Bassett Creek Watershed Management Commission

Regular Meeting
Thursday April 18, 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 – March 21, 2019 Commission Meeting
   - B. Acceptance of April 2019 Financial Report
   - C. Approval of Payment of Invoices
     - i. Keystone Waters, LLC – March 2019 Administrative Services
     - ii. Keystone Waters, LLC – March 2019 Printing Expenses
     - iii. Barr Engineering – March 2019 Engineering Services
     - iv. Triple D Espresso – April 2019 Meeting Refreshments
     - v. Wenck – March 2019 WOMP Monitoring
     - vi. Lawn Chair Gardener – March 2019 Administrative and Educational Services
     - vii. Kennedy & Graven – February 2019 Legal Services
     - viii. Lawn Chair Gardener – March 2019 Administrative Expenses
     - ix. Prairie Moon Nursery – Native Seed Packets
   - D. Approval to Reimburse Commissioner Carlson for Land Development Conference
   - E. Approval of Agreement with Hennepin County for 2019 River Watch Program
   - F. Approval of Contract with Lake Restoration, Inc. for Curly-leaf Pondweed Treatment
   - G. Approval not to waive monetary limits on municipal tort liability
   - H. Approval of Agreement with Met Council for 2019 Citizen Assisted Monitoring Program
   - I. Approval of Marsh Run Apartments Project, Minnetonka

5. **BUSINESS**
   - A. Consider Approval of DeCola Ponds B & C Improvement Project 90% Design Plans (30 min)
   - B. Review Draft Feasibility Study for Jevne Park Water Quality Improvement Project (30 min)
   - C. Update on 319 Grant for Sweeney Lake Alum Treatment and Carp Management (10 min)
   - D. Review Technical Advisory Committee Recommendations for 5-year CIP (20 minutes)
     - i. TAC Memo
     - ii. Proposed 2021 – 2025 CIP
     - iii. Scoring Matrix
     - iv. Project Fact Sheets
   - E. Consider Directing TAC to Provide Guidance on Reviewing Proprietary Stormwater Treatment Devices (15 min)

F. Discuss Report on Winter Maintenance Classes and Recommendations from Fortin Consulting (15 min)
G. Discuss Plans for 50th Anniversary Event (15 min)

6. COMMUNICATIONS (10 minutes)

A. Administrator's Report
B. Chair
C. Commissioners
D. TAC Members
E. Committees
   i. Budget Committee Meeting April 22
F. Legal Counsel
G. Engineer

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. Met Council Water Resources Overview with Quotes from BCWMC
E. 2018 River Watch Report
F. River Watch Interactive Map

8. ADJOURNMENT

Upcoming Meetings & Events

- BCWMC Budget Committee Meeting: Monday April 22, 11:00 – 12:30 p.m., Golden Valley City Hall
- 2019 Water Summit: May 9th and 10th, Science Museum of Minnesota, St. Paul (https://freshwater.org/2019-water-summit/)
- AMLAC Annual Meeting: May 15th, 7:00 – 8:30 p.m. Location TBD (watch BCWMC online calendar)
- Bassett Creek Watershed Management Commission Meeting: Thursday May 16th, 8:30 a.m., Golden Valley City Hall
- 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 4/18/19 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 – March 21, 2019 Commission Meeting- **ACTION ITEM with attachment**
   B. Acceptance of April 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 – March 2019 Administrative Services
      ii. Keystone Waters, LLC – March 2019 Printing Expenses
      iii. Barr Engineering – March 2019 Engineering Services
      iv. Triple D Espresso – April 2019 Meeting Refreshments
      v. Wenck – March 2019 WOMP Monitoring
      vi. Lawn Chair Gardener – March 2019 Administrative and Educational Services
      vii. Kennedy & Graven – February 2019 Legal Services
      viii. Lawn Chair Gardener – March 2019 Administrative Expenses
      ix. Prairie Moon Nursery – Native Seed Packets

   D. Approval to Reimburse Commissioner Carlson for Land Development Conference – **ACTION ITEM no attachment** – *The 2019 Education Budget includes $1,200 for commissioner training and registration. Commissioner Carlson requests reimbursement of $99 for registration costs for the May 3rd Land Development Conference where BCWMC will be included on a panel discussion about watershed requirements during development and redevelopment. Staff recommends approval.*

   E. Approval of Agreement with Hennepin County for 2019 River Watch Program – **ACTION ITEM with attachment** – *Each year the Commission participates in the River Watch Program that's coordinated through Hennepin County. Through this program, high school and middle school students visit stream sites to collect data (typically macroinvertebrates) in order to assess the stream's health. You can read about last year's results in the annual report and view the interactive map in Items 7E and 7F below. Staff recommends approval.*

   F. Approval of Contract with Lake Restoration, Inc. for Curly-leaf Pondweed Treatment – **ACTION ITEM with attachment** – *In 2017 and 2018, the Commission coordinated the treatment of curly-leaf pondweed on Medicine Lake including receiving a permit, hiring a contractor, and partnering with Three Rivers Park District on vegetation surveys and partial payment (17%) of the treatment. Staff received quotes from two herbicide contractors this year and recommends approving the contract with Lake Restoration, Inc.*

   G. Approval not to waive monetary limits on municipal tort liability – **ACTION ITEM with attachment** – *Commission Legal Counsel Anderson recommends the Commission take action to not waive monetary limits on municipal tort liability. This action is taken by the Commission annually.*

H. Approval of Agreement with Met Council for 2019 Citizen Assisted Monitoring Program – **ACTION ITEM with attachment** – *Each year the Commission has an agreement with the Met Council for the CAMP which uses volunteers to collect water samples and data on various lakes. This year the following lakes will be monitored by volunteers through the program: Sweeney (2 sites), Twin, Lost, Parkers, Medicine (2 sites), Northwood, and Westwood. The Met Council supplies the equipment, training, program coordination, and reporting. The Commission coordinates volunteers, maintains monitoring kits, and pays for sample analyses. Funding for CAMP is included in your education and outreach budget line. Staff recommends approval.*

I. Approval of Marsh Run Apartments Project, Minnetonka – **ACTION ITEM with attachment** - *The proposed project includes redevelopment from a commercial office park to a 175-unit multifamily residential housing facility resulting in 2.47 acres of grading, 1.87 acres of new and fully reconstructed impervious surfaces, including 0.53 of new acres of impervious surfaces. Stormwater management is proposed through alternative treatment devices. The Commission Engineer recommends approval with multiple conditions outlined in the attached memo.*

5. BUSINESS

A. Consider Approval of DeCola Ponds B & C Improvement Project 90% Design Plans (30 min) – **ACTION ITEM with attachments (complete plan set online)** – *At your meeting in February, the 50% plans for this project were approved. Staff with Golden Valley and Barr Engineering (the city's consultant for this project) will present the 90% plans and will review input received from a public open house on April 10th.*

B. Review Draft Feasibility Study for Jevne Park Water Quality Improvement Project (30 min) – **DISCUSSION or ACTION ITEM with attachments (appendices and complete document online)** – *In July 2018, the Commission approved a proposal from the Commission Engineer to study the feasibility of water quality improvements in Jevne Park in the city of Medicine Lake. The draft feasibility study was developed by the Commission Engineer with input and review from the city's team of representatives, the city council, and the public. The Commission Engineer and the city's team recommend implementing Option 1. The Commission should consider approval of the study and selection of an option, or request that revisions are made and brought to the May meeting.*

C. Update on 319 Grant for Sweeney Lake Alum Treatment and Carp Management (10 min) – **INFORMATION ITEM no attachments** – *Good news to report! The Federal 319 grant application was approved and the MPCA is recommending that the EPA fund the project. Next steps include completing a Nine Element Review by April 17th for review and approval by EPA, executing grant agreements, and discussing the project and expected future lake conditions with lake residents. The local match of $220,000 is included in 2020/2021 in the 5-year CIP in Item 5D below. The grant funding would be available next spring and needs to be spent by August 2023.*

D. Review Technical Advisory Committee Recommendations for 5-year CIP (20 min) – **ACTION ITEM with attachments** - *The BCWMC TAC met on March 8 and 26 to discuss possible projects to include in the 5-year Capital Improvement Program (CIP) and to score projects using the new CIP Project Scoring Matrix. A recap of their discussion is presented in the memo, their recommended 2021 – 2025 CIP list, results of the scoring, and project fact sheets (online only) are included here. The Commission should consider approving their recommendations or request more information or revisions for a future meeting.*
   i. TAC Memo
   ii. Proposed 2021 – 2025 CIP
   iii. Scoring Matrix
   iv. Project Fact Sheets

E. Consider Directing TAC to Provide Guidance on Reviewing Proprietary Stormwater Treatment Devices (15 min) – **ACTION ITEM with attachment** – *The BCWMC Engineer has seen an increase in the use of proprietary stormwater treatment devices for development and redevelopment projects. There are not widely accepted levels of treatment or pollutant removal efficiencies associated with these devices. While most proprietary devices undergo third party testing, not all testing is the same and not all devices receive the same level of approval from third party testing organizations. The BCWMC Engineer requests that the Commission direct the TAC to provide guidance for BCWMC review and acceptance of proprietary stormwater treatment devices.*

F. Discuss Report on Winter Maintenance Classes and Recommendations from Fortin Consulting (15 min) – **DISCUSSION ITEM with attachment** – *Commissioner Harwell requested that the Commission review and discuss the recommendations resulting from 39 Winter Maintenance Trainings performed by Fortin Consulting.*

G. Discuss Plans for 50th Anniversary Event (15 min) – **DISCUSSION ITEM no attachment** – *I will update you on progress made and seek guidance in some areas of the planning.*

6. COMMUNICATIONS (10 minutes)

A. Administrator's Report – **INFORMATION ITEM with attachment**
B. Chair
C. Commissioners
D. TAC Members
E. Committees
   i. Budget Committee meeting April 22nd
F. Legal Counsel
G. Engineer

7. INFORMATION ONLY (Information online only)

A. Administrative Calendar
B. CIP Project Updates http://www.bassettcreekwmo.org/projects
C. Grant Tracking Summary and Spreadsheet
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- Bassett Creek Watershed 50th Anniversary Tour and Celebration Event: Thursday June 27th, Brookview Community Center, Golden Valley

Item 4A.
BCWMC 4-18-19

Bassett Creek Watershed Management Commission

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

1. CALL TO ORDER and ROLL CALL

On Thursday, March 21, 2019 at 8:32 a.m. in the Council Conference Room at Golden Valley City Hall (7800 Golden Valley Rd.), Vice Chair Prom 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	*Absent*	*Absent*	Eric Eckman and Jeff Oliver
Medicine Lake	Clint Carlson	Gary Holter	*Absent*
Minneapolis	Michael Welch	Vacant Position	Liz Stout
Minnetonka	*Absent*	Bill Monk	Sarah Schweiger, Will Manchester
New Hope	*Absent*	Pat Crough	Megan Hedstrom
Plymouth	Jim Prom	*Absent*	Vanessa Strong
Robbinsdale	Michael Scanlan	*Absent*	Marta Roser
St. Louis Park	Jim de Lambert	*Absent*	Erick Francis
Administrator	Laura Jester, Keystone Waters		
Engineer	Karen Chandler, Barr Engineering		
Recorder	Dawn Pape, Lawn Chair Gardener Creative Services		
Legal Counsel	Dave Anderson, Kennedy & Graven		
Presenters/ Guests/Public	Meg Rattei (Barr), Jake Newhall (WSB), Evan Bisbee (SWLRT), Catherine Cesnik (Plymouth resident)		

2. CITIZEN FORUM ON NON-AGENDA ITEMS

No citizens present. Introductions were made around the table. Chair Prom stated he thought it was valuable to have so much expertise in the room.

