced. For example, both zebra mussels and starry stonewort were recently found in nearby Medicine Lake. To determine whether Westwood Lake water quality would support the introduction of six AIS—starry stonewort, zebra mussels, spiny waterflea, faucet snail, Chinese mystery snail, and rusty crayfish—a suitability analysis for each species was performed.

The analyses compared 2018 lake water quality with the water quality conditions required for each species, specifically evaluating total phosphorus, chlorophyll *a*, Secchi disc depth, trophic state index (TSI), water temperature, dissolved oxygen, specific conductance, calcium, magnesium, sodium, alkalinity, hardness, and calcium carbonate. The results indicate the water quality of Westwood Lake meets the suitability requirements for two of the species: rusty crayfish and faucet snail. These species would likely thrive if introduced to the lake. The lake partially meets the suitability requirements of the Chinese mystery snail, zebra mussels, spiny waterflea, and starry stonewort. If these species were introduced to the lake, they would likely survive, but may not thrive.

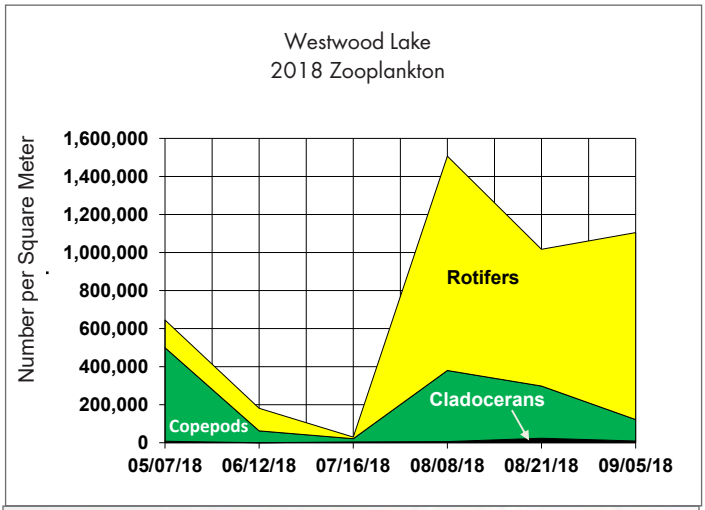
Phytoplankton and zooplankton

Samples of phytoplankton, microscopic aquatic plants, were collected from Westwood Lake to evaluate water quality and the quality of food available to zooplankton (microscopic animals). Phytoplankton numbers followed a pattern similar to chlorophyll *a*, both reflecting good water quality. These numbers increased between June and August, then decreased in September, as shown in the upper-right figure. Cryptomonads and green algae, good sources of food for the lake's zooplankton, were dominant throughout the summer. Blue-green algae, which are associated with water quality problems and can be a source of health concerns, were present in very low numbers.

The composition of the 2018 zooplankton community was consistent with recent years. All three groups of zooplankton (rotifers, copepods, and cladocerans) were represented (see figure at bottom right). Small rotifers and copepods have generally dominated the community. Because these species do not graze as heavily on algae as the larger cladocerans, they generally have limited impact on the lake's water quality. This suggests that future Westwood Lake water quality efforts should focus on phosphorus management to reduce the nutrients that contribute to algae growth.



Pediastrum boryanum, a type of algae found in Westwood Lake



Lecane, a rotifer found in Westwood Lake

Increased use of chloride for road maintenance has had an impact on chloride levels in Twin Cities metro area lakes.

Chloride levels in 2018

Chloride concentrations in area lakes have increased since the early 1990s when many government agencies switched from sand or sand/salt mixtures to salt for winter road maintenance. When snow and ice melts, the salt goes with it, washing into lakes, streams, wetlands, and groundwater. It only takes 1 teaspoon of road salt to permanently pollute 5 gallons of water. And, once in the water, there is no way to remove chloride.

Because high concentrations of chloride can harm fish and plant life, the MPCA has established a chronic exposure chloride standard of 230 mg/L or less.

- **Range of chloride concentrations in Westwood Lake:** From a high of 79 mg/L, measured in September, to a low of 57 mg/L, measured in May
- **Average concentration:** 72 mg/L (meets MPCA standard)

A Thank You to Our Volunteers

Each year volunteers from across the watershed participate in the Citizen Assisted Monitoring Program (CAMP) coordinated and funded by the Metropolitan Council with assistance and additional funding from the BCWMC. These volunteers spend hours on their lakes collecting water samples and data that augment data collected through BCWMC routine monitoring. Their work is an important piece of the overall BCWMC monitoring program and their time and dedication are greatly appreciated!

Bassett Creek Watershed Management Commission
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Item 5C.
BCWMC
3-21-19

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

RESOLUTION NO. 19-07

Supporting State Law That Provides Limited Liability to Commercial Salt Applicators That are Certified Through an Established Voluntary Salt Applicator Certification Program

WHEREAS chloride contamination of water resources has been found in urban areas around the state; and

WHEREAS the Minnesota Pollution Control Agency (MPCA) has listed 39 waterbodies in the Twin Cities metro area as impaired for chloride and has completed Total Maximum Daily Load (TMDL) studies on Nine Mile Creek and Shingle Creek and recently completed the Twin Cities Metropolitan Area Chloride TMDL; and

WHEREAS the TMDL studies have indicated that the largest chloride source to our lakes and streams is through the application of chloride compounds on roads, parking lots, sidewalks and other hard surfaces for winter maintenance practices; and

WHEREAS liability for property damage or personal injury as a result of snow or ice is one of the main reasons over-salting occurs and many private commercial contractors and property owners are reluctant to implement salt-reduction practices for fear of increased liability; and

WHEREAS the MPCA currently oversees a voluntary Smart Salting Certification Program that provides training to public and commercial salt applicators, private property owners and managers and others on how to maintain safe surfaces using salt efficiently.

NOW, THEREFORE BE IT RESOLVED, the Bassett Creek Watershed Management Commission supports passage and enactment of state law that provides a limited liability exemption to commercial salt applicators and property owners using salt applicators who are certified through the established salt applicator certification program who follow best management practices.

_____

Chair

ATTEST:

_____

Secretary

Item 5Di.
BCWMC 3-21-19

Proposed 2019 BCWMC Education and Outreach Budget

	Activity	Budget	Notes
1	**Publications/Annual Report**	$1,300	Existing line item in operating budget to develop Commission's Annual Report
2	**Website Hosting/Maintenance**	$3,000	Existing line item in operating budget for website maintenance and hosting
3	**Watershed Education Partnerships**		
	a. Citizen Assisted Monitoring Program	$6,460	This program through the Met Council sponsors volunteer monitors on several BCWMC lakes. This year there are volunteers lined up for nine lakes sites.
	b. River Watch Program	$2,000	BCWMC has sponsored this program coordinated by Hennepin County for many years. High school students collected water quality data on local creeks.
	c. MetroWaterShed Partners	$3,500	BCWMC provides funding to support the Clean Water MN Media Campaign. Watershed organizations our size are asked to contribute between $3,000 and $5,000.
	d. Children's Water Festival	$350	This event educates 4th grade students about water resources and presents ways they can help ensure a future where water resources are protected and managed wisely.
	e. Metro Blooms Workshops	$2,500	Workshops are geared toward planting resilient yards including alternative turf, raingardens, and native plants. BCWMC cities coordinate with Metro Blooms to schedule an event.
	3. Subtotal	***$14,810***	
4	**Education and Public Outreach**		
	a. West Metro Water Alliance	$9,000	Contract approved by BCWMC 2/19/15. Administrator attends monthly WMWA meetings and is involved with this organization and its activities. The BCWMC was only invoiced $5,000 of this amount so far in 2019. The remaining $4,000 will only be invoiced if needed later this year.
	b. Prairie Moon Native Seeds	$270	Recommended purchase for use at events.
	c. Training for Commissioners (registrations, fees)	$1,200	Recommended for reimbursement of registration fees for Commissioners, Alt. Commissioners, or Committee members to attend workshops, trainings, and other events. Pre-approval from the Commission is required for each expenditure and funds are used to reimburse individuals with proper receipts and documentation. Typically, these funds are for registration expenses only but are sometimes used for travel expenses (lodging and mileage for out of town events). Funds are distributed on a first come, first serve basis until depleted. In 2018, $1,008 of this fund was used.
	d. Metro Blooms Harrision Neighborhood Project Support	$4,000	Recommended to continue supporting and helping provide grant match funds for the Harrison Neighborhood Project being implemented by Metro Blooms.
	e. Purchase of 150 dog waste bag dispensers	$0	Plenty left over from last year.
	f. Creek crossing signs	$0	Need to install signs purchased last year
	g. AIS Grant Activities (BCWMC match)	$300	Develop and print lake-specific AIS educational materials + provide refeshments at AIS early detection training [$300 match; $1,040 to be rec'd in grant funds]
	g. 50th Anniversary	$7,240	Possible budget items: Celebration Event Meal: $2,700 (150 ppl * $18/person) Tour buses (2 – 54 passenger buses): $1,200 Development of historical document display at event: $840 (20 hours of D. Pape's time) Development and limited printing of commemorative report: $2,200 (D. Pape time + printing) Materials (flowers, table cloths, etc.) $300
	h. Chloride Education Activities	$3,000	Educational PSA-type videos for website and social media Salt smart campaigns/education Coordination with other watersheds to implement collaborative education
	4. Subtotal	***$25,010***	
5	**Public Communications**	**$1,000**	Existing line item in operating budget for required public notices.
	TOTAL	**$45,120**	
6	**Unassigned Education Funds**	**$1,030**	These funds could be used to augment 50th Anniversary events, tours, products (if needed) and/or could be used to fund other educational initiatives.

Item 5Dii.
BCWMC 3-21-19

EDUCATION AND OUTREACH SERVICES AGREEMENT

THIS ADMINISTRATIVE SERVICES AGREEMENT ("Agreement") is made and entered into by and between the Bassett Creek Watershed Management Commission, a Minnesota joint powers organization (the "Commission"), and Dawn Pape, doing business as Lawn Chair Gardener, 5901 Birchwood Street, Shoreview, MN 55126 (the "Contractor").

1. SERVICES. Contractor will perform the services outlined in the proposal ("Proposal") dated March 12, 2019, which is attached hereto as Exhibit 1 and is incorporated herein, including performing outreach and education activities related to salt, including partnering with other organizations and developing informational videos; planning/developing materials for the 50th anniversary; and assisting with implementing the Hennepin County AIS Prevention Grant from Hennepin County (collectively, the "Services"). The terms and conditions of this Agreement shall be controlling over any conflicting term or condition contained within the Proposal.

2. COMPENSATION. Contractor will be paid for Services at the rate of $42 per hour. Contractor will be reimbursed for actual, reasonable and necessary out-of-pocket expenses including printing, materials, and travel (at the current IRS rate for privately owned automobiles). Travel outside of the Minneapolis/St. Paul metropolitan area and overnight accommodations must have the prior approval of the Commission. Meeting and meal expenses (other than meetings of the Commission or its committees) must have the prior approval of the Commission. The total compensation, including expenses, to be paid to Contractor for all the Services to be provided under this Agreement shall not exceed $7,080.00

3. PAYMENT. Contractor will submit monthly invoices for the Services providing detailed time records of Services provided and time spent and shall provide receipts for eligible reimbursable expenses that are not otherwise reimbursed by the Commission through its consultants or otherwise. Invoices and records, together with supporting information, shall be submitted in a form acceptable to the Commission. The Commission will pay invoices within 45 days of receipt thereof. Invoices received by the first Thursday of the month will ordinarily be authorized for payment at that month's regular meeting.

4. TERM AND TERMINATION. This Agreement shall be effective as of the date of the last party to execute it and it shall continue in effect until March 21, 2020. This Agreement may be terminated by either party at any time, and for any reason, on 35 days' written notice of termination.

5. SUBSTITUTION AND ASSIGNMENT. Services provided by Contractor will generally be performed by Dawn Pape. Upon approval by the Commission, the Contractor may substitute other persons to perform some identified portion of the Services set forth in this Agreement. No assignment of this Agreement shall be permitted without a prior written amendment signed by the Commission and the Contractor.

6. AMENDMENTS. This document, together with any attached Exhibit, constitutes the entire Agreement between the parties and no modifications of its terms shall be valid unless reduced to writing and signed by both parties.

7. INDEPENDENT CONTRACTOR. The Contractor (including the Contractor's employees, if any) is not an employee of the Commission. Contractor will act as independent contractor and acquire no rights to tenure, workers' compensation benefits, unemployment compensation benefits, medical and hospital benefits, sick and vacation leave, severance pay, pension benefits or other rights or benefits offered to employees of the Commission. Contractor shall not be considered an employee of the Commission for any purpose including, but not limited to: income tax withholding; workers' compensation; unemployment compensation; FICA taxes; liability for torts; and eligibility for benefits.