3. APPROVAL OF AGENDA

MOTION: Commissioner Welch moved to approve the agenda. Commissioner Carlson seconded the motion. Upon a vote, the motion carried 8-0, with the City of Golden Valley absent from the vote.

4. CONSENT AGENDA

Commissioner Welch requested to pull item 4F (approval of Southwest Light Rail Transit Project) off of the consent agenda and move to 5A.

MOTION: Commissioner Scanlan moved to approve the consent agenda as amended. Commissioner de Lambert seconded the motion. Upon a vote, the motion carried 8-0, with the City of Golden Valley absent from the vote.

The following items were approved as part of the consent agenda: February 21, 2019 Commission meeting minutes, acceptance of the March 2019 financial report, payment of invoices, approval to reimburse Commissioner Scanlan for 2019 Water Summit, approval of Golden Valley 2019 Pavement Management Program Project, approval to appoint Golden Valley Staff Drew Chirpich to Education Committee, approval to execute agreement with Hennepin County for AIS Prevention Grant.

The general and construction account balances reported in the March 2019 Financial Report are as follows:

Checking Account Balance	$ 792,119.31
TOTAL GENERAL FUND BALANCE	$ 792,119.31
TOTAL CASH & INVESTMENTS ON-HAND (03/13/19)	$ 3,613,385.47
CIP Projects Levied – Budget Remaining	$ (4,682,820.63)
Closed Projects Remaining Balance	$366,564.84
2012-2017 Anticipated Tax Levy Revenue	$7,045.36
2018 Anticipated Tax Levy Revenue	$10,316.57
Anticipated Closed Project Balance	$383,926.77

5. BUSINESS

A. Approval of Southwest Light Rail Transit Project (4F of Consent Agenda)

Commissioner Welch asked why this was on the agenda since the engineer's recommendations indicate that a thorough review hasn't been completed. Commission Engineer Chandler explained that it is a complex project and that it's difficult to know what aspects changed from the last time the project was approved. She also noted that additional information was sent at the last minute regarding the storm water management plans. She noted that overall the project plans look good but she felt the recommendations needed the caveat that some additional review is still needed. She reported staff is currently in the middle of reviewing it and are feeling comfortable with the plans.

Commissioners Welch pointed out that this is a big public works project and that this project may impact the Commission's Bryn Mawr Water Quality Improvement Project. Engineer Chandler agreed that more stormwater will be directed to Penn Ponds. Alternate Commissioner Monk asked about the timeline for review and approval. Mr. Bisbee replied that construction is starting soon. Commissioner Welch indicated he didn't see any reason to hold up approval if the review by the Commission engineers continues to be routine.

MOTION: Commissioner Welch moved to approve Southwest Light Rail Transit Project with acknowledgement that conditions must be met. Commissioner Scanlan seconded the motion.

Discussion: Commission Attorney Anderson summarized that the Commission would be approving the project with conditions. He noted that those conditions should be met or the Commission will have to take affirmative action.

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

B. Consider Approval of Crane Lake Feasibility Study

Administrator Jester reminded the Commission that in September, the Commission reviewed and discussed the draft feasibility study for this project, which is to be constructed in conjunction with the Ridgedale Drive Reconstruction Project in Minnetonka. Ms. Schweiger, from the City of Minnetonka, told the Commission that the city appreciated the partnership and she outlined the project budget and the city's proposed financial contribution.

Jake Newhall with WSB reviewed the three options proposed in the feasibility study, noting that that they focus on removing total phosphorus and total suspended solids. He noted that much of the area is already receiving stormwater treatment, except for 13.3 acres that currently flow directly into Crane Lake.

[Commissioner Carlson departs, Alternate Commissioner Holter becomes Medicine Lake voting member.]

Mr. Newhall reviewed the following options:

- 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. This option also includes some education opportunity in the new park.
- 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. This option also includes a better educational component in the new park.

Mr. Newhall reported that the city is recommending option 3. He noted the Ridgedale Drive Reconstruction Project is a 2-year construction project and that the park and BMP construction would be in early 2020.

Mr. Newhall also reported that the city has contacted Met Council (MCES) about using sanitary sewer for disposal of chloride contaminated effluent. He reported that MCES established a chlorides team to review all sources of chlorides in the sewer system and present findings to their team in the spring of 2019. He noted that for this project, the city is no longer seeking the ability to use the sanitary sewer system for chloride contaminated effluent, but that it's good to see the Met Council is taking a close look at the situation.

Commissioner Monk stated that the Commission should stay informed of what the MCES chloride team decides. He also had question about pipe size and size of storm this system will be able to handle. Mr. Newhall replied that just under first half inch of rain can be stored in the underground tank.

Commissioner Scanlan noted concern about the prospect of putting chloride-laden stormwater into the sanitary sewer and wondered about the precedence it could set. Commissioner Welch pointed out that Crane Lake is impaired chlorides, not nutrients and he wondered how this project fits into the overall CIP program.

Administrator Jester pointed out that Crane Lake isn't impaired for nutrients but this is a good opportunity to be proactive and to capture and treat over 13 acres of currently untreated runoff.

Alternate Commissioner Monk said we should try to improve even unimpaired waters when an opportunity arises and he noted this is a good innovative project. He wondered, instead, how the cost split between the city and the Commission was calculated and wondered about the timing needs of the city.

Mr. Manchester, from the City of Minnetonka, explained that the project is not under a time constraint right now. Their city is spending a total of $12 million on the Ridgedale Drive Reconstruction Project and wanted to partner with BCWMC to provide stormwater treatment and education. Option 1 includes land acquisition, but that's too expensive. Option 3 has a better educational component. Chair Prom pointed out that the question of who pays which percentage is a larger discussion.

MOTION: Alternate Commissioner Monk moved to approve implementing Option 3 of the Crane Lake Improvement Project Feasibility Study with further analysis on the cost share with the city. Commissioner de Lambert seconded the motion.

Discussion: Administrator Jester and Engineer Chandler reported that the proposed cost sharing in this instance is in line with the Watershed Plan and current fiscal policies. They noted that typically, the Commission pays for 100% of project costs and cities have the ability to provide funding to improve or expand the project. Administrator Jester was asked to send the fiscal policies related to CIP funding to commissioners.

VOTE: Upon a vote the motion failed with Alternate Commissioner Crough voting aye and all others voting nay.

MOTION: Commissioner Welch moved to approve the Commission Engineer's recommendations and to move forward in implementing Option 3 of the Crane Lake Improvement Project Feasibility Study. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 8-0, with the City of Golden Valley absent from the vote.

C. Receive Presentation on 2018 Lake Monitoring Results

Commission Engineer Chandler introduced Meg Rattei with Barr Engineering. Ms. Rattei proceeded with a presentation on the monitoring results from Westwood Lake and Parkers Lake in 2018. She reported that Parkers Lake has been impaired for chlorides since 2014 and she noted that imperviousness in the lake's watershed was found to be related to chloride levels. She reported that in 2018, every sampling date had chloride levels above the standard of 230 mg/l and that the northern sub-watershed had the highest chloride loading. Parkers Lake meets standards for total phosphorus and chlorophyll a. There are no significant changes in transparency. The lake plant index of biological integrity (IBI), which measures the numbers and quality of species, will be used in the future to assessment for biological impairments. Parkers Lake plant quality was below the floristic quality standard in August. Ms. Rattei also reported the lake is suitable for most of the six most concerning AIS.

Ms. Rattei then reported on monitoring on Westwood Lake. She noted it is a shallow lake so it has different water quality standards than Parkers Lake, which is a deep lake. In short, the chlorides are very low, the total phosphorus and chlorophyll a are excellent and trends are stable. Secchi disc transparency is good, and plant IBI is very good. Of note is the bearded stonewort – a new plant that has greatly expanded and displaced other species. This is a new species to MN and it was found in 34% of the samples. Westwood Lake is suitable for rusty crayfish and faucet snail. The recommendation is to further investigate the bearded stonewort situation to determine if this plant represents a potential problem in the lake.

There was some discussion about whether BCWMC CIP projects have positively impacted the lake. Ms. Strong, from the City of Plymouth, noted that chloride reduction measures in the northern subwatershed of Parkers Lake are difficult to implement as the area is largely multifamily and commercial properties with much impervious surface. Mr. Francis noted that since the nature center surrounds Westwood Lake and doesn't allow outside watercraft, AIS may be less of a threat there.

D. Consider Approval of Resolution 19-07 in Support of Chloride Limited Liability Legislation

Administrator Jester reported that HF1502 and SF1667 are working their way through the legislature with the goal of limiting the liability of those that apply chloride deicers. She noted it might be appropriate for the Commission to pass a resolution of support.

Chair Prom asked for clarification on who would actually see limited liability if the legislation passes. Commissioner Welch responded that property owners are defined as people who hire certified contractors.

MOTION: Commissioner Scanlan moved to approve Resolution 19-07 in Support of Chloride Limited Liability Legislation. Commissioner Welch seconded the motion. Upon a vote, the motion carried 8-0, with the City of Golden Valley absent from the vote.

E. Consider Recommendations from Education Committee

i. 2019 Education Budget

Administrator Jester explained that the Education Committee met on March 7th and that their proposed budget is included in the packet. Commissioner Scanlan asked how this budget compared with last year's budget. Administrator Jester noted that it is similar with the difference being the 50th anniversary event with $7,000 budgeted for tour, event, and commemorative document.

MOTION: Commissioner Scanlan moved to approve the 2019 education budget as presented. Commissioner de Lambert seconded the motion. Upon a vote, the motion carried 8-0, with the City of Golden Valley absent from the vote.

ii. Contract with Lawn Chair Gardener

MOTION: Commissioner de Lambert moved to approve the contract with Lawn Chair Gardener. Alt. Commissioner Crough seconded the motion. Upon a vote, the motion carried 8-0, with the City of Golden Valley absent from the vote.

iii. Update on 50th Anniversary Event Planning

Administrator Jester updated the Commission that the event will be held on June 27. She noted a "save the date" email would be sent to a long list of invitees soon. She also noted she is working to secure a keynote speaker.

F. Consider Approval of Final Report for Bassett Creek Main Stem Restoration Project (2015CR)

Mr. Eckman, from the City of Golden Valley, gave an overview of the project outcomes and final report. He noted that the report shows that monitoring at the Met Council WOMP station at the outlet of the watershed shows a significant reduction in total suspended solids and total phosphorus indicating that projects like these are working to improve water quality.

[Commissioner de Lambert departs.]

Mr. Eckman noted that 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. He reported that it worked well to have a separate contractor to work directly with native plant establishment and initial maintenance. He reported that the project required working with over 70 property owners and that only one property owner along the corridor didn't participate in the project. He

reported the project was completed on time and under budget and that individual owners will be maintaining the private portions. He noted the property owners were given instructions on maintenance and that city staff will follow up with anyone that has questions or needs assistance.

MOTION: Commissioner Scanlan moved to approve the Final Report for Bassett Creek Main Stem Restoration Project. Commissioner Anderson seconded the motion

Discussion: Commissioner Welch commented that the City of Golden Valley did an excellent job working with 70 different landowners. On the flip side, the Commission is investing over a million dollars and relying on private property owners to maintain most of the restoration. He wondered if maintenance easements should be pursued. Commissioner Welch requested that the administrator coordinate efforts and check on how things are looking in a few years.

Commission Engineer Chandler asked if the city can offer for private landowners to buy into the city's vegetation management contract. Mr. Oliver noted that would be difficult for the city to coordinate. Ms. Strong offered that the noxious/invasive weed ordinance might help keep projects from getting out of hand.

Ms. Pape added that a targeted hands-on workshop where an expert could walk the area with the residents and help them with questions would be beneficial. This might be an ideal project to bring in Hennepin County Master Gardeners who are knowledgeable about native plants.

Commissioner Welch suggested to bring this item to the Education Committee to supply the proper materials to homeowners. Ms. Pape responded that the educational materials exist already and it wouldn't be hard to offer resources. The main problem with maintenance is the actual implementation. Going from guidebook or handout to on the ground identification is very challenging. Most people need personal one-on-one assistance.

MOTION: Commissioner Welch moved to amend the prior motion and have the administrator coordinate efforts to maintain buffers and bring information back in 3 years. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 7-0, with the Cities of Golden Valley and St. Louis Park absent from the vote.

VOTE on original motion: Upon a vote, the motion carried 7-0, with the Cities of Golden Valley and St. Louis Park absent from the vote.

G. Consider Approval of Final Reimbursement Request for Bassett Creek Main Stem Restoration Project

MOTION: Commissioner Welch moved to approve the final reimbursement request for Bassett Creek Main Stem Restoration Project. Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 7-0, with the Cities of Golden Valley and St. Louis Park absent from the vote.

H. Consider Approval to Amend Agreement with City of Crystal for Winnetka Pond Dredging Project

Administrator Jester noted that the Commission approved additional funding for this project contingent on the funds being available in the Commission's Closed Project Account. She reported that with the approval of the above motion, there is $383,926.77 in the account.

MOTION: Commissioner Anderson moved to approve the amendment to the agreement with the City of Crystal for Winnetka Pond Dredging Project. Alternate Commissioner Monk seconded the motion. Upon a vote, the motion carried 6-1, with Minneapolis voting against the motion and all others voting for the motion. The Cities of Golden Valley and St. Louis Park were absent from the vote.

I. Consider Resolution 19-08 to Approve St. Louis Park Surface Water Management Plan

Commission Engineer Chandler reported that she 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. She recommended approval of the 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.

MOTION: Commissioner Welch moved to approve St. Louis Park Surface Water Management Plan. Alternate Commissioner Crough seconded the motion. Upon a vote, the motion carried 7-0, with the Cities of Golden Valley and St. Louis Park absent from the vote.

J. Consider Resolution of Appreciation for Alternate Commissioner John Byrnes

Administrator Jester reported that Alternate Commissioner Byrnes is moving to Minnetonka and will no longer be able to represent Plymouth on the Commission. She noted John was an active member of the Commission and his service was greatly appreciated.

MOTION: Commissioner Welch moved to approve the resolution of appreciation for Alternate Commissioner John Byrnes. Commissioner Prom seconded the motion. Upon a vote, the motion carried 7-0, with the Cities of Golden Valley and St. Louis Park absent from the vote.

6. COMMUNICATIONS

A. **Administrator's Report**
   i. AIS Prevention Grant. Administrator Jester went through the details of the grant that was received.
   ii. 2019 Water Summit is being put on by Freshwater. Administrator Jester reported she will be co-presenting on the Harrison Neighborhood project. She also noted she accepted an invitation to participate in a panel discussion at an upcoming Land Development event.

B. **Chair –** No reports

C. **Commissioners**

Commissioner Scanlan noted some upcoming events

D. **TAC Members**
   i. Four Season Mall Update – Chair Prom will report when details are concrete
   ii. Next Meeting March 26th

E. **Committees – No reports**

F. **Legal Counsel – No reports**

G. **Engineer**
   i. Flood forecast: Despite a lot of snowmelt and rain, there was only localized flooding and the system functioned as it was supposed to.

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

The meeting adjourned at 10:37 a.m.

_____

Signature/Title Date

_____

Signature/Title Date

Item 4B.
BCWMC 4-18-19
Full document online

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report
Fiscal Year: February 1, 2019 through January 31, 2020
MEETING DATE: April 18, 2019

BEGINNING BALANCE	**13-Mar-19**			**792,119.31**
ADD:				
General Fund Revenue:				
	Interest less Bank Fees		89.39	
	Metropolitan Council - Metro Blooms - SG-05827 - Final		1,000.00	
Permits:				
	City of Plymouth	BCWMC 2019-05	1,500.00	
	Sambatek	BCWMC 2019-06	2,500.00	
	INSPEC	BCWMC 2019-07	1,500.00	
	Plymouth Christian Youth Ctr	BCWMC 2019-08	1,500.00	
	Ind School Dist 284	BCWMC 2019-09	1,500.00	
	Reimbursed Construction Costs		15,028.80	
		Total Revenue and Transfers In		**24,618.19**
DEDUCT:				
Checks:				
3179	Barr Engineering	March Engineering	43,403.19	
3180	Kennedy & Graven	February Legal	1,612.40	
3181	Keystone Waters	March Admin	5,930.03	
3182	Lawn Chair Gardener	March Admin Services	1,649.94	
3183	Triple D Espresso	April Mtg	111.75	
3184	Wenck Associates	March WOMP	2,042.70	
3185	Prairie Moon Nursery	Seed packets	276.52	
		Total Checks/Deductions		**55,026.53**
Outstanding from previous month:				
3172	Lawn Chair Gardener	Feb Admin Services	1,128.72	
3176	Metro Watershed Partners	Partnership	3,500.00	
3177	Metro Conservation Districts	Partnership	350.00	
ENDING BALANCE	**9-Apr-19**			**761,710.97**

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report **(UNAUDITED)**
Fiscal Year: February 1, 2019 through January 31, 2020
MEETING DATE: April 18, 2019

	2019/2020 BUDGET	CURRENT MONTH	YTD 2019/2020	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSEMENTS TO CITIES	529,850	0.00	445,884.00	83,966.00
PROJECT REVIEW FEES	60,000	8,500.00	8,500.00	51,500.00
WOMP REIMBURSEMENT	5,000	0.00	4,500.00	500.00
METROPOLITAN COUNCIL - LRT		0.00	0.00	
METRO BLOOOMS - MET COUNCIL GRANT		1,000.00	1,000.00	
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**	**9,500.00**	**459,884.00**	**211,966.00**
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	130,000	10,682.50	15,739.00	114,261.00
DEV/PROJECT REVIEWS	80,000	5,179.00	12,430.15	67,569.85
NON-FEE/PRELIM REVIEWS	15,000	5,865.00	9,001.50	5,998.50
COMMISSION AND TAC MEETINGS	12,000	1,787.48	3,187.48	8,812.52
SURVEYS & STUDIES	20,000	0.00	0.00	20,000.00
WATER QUALITY/MONITORING	78,000	3,570.93	8,839.07	69,160.93
WATER QUANTITY	10,000	519.48	1,609.22	8,390.78
ANNUAL FLOOD CONTROL INSPECTIONS	48,000	0.00	1,462.50	46,537.50
REVIEW MUNICIPAL PLANS	4,000	700.00	1,750.00	2,250.00
WOMP	20,500	2,042.70	3,056.70	17,443.30
XP-SWMM MODEL UPDATES/REVIEWS	0	0.00	0.00	0.00
APM / AIS WORK	32,000	0.00	2,105.00	29,895.00
ENGINEERING & MONITORING TOTAL	**449,500**	**30,347.09**	**59,180.62**	**390,319.38**
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	5,400.00	11,250.00	57,950.00
LEGAL COSTS	17,000	1,612.40	1,612.40	15,387.60
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	335.25	1,164.75
ADMINISTRATIVE SERVICES	15,000	1,532.75	2,976.33	12,023.67
ADMINISTRATION TOTAL	**124,200**	**8,656.90**	**16,273.98**	**107,926.02**
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	1,300	70.00	70.00	1,230.00
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	923.74	6,068.74	18,931.26
WATERSHED EDUCATION PARTNERSHIPS	15,850	0.00	4,350.00	11,500.00
OUTREACH & EDUCATION TOTAL	**46,150**	**993.74**	**10,488.74**	**35,661.26**
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**	**39,997.73**	**85,943.34**	**605,906.66**

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

Cash Balance 03/13/2019				
Cash		1,068,731.59		
	Total Cash		1,068,731.59	
Investments:				
Minnesota Municipal Money Market (4M Fund)		2,500,000.00		
2018-19 Dividends		44,653.88		
2019-20 Dividends				
Dividends-Current		4,661.60		
	Total Investments		2,549,315.48	
	Total Cash & Investments			3,618,047.07
Add:				
Interest Revenue (Bank Charges)		238.27		
	Total Revenue			238.27
Less:				
CIP Projects Levied - Current Expenses - TABLE A		(1,694.30)		
Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B		(7,683.00)		
	Total Current Expenses			(9,377.30)
	Total Cash & Investments On Hand 04/09/19			**3,608,908.04**

Total Cash & Investments On Hand	3,608,908.04
Current Anticipated Levy -2019 (July 19/Dec 19/Jan 20)	1,436,000.00
CIP Projects Levied - Budget Remaining - **TABLE A**	(4,681,126.33)
Closed Projects Remaining Balance	**363,781.71**
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	**381,143.64**
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	1,694.30	2,519.30	378,574.16	233,425.84	
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	0.00	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	1,694.30	117,120.35	4,446,005.96	4,681,126.33	

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	4,215.50	9,296.96	39,751.25	(39,751.25)
Crane Lake Improvement Proj (CL-3)	0	3,467.50	3,600.50	8,762.85	(8,762.85)
2020 Project Totals	0	7,683.00	12,897.46	144,017.66	(144,017.66)
Total Proposed & Future CIP Projects to be Levied	0	7,683.00	12,897.46	144,017.66	(144,017.66)

BCWMC Construction Account
Fiscal Year: February 1, 2018 through January 31, 2020 **(UNAUDITED)**
April 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	694,573.00	5,651.50	21,588.00	363,038.41	
Less: State of MN - DNR Grants			0.00	(97,542.00)	
	694,573.00	5,651.50	21,588.00	265,496.41	429,076.59
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	1,864,168.00	5,651.50	21,588.00	518,162.00	1,144,112.00

Contract No: A199569

Item 4E.
BCWMC 4-18-19

AGREEMENT FOR SERVICES

This Agreement is between the COUNTY OF HENNEPIN, STATE OF MINNESOTA, (the "COUNTY") A-2300 Government Center, Minneapolis, Minnesota 55487, on behalf of the Hennepin County (Environment and Energy, 701 Fourth Avenue South, Suite 700, Minneapolis, MN 55415) ("DEPARTMENT") and Bassett Creek Watershed Management Commission, a Minnesota joint powers organization ("COMMISSION") C/O 16145 Hillcrest Lane, Eden Prairie, MN 55346

The parties agree as follows:

1. TERM OF THE AGREEMENT

The County agrees to furnish River Watch program services to the Commission commencing May 1, 2019 and terminating December 31, 2019, unless terminated earlier in accordance with the Default and Cancellation provisions of this Agreement.