   Contractor will not be provided with a place of business and will retain control over the manner and means of the Services provided as an independent contractor. Contractor will provide, at Contractor's expense, necessary office space, transportation, computer capability, an internet email address, and incidental office supplies.

8. DATA PRACTICES AND RECORDS. All records, information, materials and other work product, in written, electronic, or any other form, developed in connection with providing Services under this Agreement shall be the exclusive property of the Commission. All such records shall be maintained with the records of the Commission and in accordance with the instructions of the Commission. The Contractor will comply with the Minnesota Government Data Practices Act and all other applicable state and federal laws relating to data privacy or confidentiality. The Commission will provide such advice and legal services as are necessary to comply with such laws and regulations as they relate to the data maintained by the Commission.

9. COMPLIANCE WITH LAWS. Contractor shall comply with all applicable federal, state and local laws, regulations or ordinances in performance of Contractor's duties hereunder, such laws including but not limited to those relating to non-discrimination in hiring or labor practices.

10. AUDIT. The Contractor agrees that the Commission, the State Auditor, or any of their duly authorized representatives, at any time during normal business hours and as often as they may reasonably deem necessary shall have access to and the right to examine, audit, excerpt, and transcribe any books, documents, papers, and records that are relevant to and involve transactions relating to this Agreement.

11. HOLD HARMLESS. Contractor shall defend, indemnify and hold harmless the Commission, its member cities and their elected officials, officers, employees, agents, and representatives, from and against any and all claims, costs, losses, expenses, demands, actions or causes of action, including reasonable attorneys' fees and other costs and expenses of litigation that may arise out of this Agreement for Services provided by Contractor hereunder.

12. APPLICABLE LAW. The law of the State of Minnesota shall govern all interpretations of this Agreement, and the appropriate venue and jurisdiction for any litigation that may arise under this Agreement will be in and under those courts located within the County of Hennepin, State of Minnesota, regardless of the place of business, residence, or incorporation of Contractor.

13. NO AGENCY. Contractor is an independent contractor and shall not be considered to be the agent or servant of the Commission for any purpose and shall have no authority to enter into any contracts, create any obligations, or make any warranties or representations on behalf of the Commission.

14. NOTICES. Any notice or demand, authorized or required under this Agreement shall be in writing and shall be sent by certified mail to the other party as follows:

To the Contractor:
Dawn Pape
Lawn Chair Gardener
5901 Birchwood Street
Shoreview, MN 55126

To the Commission:
Chairman
Bassett Creek Watershed Management Commission
City of Golden Valley City Hall
7800 Golden Valley Road
Golden Valley, MN 55427

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the date of the last party to execute it.

CONTRACTOR

By: _____
Dawn Pape (Lawn Chair Gardener) Date

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

By: _____
Chair Date

By: _____
Secretary Date

Exhibit 1

LAWN CHAIR Gardener
CREATIVE SERVICES

2019 EDUCATION SERVICES
March 22, 2019-March 21, 2020

PROPOSAL FOR BCWMC

Dawn Pape has over twenty years of experience in the field of education and fifteen years of experience specifically in water-related public education. Pape started the Blue Thumb—Planting for Clean Water® program when she was the director of outreach at the Rice Creek Watershed District. In that position, she communicated and coordinated projects with 29 communities, four counties, and many water management organizations.

Dawn Pape brings a unique skill set to projects: writing, creativity, graphic design, photography, social media, website development, friendliness, energy, practicality, implementation experience, fiscal responsibility and even public speaking and performance. With a Masters of Science in Environmental Education from University of Wisconsin—Stevens Point, Pape keeps abreast of environmental issues and technology with continuing education.

Lawn Chair Gardener

Dawn Pape
5901 Birchwood St.
Shoreview, MN 55126
651.485.5171
dawn@lawnchairgardener.com
lawnchairgardener.com

BCWMC

Laura Jester

laura.jester@keystonewaters.com
bassettcreekwmo.org

Proposal Issued: 03.12.2019

Proposal Valid to: 03.30.2019

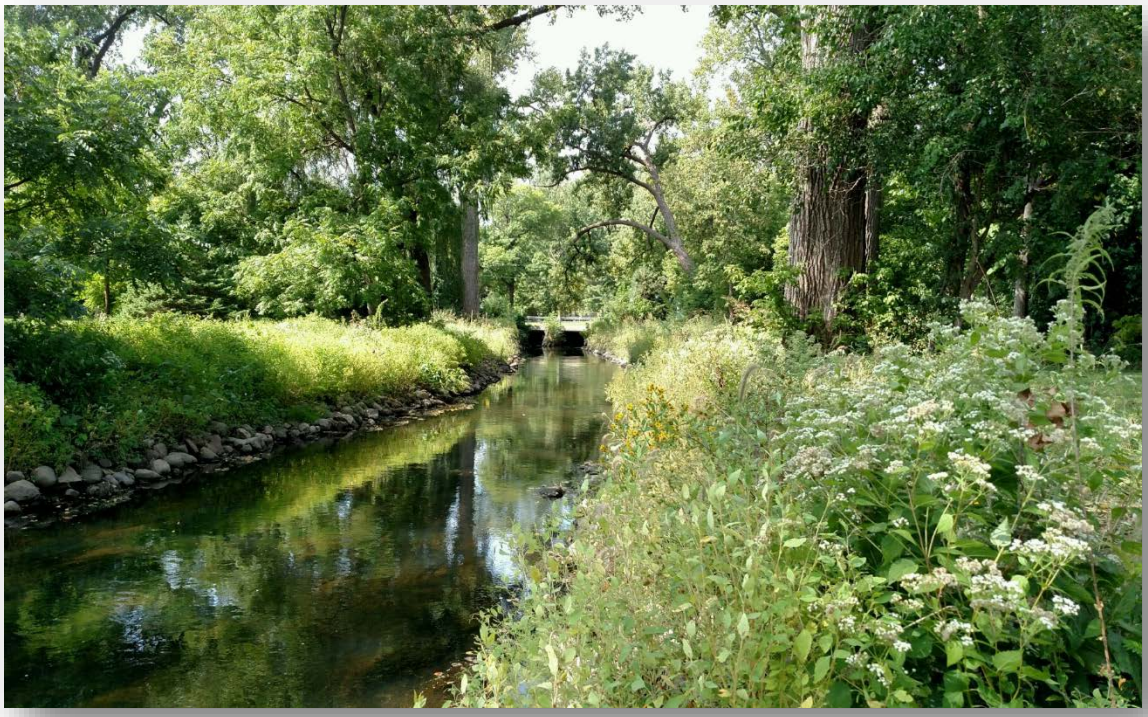
Services	Hourly Rate x Time	Total
50th Anniversary - Edit content and design 8-page booklet, print 250 copies - Assist Administrator Jester in creating a display for June 27th event	$42 x 57 hrs =$2,394 + $646 for printing and display materials	$3,040.00
Help Develop Lake-Specific AIS Prevention Educational Materials (Hennepin County AIS grant) Notes: Lake group leaders will identify key messages and material format for their lakes. Leaders from lakes in the BCWMC expressed an interest in personally reaching out to their neighbors, shoreline homeowners, and lake users with lake specific materials regarding AIS prevention. They are particularly interested in helping homeowners understand their personal responsibility in AIS prevention, including hiring only well vetted Lake Service Providers and making sure docks, lifts, and other objects are AIS free before installation or removal from their property. Since there is already a large amount of AIS educational material that can be used, tailoring messages for specific lakes is the key.	$42 x 12 hrs = $504 + $536 for printing	$1,040.00
Salt Education Educational PSA-type videos for website and social media Salt smart campaigns/education Coordination with others watersheds to implement collaborative education	$42 x ~68 hrs. = $2,855 + mileage to ~5 meetings (50 mi. x .58/mi. = $145)	$3,000.00