2. SERVICES TO BE PROVIDED

The County agrees to provide River Watch program services to the Commission as more fully described in Exhibit A, attached hereto and incorporated herein by reference.

3. PAYMENT FOR SERVICES

The Department will bill the Commission for services rendered. Payment shall be made within thirty-five (35) days from receipt of the invoice.

The total cost of this Agreement shall not exceed Two Thousand Dollars ($2,000).

4. INDEPENDENT CONTRACTOR

The County shall select the means, method, and manner of performing the services. Nothing is intended or should be construed as creating or establishing the relationship of a partnership or a joint venture between the parties or as constituting either party as the agent, representative, or employee of the other party for any purpose. The County is and shall remain an independent contractor for all services performed under this Agreement.

5. LIABILITY

Each party shall be responsible for its own acts and deeds and the results thereof. The County's liability shall be governed by the provisions of Minnesota Statutes, Chapter 466 and other applicable law.

6. INSURANCE

A. Both parties agree at all times during the term of this Agreement, and beyond such term when so required, to have and keep in force the following insurance coverages:

	Limits
1. Commercial General Liability on an occurrence basis with contractual liability coverage:	
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
2. Workers' Compensation and Employer's Liability:	
Workers' Compensation	Statutory
Employer's Liability. Bodily injury by:	
Accident—Each Accident	500,000
Disease—Policy Limit	500,000
Disease—Each Employee	500,000
3. Professional Liability— Per Claim	1,500,000
Aggregate	2,000,000

The professional liability insurance must be maintained continuously for a period of two years after the termination of this Agreement.

B. A self-insurance program is an acceptable method to provide the required insurance limits. Coverage provided by the League of Minnesota Cities Insurance Trust municipal liability policy shall be considered adequate for purposes of this section.

C. Duty to Notify. Each party shall promptly notify the other party of any claim, action, cause of action or litigation brought against it, its employees, officers, agents or subcontractors, which arises out of the services contained in this Agreement. Each party shall also notify the other party whenever it has a reasonable basis for believing that it and/or its employees, officers, agents or subcontractors, might become the subject of a claim, action, cause of action, or litigation arising out of and/or related to the services contained in this Agreement.

7. DATA PRACTICES

Each party, its officers, agents, owners, partners, employees, volunteers and subcontractors shall abide by the provisions of the Minnesota Government Data Practices Act, Minnesota

Statutes, Chapter 13 (MGDPA), the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health Act (HITECH), adopted as part of the American Recovery and Reinvestment Act of 2009, and implementing regulations, if applicable, and all other applicable state and federal laws, rules, regulations and orders relating to data privacy or confidentiality. The terms of this section shall survive the cancellation or termination of this Agreement.

8. SUCCESSORS AND ASSIGNMENTS

A. Each party binds itself, its partners, successors, assigns and legal representatives to the other party for all covenants, agreements and obligations contained in the contract documents.

B. Neither party shall assign, transfer or pledge this Agreement and/or the services to be performed, whether in whole or in part, without the prior written consent of the other party.

9. MERGER AND MODIFICATION

A. It is understood and agreed that the entire Agreement between the parties is contained herein and that this Agreement 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. Any alterations, variations, modifications, or waivers of 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.

10. DEFAULT AND CANCELLATION

A. If either party fails to perform any of the provisions of this Agreement or so fails to administer the work as to endanger the performance of the Agreement, it shall be in default. Unless the defaulting party's default is excused by the other party, the non-defaulting party may upon written notice immediately cancel this Agreement in its entirety.

B. A party'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.

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

11. SURVIVAL OF PROVISIONS

Provisions that by their nature are intended to survive the term, cancellation or termination of this Agreement include but are not limited to: INDEPENDENT CONTRACTOR; LIABILITY; INSURANCE; DATA PRACTICES; DEFAULT AND CANCELLATION; MEDIA OUTREACH; and MINNESOTA LAW GOVERNS.

12. CONTRACT ADMINISTRATION

In order to coordinate the services being provided to the Commission with the activities of the Department, Mary L Karius, or successor, shall manage this Agreement on behalf of the County and serve as liaison between the County and the Commission.

13. COMPLIANCE AND NON-DEBARMENT CERTIFICATION

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

14. NOTICES

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 the County shall be sent to the County Administrator with a copy to the originating Department at the address given in the opening paragraph of the Agreement. Notice to the Commission shall be sent to the address stated in the opening paragraph of the Agreement.

15. MEDIA OUTREACH

Commission shall not use the term “Hennepin County”, or any derivative thereof in Commission’s 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.

16. 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. If any provision of this Agreement is held invalid, illegal or unenforceable, the remaining provisions will not be affected.

COUNTY ADMINISTRATOR AUTHORIZATION

Reviewed by the County Attorney's Office

_____
Assistant County Attorney

COUNTY OF HENNEPIN
STATE OF MINNESOTA

By: _____
David Hough, County Administrator

By: _____
Assistant County Administrator - Public Works

Date:_____

Recommended for Approval

By:_____
Director, Department of Environment and Energy

Date:_____

Basset Creek Watershed Management Commission
The Commission certifies that the person who executed this Agreement is authorized to do so on behalf of the Commission as required by applicable articles, bylaws, resolutions or ordinances.*

Printed Name:_____

Signed: _____

Title: _____

Date:_____

* Commission shall submit applicable documentation (articles, bylaws, resolutions or ordinances) that confirms the signatory's delegation of authority. This documentation shall be submitted at the time Commission returns the Agreement to the County. Documentation is not required for a sole proprietorship.

EXHIBIT A

SCHEDULE OF SERVICES

River Watch is a volunteer monitoring program coordinated by Hennepin County Environment and Energy through a partnership between cooperating cities and watershed commissions. In the program, teachers and youth volunteers use biological monitoring criteria established by the MPCA to monitor local streams. Teachers use this as a unique hands-on research experience in the classroom setting. Hennepin County's responsibilities in coordinating the program are as follows:

- Take proper precautions to ensure the safety of those involved in activities relating to River Watch.
- Recruit and manage teachers and students to monitor sites within the Bassett Creek Watershed.
- Coordinate and facilitate training sessions in field collection techniques and macroinvertebrate identifications including all in-person, hands-on training.
- Provide all necessary equipment and resources for successful collection of data.
- Provide funds to cover school costs including busing.
- Provide all Quality Assurance/Quality Control checks.
- Manage program finances.
- Manage program contracts.
- Maintain communication with all parties including communication on field events and participating schools or organizations.
- Coordinate outreach educational opportunities.
- Coordinate volunteer appreciation efforts.
  Develop and distribute Year End Results to all interested parties upon request and via Hennepin County website.

Item 4F.
BCWMC 4-18-19

CURLY-LEAF PONDWEED TREATMENT PROGRAM SERVICES AGREEMENT

THIS CURLY-LEAF PONDWEED TREATMENT PROGRAM SERVICES AGREEMENT ("Agreement") made and entered into by and between the Bassett Creek Watershed Management Commission, a Minnesota joint powers organization (the "Commission"), and Lake Restoration, Inc. (the "Contractor"). The Commission and the Contractor may hereinafter be referred to individually as a "party" or collectively as the "parties."

1. **SERVICES**. The Contractor will provide all labor, materials, supplies, and equipment needed to perform the Curly-leaf pondweed treatment services as set out in the attached Exhibit 1 in accordance with the terms and conditions of this Agreement (collectively, the "Services").

2. **TIMING OF SERVICES**. The Contractor shall fully perform and complete delivery of the Services to the reasonable satisfaction of the Commission by June 1, 2019.

3. **PAYMENT FOR SERVICES**. The Contractor shall be paid based on the price in its quote, attached hereto as Exhibit 2, and in accordance with the provisions in Exhibit 1. The Contractor shall provide the Commission a detailed invoice for the completed Services in accordance with the requirements of Minnesota Statutes, section 471.38. The Commission shall pay the Contractor within 40 days of receipt of the invoice.

4. **INSURANCE**. The Contractor shall carry, during the entire term of this Agreement, insurance coverage in values indicated below and shall furnish a certificate of insurance to the Commission prior to commencing the Services. The Commission shall be named an additional insured on the Contractor's Commercial General Liability policy.

TYPE	MINIMUM LIMITS
Commercial General Liability	$1,000,000
Automobile Liability	$1,000,000
Workers Compensation	State of MN Statutory Limits
Employer's Liability	$500,000

5. **INDEPENDENT CONTRACTOR**. The Contractor acknowledges and agrees that it is an independent contractor and that nothing herein shall be construed to create the relationship of employer and employee between the Commission and the Contractor. No employee related withholdings or deductions shall be made from payments due the Contractor. The Contractor shall not be entitled to receive any benefits from the Commission and shall not be eligible for workers' compensation or unemployment benefits. The Contractor shall at all times be free to exercise initiative, judgment, and discretion in how best to perform or provide the Services identified herein.

6. **COMPLIANCE WITH LAWS**. The Contractor shall comply with all applicable federal, state and local laws, regulations or ordinances in performance of the Contractor's duties hereunder, such laws including but not limited to those relating to non-discrimination in hiring or labor practices. The Contactor shall also be required to, at its own cost, obtain any permits, licenses, or

permissions that may be required to provide the Services, except that the Commission shall obtain, at its own cost, a permit from the MnDNR for the treatment. The Contractor shall adhere to the MnDNR permit issued for this project. Any violation of federal, state, or local laws, statutes, ordinances, rules or regulations, as well as loss of any applicable license, permit, or certification by the Contractor shall constitute a material breach of this Agreement, regardless of the reason and whether or not intentional, and shall entitle the Commission to terminate this Agreement effective as of the date of such violation, failure, or loss.

7. **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 final payment by the Commission after satisfactory completion of the Services. The Commission may terminate this Agreement if the Contractor fails to make sufficient progress toward completion, or fails to complete, the Services in accordance with the timeline established herein. Either party may terminate this Agreement if the other party is in breach of any material term of this Agreement if the breaching party fails to complete the cure the breach within 20 days' written notice of breach provided by the non-breaching party.

8. **AMENDMENTS**. This document, together with the attached exhibits and quote (which are incorporated herein by reference), 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.

9. **DATA PRACTICES**. Any data created, collected, received, stored, used, maintained, or disseminated by the Contractor in performing the Services is subject to the requirements of the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13, ("Act") and the Contractor must comply with those requirements as if it were a government entity. The Contractor does not have a duty to provide access to public data to the public if the public data is available from the Commission. The Contractor shall immediately notify the Commission if it receives a request under the Act and shall work with the Commission to ensure the response complies with the Act.

10. **AUDIT**. The Contractor agrees that for a period of six years after completion of the Services the Commission, the State Auditor, and the Legislative Auditor, or any of their duly authorized representatives, 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. **INDEMNIFICATION**. Any and all claims that arise or may arise against the Contractor, it agents, servants, or employees as a consequence of any act or omission on the part of the Contractor or its agents, servants, or employees while engaged in the performance of the Agreement shall in no way be the obligation or responsibility of the Commission. The Contractor shall indemnify, hold harmless, and defend the Commission, its officers, agents, and employees against any and all liability, loss, costs, damages, expenses, claims or actions, including attorney fees which the Commission, its officers, agents, or employees may hereafter sustain, incur, or be required to pay, arising out of or by reason of any act or omission of the Contractor, its agents, servants or employee, in the execution, performance, or failure to adequately perform the Contractor's obligations pursuant to this Agreement. Nothing in this

Agreement shall constitute a waiver by the Commission of any statutory limits or immunities from liability.

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 the Contractor.

13. **NO AGENCY**. The 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:	Chad Hadler Lake Restoration, Inc. 12425 Ironwood Circle, Rogers MN 55374
To the Commission:	Chairperson Bassett Creek Watershed Management Commission City of Golden Valley 7800 Golden Valley Road Golden Valley, MN 55427

15. **AUTHORITY**. Each of the undersigned parties warrants that it has the full authority to execute this Contract, and each individual signing this Contract on behalf of a corporation hereby warrants that he or she has full authority to sign on behalf of the corporation and that he or she represents and binds such corporation thereby.

16. **NO WAIVER**. The waiver by any party of a breach or violation of, or failure of any party to enforce, any provision of this Contract shall not operate or be construed as a waiver of any subsequent breach or violation or as a relinquishment of any rights hereunder.

17. **SERVERABILITY**. If any part of this Contract is invalid or unenforceable under applicable law, that part shall be ineffective only to the extent of such invalidity or unenforceability without in any way affecting the remaining parts of the provision or this Contract.

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

CONTRACTOR

By: _____

Its: Vice President

Date: April 9, 2019

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

By: _____
Chairperson

Date: _____

By: _____
Secretary

Date: _____

EXHIBIT 1

General Service Requirements

1. LOCATION & SCOPE OF SERVICES

The purpose of the Services is to do follow up control of Curly-leaf pondweed regrowth. The location of the Services shall only be on Medicine Lake within the Cities of Plymouth and Medicine Lake, Minnesota. The Services shall include furnishing and applying herbicide, furnishing and installing signage throughout the project area during the spring of 2018. The work shall be done in accordance with Minnesota Department of Natural Resources (MnDNR) guidelines for herbicide application.

2. MATERIALS

A. Herbicide. The herbicides used will be Diquat at locations and at a concentration specified in MnDNR herbicide application permit.

B. Signage. The Contractor will place all necessary signage in the project area according to approved MnDNR standards.

3. APPLICATION

A. MnDNR Guidelines. The Contractor shall follow all of MnDNR's guidelines for herbicide application and will install all necessary signage throughout the project area and public access areas.

B. Treatment Times. The herbicide treatment, if feasible, will be conducted during mid-week (Tuesday-Thursday) to minimize impact on lake users. Once the herbicide application has begun, it must be completed within seven days. Treatment should be done between 4/1/2019 and 6/1/2019. No treatment should be done 5/25/19 to 5/27/19 for the Memorial Day holiday.

4. TREATMENT AREA

Specific locations for treatment will be determined by an early spring aquatic vegetation survey. Total treated areas will not exceed 62 acres on Medicine Lake. There will be no treatment of the lake closer than 150 feet off the shore.

5. WEATHER AND TEMPERATURE LIMITATIONS

The treatment must happen when the lake water temperature is between 50 and 60 degrees Fahrenheit. The Contractor is responsible to take lake water temperature readings at approximately 2-3 feet depth, at least once every day starting April 18, 2019 and each day until the project is completed. If the temperature of the lake water is at 50 degrees Fahrenheit and there is a risk that it may decrease below 50 degrees Fahrenheit, then the herbicide application must be postponed. All water temperature readings must be provided to the Commission on a daily basis. The decision to

begin, postpone, or continue the herbicide application will be made by the Bassett Creek Watershed Management Commission in consultation with the MnDNR. There will be no herbicide application if the water temperature stays over 60 degrees Fahrenheit over four consecutive days.

6. GPS DOCUMENTATION

The Contractor must have Global Positioning System (GPS) technology to record all areas of the lake that are treated and provide the records to the Commission.

7. QUESTIONS

Any questions with regard to these requirements should be directed to Laura Jester, Administrator, Bassett Creek Watershed Management Commission, (952) 270-1990, laura.jester@keystonewaters.com. All questions should be in writing, if time permits. Verbal interpretations shall not be considered binding.

8. PAYMENT

A. Basis. Payment for Curly-leaf pondweed treatment shall be made based on the total number of acres treated, which shall include all labor, equipment, signage, and application.

B. The amounts shown in the quote are estimates only. Final payment for the Services shown in the quote will be determined by final amount of acres treated.

C. Subcontractors. The Contractor shall pay any subcontractors in accordance with Minnesota Statutes, section 471.25, subdivision 4a.

Exhibit 2

QUOTE FORM

QUOTE FOR THE 2019 CURLY-LEAF PONDWEED TREATMENT PROGRAM ON MEDICINE LAKE

Bassett Creek Watershed Management Commission
Laura.jester@keystonewaters.com

To: Laura Jester, Bassett Creek Watershed Management Commission

The undersigned, being familiar with your local conditions, having made the field inspection and investigation, I/we deem necessary, having studied the plans and specifications for the work and being familiar with all factors and other conditions affecting the work and cost thereof, hereby propose to furnish all labor, tools, materials, skills, equipment and all else necessary to complete the treatment in accordance with the instructions to quoters and the service agreement. To be considered, such quotes must be received by **Friday April 3, 2019** by 4:30 p.m.

CURLY-LEAF TREATMENT

TOTAL QUOTE Total cost, inclusive of tax, to treat one (1) surface acre on Medicine Lake, assuming up to Sixty Two (62) acres* maximum application, based on an estimated quantity of DIQUAT applied per acre of 10.0 gals/acre.

$ 116.00 **Per Acre**

***NOTE: Total actual acres to be treated as determined by early spring aquatic vegetation survey.**

FIRM NAME: Lake Restoration, Inc.

CONTACT NAME: Chad Hadler

ADDRESS: 12425 Ironwood Circle, Rogers, MN 55374

PHONE NO.: 763-428-9977

EMAIL: chad@lakerestoration.com

SIGNATURE:

DATE: March 29, 2019

HERBICIDE SUPPLIER

FIRM NAME: Lake Restoration, Inc. Dibrox - Herbicide

ADDRESS: 12425 Ironwood Circle, Rogers, MN 55374

PHONE NO.: 763-428-9977

LEAGUE OF MINNESOTA CITIES

Item 4G.
BCWMC 4-18-19

CONNECTING & INNOVATING
SINCE 1913

LIABILITY COVERAGE – WAIVER FORM

Members who obtain liability coverage through the League of Minnesota Cities Insurance Trust (LMCIT) must complete and return this form to LMCIT before the member's effective date of coverage. Return completed form to your underwriter or email to pstech@lmc.org.

The decision to waive or not waive the statutory tort limits must be made annually by the member's governing body, in consultation with its attorney if necessary.

Members who obtain liability coverage from LMCIT must decide whether to waive the statutory tort liability limits to the extent of the coverage purchased. The decision has the following effects:

- *If the member does not waive the statutory tort limits*, an individual claimant could recover no more than $500,000 on any claim to which the statutory tort limits apply. The total all claimants could recover for a single occurrence to which the statutory tort limits apply would be limited to $1,500,000. These statutory tort limits would apply regardless of whether the member purchases the optional LMCIT excess liability coverage.

- *If the member waives the statutory tort limits and does not purchase excess liability coverage*, a single claimant could recover up to $2,000,000 for a single occurrence (under the waive option, the tort cap liability limits are only waived to the extent of the member's liability coverage limits, and the LMCIT per occurrence limit is $2,000,000). The total all claimants could recover for a single occurrence to which the statutory tort limits apply would also be limited to $2,000,000, regardless of the number of claimants.

- *If the member waives the statutory tort limits and purchases excess liability coverage*, a single claimant could potentially recover an amount up to the limit of the coverage purchased. The total all claimants could recover for a single occurrence to which the statutory tort limits apply would also be limited to the amount of coverage purchased, regardless of the number of claimants.

Claims to which the statutory municipal tort limits do not apply are not affected by this decision.

LMCIT Member Name: _____

Check one:

- ○ The member **DOES NOT WAIVE** the monetary limits on municipal tort liability established by Minn. Stat. § 466.04.

- ○ The member **WAIVES** the monetary limits on municipal tort liability established by Minn. Stat. § 466.04, to the extent of the limits of the liability coverage obtained from LMCIT.

Date of member's governing body meeting: _____

Signature:_____Position:_____

145 UNIVERSITY AVE. WEST
ST. PAUL, MN 55103-2044

PHONE: (651) 281-1200 FAX: (651) 281-1299
TOLL FREE: (800) 925-1122 WEB: WWW.LMC.ORG

Item 4H.
BCWMC 4-18-19

Contract No. 19R009

INTERGOVERNMENTAL AGREEMENT BETWEEN THE METROPOLITAN COUNCIL AND THE BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

THIS AGREEMENT is made and entered into by and between the Metropolitan Council (the "Council") and the Bassett Creek Watershed Management Commission (the "Watershed"), each acting by and through its duly authorized officers.