Labor	$5,753.00
Materials + Mileage	$1,327.00
Total	$7,080.00

Item 5E.
BCWMC 3-21-19

Bassett Creek Main Stem Restoration Project

10th Avenue to Duluth Street, Golden Valley (2015CR)



FINAL REPORT

March 10, 2019

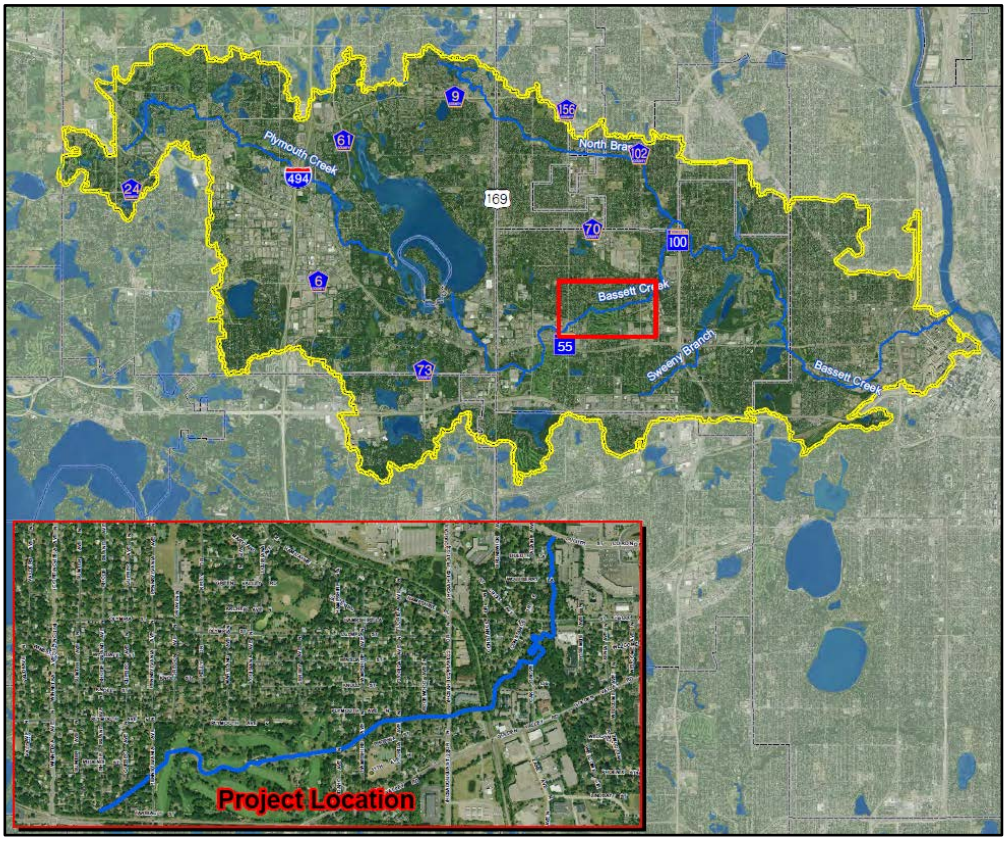
I. Project Overview

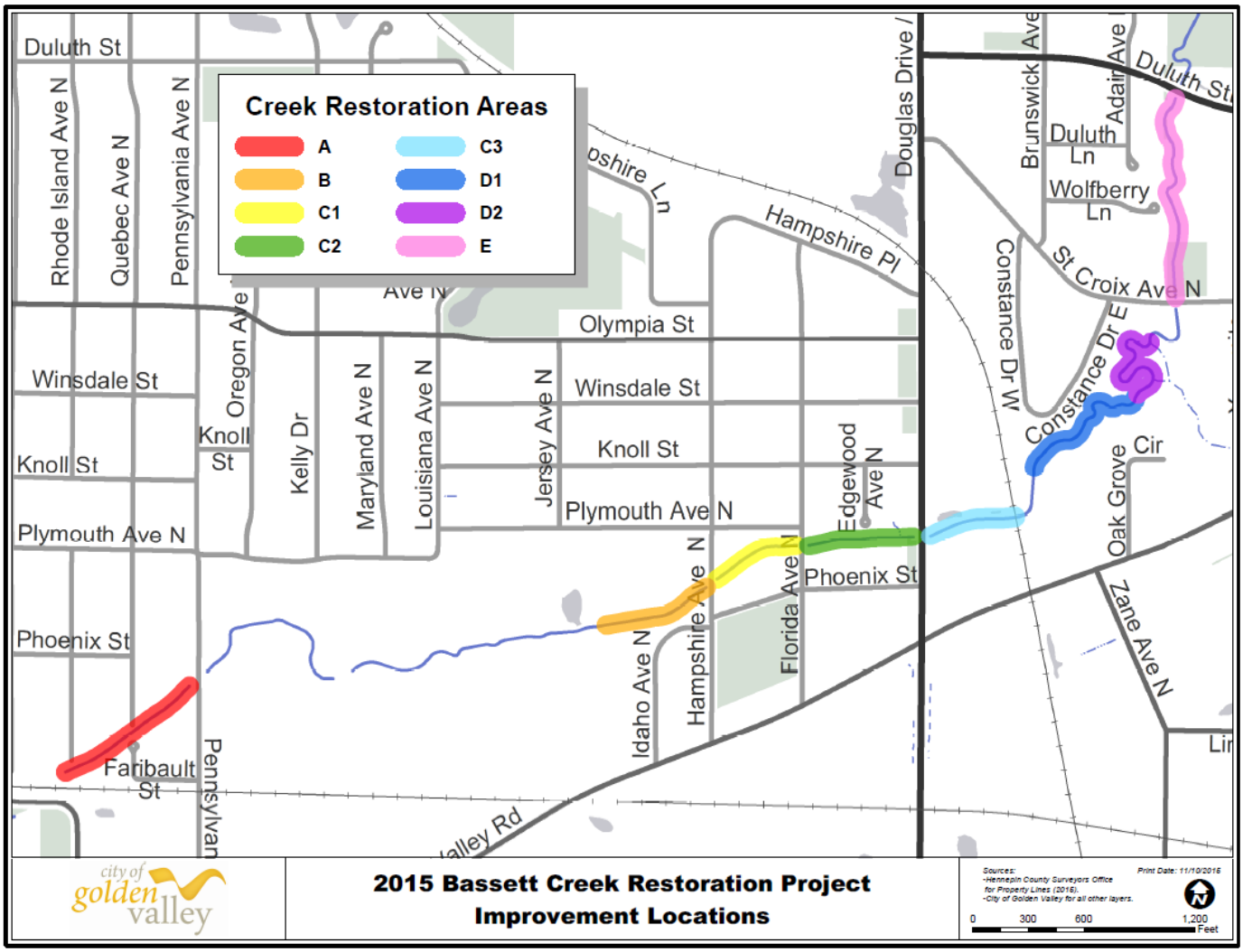
This project in the City of Golden Valley restored streambanks along the 9,500-foot reach of the Main Stem of Bassett Creek from the intersection of 10th Ave. N. and Rhode Island Ave. N. to Duluth St. Areas of bank erosion and bank failure were stabilized and re-vegetated to improve water quality and habitat. Restoration techniques included a combination of bioengineering methods using vegetative materials, and structural methods including rock and other non-vegetative materials.

II. Project Area

The reach identified for this project extended approximately 9,500 feet from 10th Avenue and Rhode Island Avenue at the upstream end to Duluth Street at the downstream end, just east of Adair Avenue. This project tied into a previous streambank restoration project completed by the BCWMC in 2012. The stream is relatively shallow in most places except for occasional deep pools.

With the exception of a reach of the within Area D (see map on following page), virtually all sections of the Main stem of Bassett Creek reach were converted into ditches in the 1900s through the 1920s. The riparian vegetation varied considerably depending on adjacent land use. Much of the reach contained unmanaged woody vegetation. Some banks within golf
course areas were largely free of woody vegetation and the banks were mostly grasses dominated by reed canary grass. Some banks within the parks and the golf course had turf grass to the top of the bank.




Creek Restoration Areas
A
B
C1
C2
C3
D1
D2
E
Duluth St
Rhode Island Ave N
Quebec Ave N
Pennsylvania Ave N
Oregon Ave
Kelly Dr
Maryland Ave N
Louisiana Ave N
Jersey Ave N
Douglas Drive
Brunswick Ave
Adair Ave
Duluth Ln
Wolfberry Ln
St Croix Ave N
Constance Dr W
Constance Dr E
Oak Grove Cir
Zane Ave N
Hampshire Pl
Olympia St
Winsdale St
Knoll St
Plymouth Ave N
Edgewood Ave N
Florida Ave N
Hampshire Ave N
Idaho Ave N
Phoenix St
Faribault St
Pennsylvan
Valley Rd
2015 Bassett Creek Restoration Project
Improvement Locations
Print Date: 11/10/2016
0
300
600
1,200
Feet

III. Project Description and Outcomes

The project reduces the total phosphorous load entering the creek by an estimated 60-100 pounds per year and the total suspended sediment load by an estimated 140,000-200,000 pounds per year. There were several goals associated with this project including:

- Removal of hazard and invasive trees and vegetation along the corridor
- Reshaping and stabilization of eroded stream banks
- Installation of a variety of stream stabilization measures and flow diversion methods to address erosion problems, including Bio-logs, boulders, riprap, vegetated bench, live stakes and fascines, and native vegetation and plantings