THE ABOVE-NAMED PARTIES hereby agree as follows:

I. GENERAL SCOPE OF AGREEMENT

The Council and the Watershed agree to undertake a volunteer lake monitoring study in order to provide an economical method of broadening the water quality database on lakes in the Twin Cities Metropolitan Area.

II. SPECIFIC SCOPE OF SERVICES

2.01 Lake Monitoring Program. The Watershed and the Council agree to jointly undertake a volunteer lake monitoring program as specified below:

a. General Purposes of Program. The volunteer lake monitoring program involves the use of citizen-scientist volunteers to monitor lakes in the Twin Cities Metropolitan Area. The volunteers will collect surface water samples which will be analyzed for total phosphorus (TP), total Kjeldahl nitrogen (TKN), and chlorophyll-a (CLA). In addition, the volunteers will measure surface water temperature, water transparency, and fill out a monitoring form that describes the lake and weather conditions at the time of the monitoring event. Lakes will be visited from April through October of 2019 (the “Monitoring Period”) for the number of times and at the approximate intervals specified in paragraph (b) below. Each lake will be sampled at the location as indicated on the site location map provided by the Council. The Council will arrange for chemical analysis of the samples either through its own laboratory or an outside laboratory.

b. Specific Lakes Involved. The following lakes and specific lake site(s) listed below will be involved in the Council’s Citizen-Assisted Lake Monitoring Program (CAMP) in 2019.

Lake name	DNR ID#	Number of monitoring events	Approximate monitoring interval	Quantity of new kits
Lost	27-0103	8 to 14	Biweekly	0
Medicine, site 1	27-0104	8 to 14	Biweekly	0
Medicine, site 2	27-0104	1 to 7	Monthly	0
Northwood	27-0627	8 to 14	Biweekly	0
Parkers	27-0107	8 to 14	Biweekly	0
Sweeney, site 1	27-0035-01	8 to 14	Biweekly	0
Sweeney, site 2	27-0035-01	8 to 14	Biweekly	0
Twin	27-0035-02	8 to 14	Biweekly	0
Westwood	27-0711	8 to 14	Biweekly	0

2.02 Watershed Responsibilities. The Watershed agrees that it will have sole responsibility for:

a. Recruiting volunteers (who have access to a boat) to monitor the lakes the Watershed wishes to involve in the program as listed in section 2.01(b) above.

b. Providing the Council and/or volunteers with needed lake information such as lake bathymetric maps and access locations.

c. Paying for the laboratory analysis cost of the samples collected by volunteers which cost is included in the amounts specified in Article III below.

d. Ensuring that the volunteers participate in the training program and follow CAMP methods and procedures.

e. Ensuring that the volunteers fill out a monitoring form during each monitoring event.

f. Picking up the samples and the lake monitoring forms from their volunteers and delivering those items to the Watershed's central storage location. The Watershed will be responsible for providing the central storage location. The central storage location can be a Council facility, but the Watershed will be required to deliver the samples and monitoring forms to this facility. The samples are required always to be frozen.

g. Storing its volunteers' samples until picked up by Council staff. The samples are required always to be frozen.

h. Maintaining, storing, and restocking its monitoring kits.

i. Delivering and picking up its monitoring kits to and from their volunteers.

2.03 Council Responsibilities. The Council agrees that it will:

a. Organize the survey.

b. Provide training for the volunteers.

c. Pick up the samples and lake monitoring forms from the Watershed's central storage location and deliver them to the laboratory at approximately 2-month intervals starting in June.

d. Review the results of the monitoring data.

e. Prepare a final report containing the physical, chemical, and biological data obtained during the Monitoring Period and a brief analysis of the data.

f. Provide quality control by collecting lake samples from random lakes involved in the volunteer program. The resulting parameter values will then be compared to the volunteers' results to determine if any problems exist involving the volunteer's monitoring activities and what should be done to correct the problem.

g. Provide and deliver to the Watershed the expendable monitoring items (e.g. sample containers, labels, filters, aluminum sheets, zip-style plastic bags, and lake monitoring forms). The expendable monitoring items will be delivered in the weeks preceding the start of the monitoring season. The cost of the expendable monitoring items is included in the annual participation fee.

III. COMPENSATION; METHOD OF PAYMENT

3.01 Payment to Council. For all labor performed and reimbursable expenses incurred by the Council under this agreement during the Monitoring Period, the Watershed agrees to pay the Council the following amounts per lake site listed in section 2.01(b). The participation fee will be billed for the contracted amount regardless whether the volunteer collects samples from or monitors a lake site fewer times than the contracted quantity.

Number of Monitoring events	Participation Fee (excludes monitoring equipment)
8 to 14	$760
1 to 7	$380

For lake sites requiring monitoring equipment, the cost for a kit of monitoring equipment is $225 per kit.

3.02 Payment Schedule. Payment of the total amount owing to the Council by the Watershed shall be made by October 30, 2019. An invoice specifying the amount owed by the Watershed will be sent under separate cover.

3.03 Additional Analyses. The total amount specified in paragraph 3.01 does not include the cost of any additional analyses requested by the Watershed, such as analysis of bottom samples. The Council will carry out any such additional analyses at the request of the Watershed and subject to the availability of Council resources for carrying out such analyses. The Council will bill the Watershed after the end of the Monitoring Period for any such additional analyses at the Council's actual cost, and the Watershed will promptly reimburse the Council for any such costs billed. The costs for additional analyses are provided in Exhibit A.

3.04 Replacement of Durable Equipment. The total amount specified in paragraph 3.01 does not include the cost of replacing durable monitoring equipment, such as thermometers, Secchi disks, filter holders, hand pumps, graduated cylinders, sampling jugs, forceps, and tote boxes. The Council will provide and deliver durable monitoring equipment that needs replacement upon request from the Watershed. The Council will bill the Watershed for any such replaced durable monitoring equipment at the Council's actual cost, and the Watershed will promptly reimburse the Council for any such costs billed.

IV. GENERAL CONDITIONS

4.01 Period of Performance. The services of the Council will commence on April 1, 2019, and will terminate on March 30, 2020, or following work completion and payment, whichever occurs first.

4.02 Amendments. The terms of this agreement may be changed only by mutual agreement of the parties. Such changes will be effective only on the execution of written amendment(s) signed by duly authorized officers of the parties to this agreement.

4.03 Watershed Personnel. Laura Jester, or such other person as may be designated in writing by the Watershed, will serve as the Watershed's representative and will assume primary responsibility for coordinating all services with the Council.

Laura Jester - Administrator
Bassett Creek Watershed Management Commission
c/o Keystone Waters
16145 Hillcrest Lane
Eden Prairie, MN 55346
952-270-1990

4.04 Council's Contract Manager. The Council's Contract Manager for purposes of administration of this agreement is Brian Johnson, or such other person as may be designated in writing by the Council's Regional Administrator. The Council's Contract Manager will be responsible for coordinating services under this agreement. However, nothing in this agreement will be deemed to authorize the Contract Manager to execute amendments to this agreement on behalf of the Council.

Brian Johnson
Metropolitan Council
2400 Childs Road
St. Paul, MN 55106
651-602-8743

4.05 Equal Employment Opportunity; Affirmative Action. The Council and the Watershed agree to comply with all applicable laws relating to nondiscrimination and affirmative action. In particular, the Council and the Watershed agree not to discriminate against any employee, applicant for employment, or participant in this study because of race, color, creed, religion, national origin, sex, marital status, status with regard to public assistance, membership or activity in a local commission, disability, sexual orientation, or age; and further agree to take action to assure that applicants and employees are treated equally with respect to all aspects of employment, including rates of pay, selection for training, and other forms of compensation.

4.06 Liability. Each party to this agreement shall be liable for the acts and omissions of itself and its officers, employees, and agents, to the extent authorized by law. Neither party shall be liable for the acts or omissions of the other party or the other party's officers, employees or agents. Nothing in this agreement shall be deemed to be a waiver by either party of any applicable immunities or limits of liability including, without limitation, Minnesota Statutes, sections 3.736 (State Tort Claims) and chapter 466 (Municipal Tort Claims).

4.07 Copyright. No reports or documents produced in whole or in part under this agreement will be the subject of an application for copyright by or on behalf of the Council or Watershed.

4.08 Termination of Agreement. The Council and the Watershed will both have the right to terminate this agreement at any time and for any reason by submitting written notice of the intention to do so to the other party at least thirty (30) days prior to the specified effective date of such termination. In the event of such termination, the

Council shall retain a pro-rata portion of the amounts provided for in Article III, based on the number of monitoring events occurring for each lake before termination versus the total monitoring events specified for each lake. The balance of the amounts will be refunded by the Council to the Watershed.

4.09 Force Majeure. The Council and the Watershed agree that the Watershed shall not be liable for any delay or inability to perform this agreement, directly or indirectly caused by, or resulting from, strikes, labor troubles, accidents, fire, flood, breakdowns, war, riot, civil commotion, lack of material, delays of transportation, acts of God or other cause beyond reasonable control of Council and the Watershed.

4.10 Audits. Pursuant to Minn. Stat. Section 16C.05, Subd. 5 , the books, records, documents, and accounting procedures and practices of Provider relative to this agreement shall be subject to examination by the Watershed and the State Auditor. Complete and accurate records of the work performed pursuant to this agreement shall be kept by provider for a minimum of six (6) years following termination of this agreement for such auditing purposes. The retention period shall be automatically extended during the course of any administrative or judicial action involving the Watershed regarding matters to which the records are relevant. The retention period shall be automatically extended until the administrative or judicial action is finally completed or until the authorized agent of the Watershed notifies Provider in writing that the records need no longer be kept.

4.11 Relationship of Parties and their Employees. Nothing contained in this agreement is intended, or should be construed, to create the relationship of co-partners or a joint venture between the Council and the Watershed. No tenure or any employment rights including worker's compensation, unemployment insurance, medical care, sick leave, vacation leave, severance pay, retirement, or other benefits available to the employees of one of the parties, including indemnification for third party personal injury/property damage claims, shall accrue to employees of the other party solely by the fact that an employee performs services under this agreement.

4.12 Severability. If any part of this agreement is rendered void, invalid or unenforceable such rendering shall not affect the remainder of this agreement unless it shall substantially impair the value of the entire agreement with respect to either party. The parties agree to substitute for the invalid provision a valid provision that most closely approximates the intent of the invalid provision.

IN WITNESS WHEREOF, the parties have caused this agreement to be executed by their duly authorized representatives on the dates set forth below. This agreement is effective upon final execution by, and delivery to, both parties.