- Repair of storm sewer outfalls and other deteriorated infrastructure along the creek
- Establishment of native vegetation, trees, and shrubs along the creek
- Removal of miscellaneous debris from within the creek

The final project design included a combination of bioengineering techniques that rely primarily on vegetation, and their associated root structures to stabilize the creek bank; and a more structural approach using rock, or other non-vegetative materials to stabilize eroding shorelines. The selection of the best option for a given steam reach was based on a number of factors including the velocity of flow in channel reach, slope of creek bank, presence and location of existing infrastructure, exposure of creek bank to sunlight, ability to obtain access for installation and future maintenance, location of significant hardwood trees to be preserved, and property owners' preferences for type of treatment. With much of the project being located on private property, the selected techniques needed the support of property owners. The final design was a collaborative effort between the BCWMC, City and property owners.

IV. Timeline and Key Documents

The 2004 Bassett Creek Watershed Management Plan included goals and policies related to the implementation and funding of channel restoration projects, the Commission's direction related to design of these restoration projects, and the benefits of stream restoration. In January 2007 the BCWMC's Technical Advisory Committee recommended that the Commission add stream channel restoration projects to the Commission's 10-Year Capital Improvements Program (CIP). Key dates for this project include:

- February 2014: BCWMC reviews the draft feasibility study for the project, prepared by WSB, Inc.
- April 2014: Golden Valley holds a public open house on the project
- June 2014: BCWMC amends its 2004 Watershed Management Plan to include the Bassett Creek Main Stem Restoration Project: 10th Avenue to Duluth Street (2015CR) in its Capital Improvement Program
- June 2014: BCWMC approves the feasibility report
- October 2014: BCWMC holds a public hearing and officially orders the project and enters an agreement with Golden Valley to design and construct the project
- March 2015: BCWMC approves 50% design plans with BCWMC engineer comments
- June 2015: BCWMC approves 90% design plans with BCWMC engineer comments

Project construction began in the winter of 2015. The project was constructed in two phases, each under a separate contract. Phase One was construction including stream bank shaping, placement of field stone rock and 12-inch bio-logs, and repair of storm sewer outlets. Phase one was completed in 2016. Phase Two began immediately following construction and included the establishment of native vegetation along the stream. Phase two continued through the growing season of 2018.

V. Project Budget and Funding

- Total project budget = $1,503,000 including feasibility study, design, construction, vegetation management, BCWMC engineering review, BCWMC legal and administrative costs
- Reimbursements to Golden Valley
  - Reimbursement 1 (July 2015) $61,993.25
  - Reimbursement 2 (December 2016) $841,405.15
  - Reimbursement 3 (August 2017) $57,299.09
  - Reimbursement 4 (March 2019) $114,601.05
- BCWMC Expenses
  - Engineering, legal, administration $43,048.75
- Total expenses and remaining funds
  - Total expenses $1,118,347.29
  - Remaining funds (to be added to closed project account) $384,652.71

VI. Lessons Learned

Separating the project into two contracts worked very well. Retaining a native vegetation contractor to complete the vegetation establishment, monitoring, and management over three growing seasons was instrumental to the success of this project which relied heavily on vegetative techniques. Ultimately this specialization lead to reduced cost (project significantly under budget), more direct control of the vegetation establishment process, and better performance and results.

Working directly with up to 70 property owners proved to be challenging and time-consuming for city staff, but was critical to the success of the project. Temporary access and construction permits were needed from all owners in order to complete the project. In addition, staff needed the consent and support of owners in order to select techniques and establish native buffers along the stream (in most cases converting manicured turf to native vegetation). Only two owners denied access and one opted back in after the project began. This project was very different than projects located mostly or entirely within a park or public property.

VII. Maintenance

The maintenance of this project depends on the location of the restoration technique. Improvements located on private property are the responsibility of each property owner. Letters were sent to owners at the end of the project providing information on how to maintain their buffers and streambanks.

Properties owned and managed by the City are the City's responsibility to maintain. The City's routine maintenance includes annual inspection and inspection following large precipitation events. It also includes ongoing monitoring and integrated plant management by a native vegetation contractor. It is anticipated this annual contract will continue into the foreseeable future. If repair of any streambanks in public areas is required in the future, the City will assess the situation and determine the appropriate technique or solution, and will involve the BCWMC if necessary.

VIII. Closing Notes

It should be noted that data from the Watershed Outlet Monitoring Program (WOMP) monitoring station at the downstream end of Bassett Creek indicate that the water quality of the creek has significantly improved over between 2001 and 2012. Aside from chloride levels, pollutants including nutrients and sediment are steadily decreasing. This is can be attributed to projects such as this which reduce erosion along the creek and improve streambank stability. More information is included in a Met Council report from 2014.

Item 5F.
BCWMC 3-21-19
Full Documentation Online

city of golden valley
7800 Golden Valley Road
Golden Valley, MN 55427

March 5, 2019

Laura Jester, Administrator
Bassett Creek Watershed Management Commission
16145 Hillcrest Lane
Eden Prairie, MN 55346

Subject: 2015 Bassett Creek Main Stem Restoration Project (City Project No. 13-25 and 16-05)
BCWMC Project #CR2015
4th (Final) Request for Reimbursement

Dear Ms. Jester:

Per the terms of the Cooperative Agreement for the 2015 Bassett Creek Main Stem Restoration Project, the City of Golden Valley is requesting reimbursement for expenses incurred for the native vegetation establishment phase of the creek restoration project. The amount requested is **$114,601.05.**

Enclosed please find the following supporting documentation:

- Applied Ecological Services voucher numbers 1 through 10
- Finance & Commerce Ad

Following is a summary of all reimbursement requests for this project:

Reimbursement 1 (July 2015)	$ 61,993.25 PAID
Reimbursement 2 (December 2016)	$ 841,405.15 PAID
Reimbursement 3 (August 2017)	$ 57,299.09 PAID
Reimbursement 4 (March 2019)	$ 114,601.05
Total	$1,075,298.54

This is the final reimbursement request for the project.

If you have any questions regarding this submission, please contact me at 763-593-8084.

Sincerely,

Eric Eckman
Project Manager

Enclosures

C: Marc Nevinski, Physical Development Director
Jeff Oliver, PE, City Engineer
Sue Virnig, Finance Director

Item 5G.
BCWMC 3-21-19

FIRST AMENDMENT TO COOPERATIVE AGREEMENT

This First Amendment to Cooperative Agreement (the "Amendment") is made this ___ day of _____, 2019 by and between the Bassett Creek Watershed Management Commission, a joint powers watershed management organization (the "Commission"), and the city of Crystal, Minnesota, a Minnesota municipal corporation (the "City").

WHEREAS, the Commission and the City previously entered into that certain Cooperative Agreement, dated September 21, 2017 (the "Contract"); and

WHEREAS, the Contract provided terms and conditions related to the City's undertaking of the dredging of Winnetka Pond (the "Project") and reimbursement by the Commission for the Project; and

WHEREAS, during construction of the Project, contaminated sediment was discovered in Winnetka Pond and due to the need for its removal, the Project costs increased and are now in excess of the $1,000,000 that was originally anticipated; and

WHEREAS, pursuant to the City's ability to contract for removal of the sediment and the aforementioned cost increase associated therewith, the parties wish to modify the terms of the Contract as provided in this Amendment.

NOW, THEREFORE, on the basis of the premises and mutual covenants hereinafter set forth, the parties hereby agree to the following:

I. Section 5 of the Contract is hereby amended by adding the double-underlined language and deleting the ~~stricken~~ language as follows:

5. Commission Reimbursement. The Commission shall reimburse the City for the Project in an amount not to exceed $1,123,351.00, less any Commission expenses. Of the total amount to be reimbursed, $9,050.00 shall come from the City's portion of available Commission Channel Maintenance Funds and $114,301.00 shall come from the Commission's Closed Project Account. For the remainder, ~~T~~the Commission will use its best efforts to secure payment from the County in accordance with Minnesota Statutes, section 103B.251 in the amount of One Million Dollars ($1,000,000) by tax levy in 2017 for collection in 2018. ~~The total reimbursement will not exceed One Million Dollars ($1,000,000), less Commission expenses.~~

Out-of-pocket costs related to the Project, incurred and paid by the Commission including, but not limited to, feasibility studies, publication of notices, securing County tax levy, preparation of contracts, review of engineering designs, review of proposed contract documents, grant application development, grant administration, administration of this contract, and up to a 2.5% administrative charge shall be repaid from the amount specified above from funds received in the tax settlement from Hennepin County. All such funds in excess of such expenses are available for reimbursement to the City for costs incurred by the City in the design and construction of the Project. Reimbursement to the City will be made as soon as funds are available,

provided a request for payment has been received from the City that contains such detailed information as may be requested by the Commission to substantiate costs and expenses. The City shall complete and submit with its final reimbursement request to the Commission a final report on the Project using the Commission's final reporting form and providing such other information as may be requested by the Commission.