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

Date _____ By_____

Name _____

Its_____

METROPOLITAN COUNCIL

Date_____ By _____

Name _____
Water Resources Assistant Manager

EXHIBIT A

Metropolitan Council Environmental Services Laboratory Prices for Additional Analyses		
Parameter	**Laboratory Code**	**Price (per sample)**
Nutrients (TP & TKN)	NUT-AHLV	$15.25
Chlorophyll	CLA-TR-CS	$15.50
Phosphorus	P-AHLV	$15.25
Chloride	CL-AV	$15.75
Ortho-phosphorus	ORTHO-AV	$15.50
Hardness	HARD-AV	$7.25
Alkalinity	ALK-AV	$13.50
Sulfate	SO4-ICV	$13.50
Metals (Cd, Cr, Cu, Pb, Ni, Zn)	MET-MSV	$36.00
Individual metal/mineral (e.g. Fe)	XX-MSV	$6.00 (per element)
A parameter not on this list		Contact the Council's Contract Manager for specific pricing.

Item 4I.
BCWMC 4-18-19

resourceful. naturally.
engineering and environmental consultants

BARR

Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co. (Barr)
Subject: Item 4I – Marsh Run Apartments – Minnetonka, MN
BCWMC April 18, 2019 Meeting Agenda
Date: April 10, 2019
Project: 23270051 2019 2183

4I Marsh Run Apartments – Minnetonka, MN BCWMC 2019-06

Summary:

Proposed Work: 175-unit multifamily housing facility and associated site work

Basis for Review at Commission Meeting: Use of alternative BMP

Impervious Surface Area: Increase 0.53

Recommendation: Conditional Approval

General Background & Comments

The proposed project is located on the border of the Bassett Creek Main Stem and Medicine Lake South subwatersheds in the northeast quadrant of the intersection of Wayzata Boulevard and Fairfield Road in Minnetonka. The proposed project includes redevelopment of the parcel from a commercial office park to a 175-unit multifamily residential housing facility resulting in 2.47 acres of grading (disturbance). The proposed project creates 1.87 acres of new and fully reconstructed impervious surfaces, including 1.34 acres of fully reconstructed impervious surfaces and an increase of 0.53 acres of impervious surfaces, from 1.34 acres (existing) to 1.87 acres (proposed). The proposed project will result in a change of land use and zoning from commercial to multifamily residential.

Floodplain

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

Stormwater Management

The August 2017 BCWMC Requirements for Improvements and Development Proposals (Requirements) document states that projects that contain more than one acre of new and fully reconstructed impervious area must manage stormwater such that peak flow rates leaving the site are equal to or less than the existing rate 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 discussed below, the proposed peak flows meet the BCWMC requirement.

In existing conditions and proposed conditions, stormwater runoff generally leaves the site in three directions, including to the west to Fairfield Road, to the south to Wayzata Boulevard, or to the northeast

to an existing swale. An underground storage system will be constructed in the northwest corner of the parcel to provide rate control for most of the site. **Table 1** summarizes the existing and proposed peak discharges in each direction.

Table 1: Summary of Existing and Proposed Peak Discharge Rates

Storm Event	Existing Peak Discharge (cfs)			Proposed Peak Discharge (cfs)		
	Fairfield Road	Wayzata Boulevard	Northeast (Swale)	Fairfield Road	Wayzata Boulevard	Northeast (Swale)
2-year	3.81	3.87	0.15	2.34	2.30	0.15
10-year	6.35	6.30	0.30	4.39	3.65	0.30
100-year	11.97	11.73	0.65	9.95	6.64	0.65

Water Quality Management

The BCWMC Requirements document states that projects that contain more than one acre of new or fully reconstructed impervious area must treat stormwater in accordance with the BCWMC water quality performance goals. If the BCWMC water quality performance goal is not feasible and/or is not allowed for a proposed project, then the project proposer must implement BCWMC flexible treatment options. As shown below, the proposed stormwater management system meets BCWMC water quality requirements.

The proposed project creates 1.87 acres of new and fully reconstructed impervious surfaces. Flexible Treatment Option (FTO) #2 was selected for the proposed project due to the presence of tight clay soils that are not conducive to infiltration. FTO #2 requires that the project provide 60% removal of total phosphorus (TP). The applicant has designed a stormwater management system that includes stormwater reuse as irrigation and stormwater filtration using a proprietary device (Jellyfish Filter). The applicant used the minimal impact design standards (MIDS) calculator to quantify the overall TP removals for the proposed project and used the "other" BMP for the two Jellyfish Filters. The applicant manually input the expected pollutant removal efficiencies, provided by the manufacturer, into the MIDS calculator to evaluate the BMPs. Barr reviewed available third party testing for the proprietary BMP. **Table 2** summarizes the annual TP loading and TP removals for the proposed BMPs. Modifications required by the comments may reduce the anticipated TP removals for the BMPs, but it is expected that the overall project will continue to meet the BCWMC water quality requirements.

Table 2: Summary of TP Removal and TP Removal Efficiency for Proposed BMPs

BMP	TP Loading (lbs/year)	TP Removal (lbs/year)	Percent Removal (%)
Stormwater Reuse for Irrigation	2.45	0.70	29
Jellyfish Filter 0408	1.75	0.99	57
Jellyfish Filter 0806	1.04	0.59	57
Total [1]	**3.53**	**2.28**	**65**

[1] The Jellyfish Filter 0408 receives overflows from the stormwater reuse, therefore the totals are not a direct summation of each BMP.

Wetlands

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

Erosion and Sediment Control

The proposed project results in more than 10,000 square feet of land disturbance; therefore, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include rock construction entrances, silt fence, silt dike, and storm drain inlet protection. Permanent erosion and sediment control features include stabilization with seed and mulch and/or landscaping features.

Recommendation

Conditional approval based on the following comments:

1. The HydroCAD models must be revised as follows to demonstrate that the proposed project meets BCWMC rate control requirements:
    a. The impervious area in the proposed conditions HydroCAD model (1.643 acres) does not match the proposed impervious area on the plans (1.87 acres). The HydroCAD model must be revised to match the plans or the discrepancy between the HydroCAD model and plans must be clarified.
2. The MIDS calculator must be revised as follows to demonstrate that the proposed project meets BCWMC water quality goals (or flexible treatment options).
    a. The "other" BMPs, used to represent the Jellyfish Filters, indicate that the BMPs will provide 17% removal of dissolved phosphorus. The Jellyfish Filters appear to only provide physical filtration, therefore the percent removal of dissolved phosphorus must be removed, or documentation must be provided to clarify how the BMP will treat dissolved phosphorus.
3. The flow rate through the Jellyfish Filters appears to exceed the recommended water quality flow rate through the devices. Documentation and/or clarification must be provided as to whether the Jellyfish Filters will provide the indicated pollutant removal rates if the water quality flow rate is exceeded.
4. Projects involving review of alternative BMPs require an add-on fee of $1,000 per the BCWMC Application Form for Development Proposals fee schedule. The additional $1,000 fee must be provided prior to approval.
5. A maintenance agreement must be established between the property owner and the City of Minnetonka for the stormwater management BMPs.
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

0 100 200 Feet

Bassett Creek Watershed Management Commission

BCWMC #2019-06
MARSH RUN APARTMENTS
11650 Wayzata Blvd
Minnetonka, MN

LOCATION MAP

Barr Footer: ArcGIS 10.6.1, 2019-04-10 12:36 File: I:\Client\BassettCreek\gis\maps\Permits\Maps-2019\2019-06 Marsh Run Apartments.mxd User: EMA

Item 5A.
BCWMC 4-18-19

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

April 9, 2019

Ms. Laura Jester
BCWMC Administrator
Keystone Waters, LLC
16145 Hillcrest Lane
Eden Prairie, MN 55346

Subject: Decola Ponds B and C Improvement Project, City Project #18-06
90% Design Plans

Dear Laura:

Enclosed, please find Barr Engineering's correspondence dated April 9, 2019 along with the 90% design plans for the Decola Ponds B and C Improvement Project. These items are being submitted for consideration at the BCWMC meeting scheduled for April 18, 2019.

If you have any questions regarding the enclosures, please contact me at 763-593-8034.

Sincerely,

Jeff Oliver, P.E.
City Engineer

Enclosures

C: Eric Eckman, Development and Assets Supervisor

resourceful. naturally.
engineering and environmental consultants

BARR

4/9/2019

Mr. Jeff Oliver, P.E.
City Engineer
City of Golden Valley
7800 Golden Valley Road
Golden Valley, MN 55427

Re: 90% Design Plans - DeCola Ponds B & C Improvement Project Golden Valley Project 18-06

Dear Mr. Oliver:

Attached please find the 90% design plans for the DeCola Ponds B & C Improvement Project. The 2019 DeCola Pond B & C improvement project (BC-2, 3) will be funded by several sources including the Minnesota Department of Natural Resources Flood Damage Reduction Grant, the BCWMC's ad valorem levy (via Hennepin County) for CIP projects, and funding from Hennepin County and the City of Golden Valley. Per the cooperative agreement between the City of Golden Valley and the BCWMC, the city is to construct the project and the plans and specifications are subject to approval by the Commission. Also, per the agreement, the 90% design plans for this project must be submitted to the BCWMC for review and approval. If the attached 90% plans meet the city's approval, we recommend submitting them, along with this letter, to the BCWMC for inclusion in the meeting packet for their April 18, 2019 meeting. Barr staff will present the 90% plans to the BCWMC at the meeting and answer any questions from the BCWMC.

The remainder of this letter presents information about the feasibility study, the design features of the project, and approval/permitting needs.

Feasibility Study Summary and Selected Project

The City of Golden Valley's *DeCola Ponds B and C Improvement Project Feasibility Study* (Barr Engineering, May 2018) examined the feasibility of three different concepts for the expansion of flood mitigation volume, water quality volume, and habitat improvement in the area around DeCola Ponds B and C, including the area to the north within a permanent drainage and utility easement on the Dover Hill property and in the Pennsylvania Woods Nature Area owned by the City of Golden Valley. This project will reduce flood elevations at the low point on Medicine Lake Road and increase pollutant removal by the DeCola Ponds, which ultimately drains to Bassett Creek.

The three concepts included:

1) Concept 1 – Maximize flood storage
2) Concept 2 – Maximize tree preservation
3) Concept 3 – Hybrid alternative of Concept 1 and 2

The feasibility report recommended the implementation of Concept 3, which intended to balance development of flood mitigation volume with tree preservation. The feasibility report estimated that project implementation (Concept 3) would reduce the 100-year flooding at the low point on Medicine Lake Road so that it is passable by emergency vehicles and reduce 100-year elevations on DeCola Ponds A, B, C, and D by 0.5 foot. The project would remove accumulated sediment in DeCola Pond B and further reduce the annual total phosphorus load to Bassett Creek by 9.0 pounds per year. Additionally, the concept would restore 2.7 acres of wetland and upland habitat in the Pennsylvania Woods Nature Area.

At their May 2018 meeting, the Commission approved the final feasibility study for this project, supporting implementation of Concept 3, and the Commission ordered the project at their August 2018 meeting. Design began in early October 2018, after the MnDNR flood mitigation grant was fully executed with the City of Golden Valley.