II. Section 6 of the Contract is hereby amended by deleting the ~~stricken~~ language as follows:

6. Limits on Reimbursement. Reimbursement to the City will not exceed the amount specified above ~~from the amount received from the County for the Project~~, less any amounts retained by the Commission for Commission expenses. Reimbursement will not be increased by grants or other revenues received by the Commission for the Project. Reimbursement will not exceed the costs and expenses incurred by the City for the Project, less any amounts the City receives for the Project as grants from other sources. All costs of the Project incurred by the City in excess of such reimbursement, shall be borne by the City or secured by the City from other sources.

III. All other terms and conditions of the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this Amendment to be executed by their duly authorized officers on behalf of the parties as of the day and date first above written.

BASSETT CREEK WATERSHED
MANAGEMENT COMMISSION

By: _____
Its Chair

By: _____
Its Secretary

CITY OF CRYSTAL

By: _____
Its Mayor

By: _____
Its Manager

Item 5G.
BCWMC 3-21-19

FIRST AMENDMENT TO COOPERATIVE AGREEMENT

This First Amendment to Cooperative Agreement (the "Amendment") is made this ___ day of _____, 2019 by and between the Bassett Creek Watershed Management Commission, a joint powers watershed management organization (the "Commission"), and the city of Crystal, Minnesota, a Minnesota municipal corporation (the "City").

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Out-of-pocket costs related to the Project, incurred and paid by the Commission including, but not limited to, feasibility studies, publication of notices, securing County tax levy, preparation of contracts, review of engineering designs, review of proposed contract documents, grant application development, grant administration, administration of this contract, and up to a 2.5% administrative charge shall be repaid from the amount specified above from funds received in the tax settlement from Hennepin County. All such funds in excess of such expenses are available for reimbursement to the City for costs incurred by the City in the design and construction of the Project. Reimbursement to the City will be made as soon as funds are available,

provided a request for payment has been received from the City that contains such detailed information as may be requested by the Commission to substantiate costs and expenses. The City shall complete and submit with its final reimbursement request to the Commission a final report on the Project using the Commission's final reporting form and providing such other information as may be requested by the Commission.

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III. All other terms and conditions of the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this Amendment to be executed by their duly authorized officers on behalf of the parties as of the day and date first above written.

BASSETT CREEK WATERSHED
MANAGEMENT COMMISSION

By: _____
Its Chair

By: _____
Its Secretary

CITY OF CRYSTAL

By: _____
Its Mayor

By: _____
Its Manager

Item 5H.
BCWMC 3-21-19

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION
RESOLUTION NO. 19-08

A RESOLUTION APPROVING THE SURFACE WATER
MANAGEMENT PLAN PREPARED BY THE CITY OF ST. LOUIS PARK

WHEREAS, the Bassett Creek Watershed Management Commission ("Commission") is a joint powers watershed management organization established in accordance with Minnesota Statutes, Section 103B.211; and

WHEREAS, the Commission has prepared a water management plan, which has been reviewed by all appropriate state and local agencies and has been approved by the Board of Water and Soil Resources; and

WHEREAS, the Commission's water management plan and Minnesota Statutes require that local water management plans be prepared in accordance with Minnesota Statutes, Section 103B.235 and Minnesota Rules, Chapter 8410; and

WHEREAS, the City of St. Louis Park ("City") has prepared and submitted to the Commission the City's local surface water management plan; and

WHEREAS, Minnesota Statutes, Section 103B.235, subdivision 3 authorizes the Commission to review and approve local water management plans and to take other actions necessary to assure that the local plan is in conformance with the Commission's plan and the standards set forth therein; and

WHEREAS, the Commission reviewed the City's plan, considered the comments provided by the Metropolitan Council regarding the plan, and has determined the plan was prepared in accordance with the requirements of Minnesota Statutes, Section 103B.235 and Minnesota Rules, Parts 8410.0160 and 8410.0170, it contains the requirements for a local plan, and is consistent with the Commission's water management plan.

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

1. The St. Louis Park Surface Water Management Plan dated March 2019 is hereby approved with the understanding that the final plan may include changes required to respond to comments from other watersheds, but conditioned on those changes not revising the provisions applicable within the Bassett Creek Watershed.
2. In accordance with Minnesota Statutes, Section 103B.235, subdivision 4, the City shall adopt and implement its local plan within 120 days of this approval and amend its official controls in accordance with the plan within 180 days.
3. Pursuant to Minnesota Statutes, Section 103B.235, subdivision 5, and to be consistent with the Commission's water management plan, the City shall submit any proposed amendments to its local plan to the Commission for review and approval prior to adoption.

Adopted by the Board of Commission of the Bassett Creek Watershed Management Commission the 21st day of March, 2019.

_____
Chair

ATTEST:

_____
Secretary

Item 5I.
BCWMC 3-21-19

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

A RESOLUTION OF APPRECIATION FOR THE SERVICES OF JOHN BYRNES
TO THE BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

WHEREAS, the Bassett Creek Watershed Management Commission (the "Commission") is a joint powers organization formed by the cities of Crystal, Golden Valley, Medicine Lake, Minneapolis, Minnetonka, New Hope, Plymouth, Robbinsdale and St. Louis Park; and

WHEREAS, the Commission serves as the duly constituted watershed management organization for the Bassett Creek watershed pursuant to the Metropolitan Surface Water Management Act); and

WHEREAS, under the Act and the Commission's joint powers agreement the Commission is charged with responsibility for the management of storm water to protect persons and property from flooding and to protect and preserve the water quality of lakes, streams and wetlands of the Bassett Creek Watershed and downstream receiving waters; and

WHEREAS, John Byrnes served as a representative from the City of Plymouth for over two years from February 2017 to March 2019; and

WHEREAS, John actively served on committees including the Education Committee from 2017 – 2019 including chairing the Education Committee in 2018; the Aquatic Plant Management/Aquatic Invasive Species Committee in 2017; and the Budget Committee in 2018; and

WHEREAS, John was a continually engaged participant in Commission discussions and decisions; and

WHEREAS, John gave generously of his time and talents, including representing the Commission and engaging residents at community events, without compensation, to protect and improve the environment and to serve the public with integrity, vision, and respect for others.

NOW, THEREFORE, BE IT RESOLVED that the Board of Commissioners of the Bassett Creek Watershed Management Commission, its member cities, and the public hereby express its sincere and grateful appreciation to John Byrnes for his distinguished service to the public.

Adopted by the Board of Commissioners of the Bassett Creek Watershed Management Commission this 21st day of March, 2019.

_____
Chair

Item 6A.
BCWMC 3-21-19

Bassett Creek Watershed Management Commission

MEMO

Date: March 13, 2019
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. Project website: http://www.bassettcreekwmo.org/index.php?cID=433 .

2020 Bryn Mawr Meadows Water Quality Improvement Project (BC-5), Minneapolis (No change since January): 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. A draft feasibility study was presented at the October meeting. At direction of the Commission, staff discussed Penn Pond function and maintenance with MnDOT to better understand treatment options. The final feasibility study was approved at the January 2019 Commission meeting. 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: 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. A draft feasibility study is expected to be presented at the April Commission meeting. 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 Nov 2018): 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. Also 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 work with the Commission Engineer and city staff to develop a BCWMC educational sign for inside the nature center. The draft sign was presented at the October meeting and will be finalized soon. The Sun Sailor printed an article on the project in October. Project website: http://www.bassettcreekwmo.org/projects/all-projects/westwood-lake-water-quality-improvement-project

2018 Bassett Creek Park Pond Phase I Dredging Project: Winnetka Pond, Crystal (BCP-2)(See Item 5G): The final feasibility study for this project was approved at the May 2017 meeting and is available on the project page online at http://www.bassettcreekwmo.org/index.php?cID=403. At the September 2017 meeting, the Commission held a public hearing on the project and adopted a resolution officially ordering the project, certifying costs to Hennepin County, and entering an agreement with the City of Crystal for design and construction. Hennepin County approved the 2018 final levy request at their meeting in November 2017. The City of Crystal hired Barr Engineering to design the project. At their meeting in April, the Commission approved 50% design plans. A public open house on the project was held May 24th where four residents asked questions, provided comments, and expressed support. 90% design plans were approved at the June 2018 meeting. An Environmental Assessment Worksheet was recently approved and a construction company was awarded the contract. A pre-construction meeting was held December 14th and construction began in January. A large area of contamination was discovered during excavation in February 2019. At their meeting February 21, 2019 the Commission approved additional funding for this project in order to properly dispose of the contamination and continue building the project as designed.

2017 Plymouth Creek Restoration Project, Annapolis Lane to 2,500 feet Upstream (2017CR-P) (No change since Feb): All project documents including the feasibility study and 90% design plans are available online at http://www.bassettcreekwmo.org/index.php?cID=284. The BCWMC executed agreements with the BWSR for a $400,000 Clean Water Fund grant and with Hennepin County for a $50,000 Opportunity Grant and a subgrant agreement with the City was executed. Project design was completed by the city's contractor, Wenck Associates, with 60% and 90% design plans approved by the Commission at the April and August 2017 meetings, respectively. Plymouth City Council awarded a construction contract in early December 2017 and construction got underway on December 11, 2017. Streambank restoration work is complete in all three reaches. Vegetation is currently being established. Requests for reimbursement to the city were approved at the June and July BCWMC meetings. I recently submitted a Clean Water Fund grant interim report.

2017 Main Stem Bassett Creek Streambank Erosion Repair Project (2017CR-M) (No change since June): 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, 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. Bidding for construction is complete and a pre-construction meeting was recently held. Construction was to begin this summer but will be delayed until winter/spring 2019 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 the preference for Pioneer Paper (a significant landowner and access grantor) for a spring/summer construction window. The cultural and historical survey fieldwork is complete and a final report is expected in mid-December.

2015 Main Stem Restoration Project 10th Avenue to Duluth Street, Golden Valley (2015CR) (Stem Items 5E and 5F): The restoration project was constructed in two phases, each under separate contract. Phase one included stream bank shaping, placement of field stone rock and 12-inch bio-logs, and repair of storm sewer outlets. The first phase of the project began in November 2015 and was finished in June 2016. Turf establishment and minor restoration repairs in Phase 1 were accepted in late October 2016. Repairs to some areas where flooding impacted rocks or biologs were completed and accepted in mid-December 2016.

Phase 2 of the project includes the establishment of native vegetation along the stream, including grasses, wildflowers, shrubs, live stakes and fascines, and cordgrass plugs. Applied Ecological Services (AES) installed live stakes and fascines planted trees and shrubs along the restoration project. AES continued to monitor and maintain the native vegetation through 2018. At this meeting the Commission will review the final project report and consider the city's final reimbursement request.

2014 Schaper Pond Diversion Project, Golden Valley (SL-3) (No change since October 2018): 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.

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.

2013 Four Season Area Water Quality Project/Agora Development (NL-2) (No change since May 2018): 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. Staff will work with the City of Plymouth to determine another possible option for treatment in this area.

Other Work

CIP Project Work and Technical Assistance

- Attended Jevne Park Project public open house
- Reviewed and commented on draft Crane Lake Feasibility Study
- Assisted with drafting final report for Main Stem Restoration Project and reviewed final invoices
- Prepared for TAC meeting including gathering, reviewing, and revising potential CIP fact sheets, preparing 5-year CIP list and costs, reviewing Bassett Creek Park Pond Dredging Feasibility Study
- Drafted and submitted final report for Met Council Stormwater Grant for Harrison Neighborhood Project

Administration and Education

- Reviewed draft March education press release
- Developed and submitted 319 grant application
- Coordinated with City of Minneapolis and Commission Legal Counsel on scope and agreements related to Bassett Creek Valley Study
- Developed and distributed email of upcoming events and meetings for Commissioners
- Secured venue for 50th anniversary event
- Prepared draft 2019 Education Budget; prepared for and attended Education Committee meeting
- Coordinated with Dawn Pape re: 2019 educational activities
- Updated grant tracking spreadsheet
- Met with financial auditors to answer grant-related questions
- Attended West Metro Water Alliance meeting and Hennepin County Natural Resources Partnership meeting