Design features – 90% plans

The project design is underway. An environmental assessment worksheet (EAW) process was conducted using 30% design for Concept 3 from the feasibility study. The EAW public comment period was from December 17, 2018-January 16, 2019. Minor comments were received from the Minnesota Pollution Control Agency, the Minnesota Department of Natural Resources, Metropolitan Council, the State Historic Preservation Office, and the Minnesota Department of Transportation.

The EAW comments have been considered and incorporated into the 90% design plans for Concept 3 from the feasibility study. The 90% design has preserved all of the components identified as part of Concept 3, which are being refined as part of the final design process. The 90% design plans are also being used for the environmental permitting process (discussed in the following section).

The table below compares the flood mitigation volume developed, the increase in total phosphorus removal, additional open water area, and restored wetland and upland areas by the project, as presented in the feasibility study and the 90% design plans.

	Flood Mitigation Volume Developed	Additional Total Phosphorus Removal	Additional Open Water Area	Restored Wetland and Upland Area[1]
Feasibility Study (May 2018)	22.0 acre-ft	9.0 lb/yr	1.9 acres	2.7 acres
90% Design Plans	23.9 acre-ft	10.8 lb/yr	2.0 acres	3.2 acres

1 – The restored wetland and upland area as reported in the feasibility study (2.7 acres) included proposed bituminous trail through the restored area (~0.35 ac). The total restored wetland and upland area, not including the bituminous trail, for Concept 3 in the feasibility study was 2.35 acres. The restored wetland and upland area in the 90% design, including the proposed bituminous trail and concrete bench pads through the restored area (~0.30 ac) is 3.2 acres. The total restored wetland and upland area, not including the bituminous trail and concrete bench pad areas, for the 90% design is 2.9 acres.

Similar to the feasibility study, the main components of the 90% design include:

1. Lowering the normal water level (NWL) of DeCola Ponds A, B, and C from 893.8 ft MSL to 893.5 ft MSL to provide additional flood mitigation volume without needing to excavate that volume. This, in addition to the proposed excavation, will develop approximately 23.9 acre-ft of flood

mitigation volume below the existing 100-year flood elevation. This effort includes modifying the DeCola Pond C outlet structure and overflow to lower the NWL while increasing the overflow elevation of the berm on the south end of DeCola Pond C (to increase the flood storage in DeCola Ponds A, B, and C). The modified outlet will also prevent the accumulation of debris on the inlet pipe which is currently a major maintenance issue for the City.

2. Installing a 14′ x 4′ box culvert that will connect the Liberty Crossing flood storage features to the expanded storage in the Dover Hills and DeCola Ponds B and C areas.
3. Developing a sediment forebay in the permanent easement on the Dover Hills area to develop water quality treatment volume, improve ease of maintenance, enhance water quality in downstream locations, and to allow lowering the normal water level of DeCola Ponds A, B, and C to increase flood storage capacity, while preserving or increasing the water quality treatment provided by the DeCola Ponds system. The current grading plan, including maintenance access and inclusion of a bituminous trail around the forebay, results in a slightly higher water quality treatment volume than what was estimated during the feasibility study. The estimated total phosphorus removal based on the 90% design features is approximately 10.8 lbs/year.
4. Increasing the DeCola Ponds B and C open water area, and increasing associated water quality treatment volume through expanding contours below the NWL and dredging accumulated sediment in DeCola Pond B. The proposed expansion does not change the overall depth of the existing ponds, but will provide additional water quality treatment volume and provide additional aquatic habitat for fish, macroinvertebrates, and macrophytes.
5. In addition to increasing the open water areas, expanding the flood and water quality storage around DeCola Ponds B and C allows for the opportunity to create and restore other wetland habitat. For design, we assumed that floodplain/wetland habitat would be established below elevation 899.0 (equivalent to about the 10-year flood elevation), and restored upland habitat would be created in all disturbed areas above this elevation. This upland area will serve as a buffer to the wetlands. Based on the City of Golden Valley's wetland management classification for these ponds (Manage 2/3) the average buffer should be at least 25 feet. However, the project is not proposing new development that will increase imperviousness on the site with the exception of the replacing/realignment of the bituminous trails and installing bench concrete pads in the project area. The trail realignment and concrete pads will add 0.11 acres (~4,790 square feet) of impervious area, however the first phase of the project (Liberty Crossings) reduced impervious by 6,987 square feet. Per the BCWMC requirements, trails and sidewalks are exempt from BCWMC water quality performance standards, but buffers should be provided for trails and sidewalks where possible.
6. Preserving trees on the large knolls between DeCola Ponds A, B, and C, and preserving screening trees along the west, east, and south side of DeCola Pond B and along north and east side of DeCola Pond C. Tree removal is expected within project disturbance limits. However, areas will be restored with native vegetation. At the 90% Design level, it is estimated that 223 trees and 432 shrubs will be planted in the disturbed area. Approximately 2.9 acres will be restored with native wetland and upland seeding.

7. Replacing disturbed trails with ADA-compliant trails to preserve maintenance access, park use and improve walking trail opportunities. Several alternative materials for the trails were evaluated based on comments from the 50% presentation to the Commission. Below is a table showing a comparison of various attributes of each material. Based on initial cost, snow removal, ADA compliance, and maintenance, bituminous asphalt was determined to be the best fit for this project.

Table 1: Trail Material Comparison

Trail material	Total Cost	Durability	Snow Removal	ADA compliance	Maintenance requirements	Permeability
Bituminous Asphalt	$29,000	High: ~20 year lifespan	Easy	Compliant	Short-term (every 2 years): Sealcoat/crack filling	Impermeable
Permeable Pavers	$223,000	High: 20-30 years lifespan	Medium	Compliant, needs increased maintenance to stay that way	Regular Maintenance (more than once a year): Periodic vacuuming, especially in heavily vegetated areas	Highly Variable
Decomposed Granite (DG)	$66,000	Low: 3-5 year lifespan	Difficult	Not Compliant	On-going maintenance (yearly or more often): occasional maintenance to replace loose granite and cracked surfaces	Low to Medium
Decomposed Granite (DG) with stabilizer	$86,000	Low: 3-5 year lifespan	Medium	Compliant, needs increased maintenance to stay that way	On-going maintenance (yearly): organic-lock is self healing, typically add water and rework ruts	Low to Medium
Crushed Lime Rock	$10,000	Low: 3-5 year lifespan	Difficult	Not Compliant	On-going maintenance (yearly and after storms): High ongoing maintenance-uneven wear, ruts and washout/runoff	Low to Medium

8. Educational signage is being developed for the project by the City and signs will likely be installed at each of the two bench locations. BCWMC and other project partners will have their logos included on the signage.

The drawings are at a 90% design stage, which means there are details yet to be worked out before the design is final and ready for bid. Any comments received from the BCWMC will be addressed in the final construction drawings.

Approvals/permit requirements

In addition to BCWMC approval of the plans, other permits/approvals will be required for this project. Other permitting and reviews include the following:

- U.S. Army Corps of Engineers Clean Water Act Section 404 Permit
- MnDNR Public Waters Work Permit
- MnDNR Appropriations Permit for construction dewatering
- MPCA 401 Water Quality Certification
- MPCA Construction Stormwater General Permit
- Compliance with the MPCA's guidance for managing dredged material, including the Notification to Dredge form
- Compliance with the MPCA's guidance for managing contaminated material and debris-containing fill
- Compliance with the Minnesota Wetland Conservation Act (WCA)
- City of Golden Valley Right-of-Way Permit
- City of Golden Valley Stormwater Permit

We anticipate that dewatering will need to start at the beginning of September 2019 to address MnDNR concerns about turtle hibernation and survivability before excavation can begin. We also anticipate that the permitting process could take 6 months. The permitting process is currently underway; the MNDNR MPARS application was submitted February 26, 2019 and the Minnesota Joint Permit Application (for USACE and WCA Impacts) was submitted February 27, 2019. These applications are currently under evaluation and permits are pending.

Recommendations

We recommend that the city request 1) BCWMC approval of the 90% drawings, and 2) BCWMC authorization for the city to proceed with final plans and contract documents.

If you have any questions, please contact me at 952-832-2750 or kleuthold@barr.com.

Sincerely,

Kurt Leuthold, P.E.
Vice President

Item 5A.
BCWMC 4-18-19
Full Plan Set Online

CHANNEL BOTTOM=895.18

CHANNEL BOTTOM=895.18

CHANNEL BOTTOM=895.18

RHODE ISLAND AVE.

DOVER HILLS APARTMENTS

CLASS V RIPRAP, SEE 3/C-21

CONNECT EXISTING STORM SEWER TO BOX CULVERT, SEE 1/C-14

CONNECT 8'-WIDE BITUMINOUS TRAIL TO EXISTING CITY WALKWAY

RECYCLED BENCH AND CONCRETE PLATFORM, SEE 5/C-21

3/C-15

2/C-14

1/C-14

0+00

1+00

14'X4' BOX CULVERT SEE 1/C-14

BULKHEAD EXISTING OPENING TO MANHOLE

REPLACE 8'-WIDE BITUMINOUS TRAIL, SEE 1/C-20

CLASS V RIPRAP

PROPOSED FOREBAY NWL = 894.0

ORANGE CONSTRUCTION FENCE

4/C-15

CB-01

FES-01

8'-WIDE BITUMINOUS TRAIL, SEE 3/C-20

BOULDER WALL, TOP ELEV. 902.0, BOTTOM ELEV. 900.0 SEE 3/C-18

5/C-15

CONNECT 8'-WIDE BITUMINOUS TRAIL TO DOVER HILLS APARTMENTS PARKING LOT

EXISTING DOVER HILLS APARTMENT EASEMENT EXTENTS

ORANGE CONSTRUCTION FENCE

FOREBAY OVERFLOW, SEE 1/C-22

2+00

2+82

CB-02

6/C-15

0+73

CLASS II RIP RAP, SEE 3/C-21

FES-02

0+88

7/C-15

FES-03

FES-04

0+91

CLASS II RIP RAP, SEE 3/C-21

8'-WIDE BITUMINOUS TRAIL, SEE 2/C-20

0+26

1+50

0+00

MATCH LINE
SEE C-13

DECOLA POND B
PROPOSED NWL = 893.5
OHWL = 895.3

DECOLA POND C
PROPOSED NWL = 893.5
OHWL = 895.3

SYMBOL AND PATTERN LEGEND

EXISTING CONDITIONS

- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- EXISTING NATURALIZED TRAIL
- EASEMENT EXTENTS
- FENCE LINE
- BACK OF CURB LINE
- FLOW LINE
- RAILROAD
- GAS LINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNDERGROUND TV
- FIBER OPTIC LINE
- SANITARY SEWER LINE
- SANITARY FORCE MAIN
- STORM SEWER LINE
- WATER
- POWER POLE
- LIGHT POLE
- HYDRANT
- GATE VALVE
- SIGN POST
- DECIDUOUS TREE (SIGNIFICANT)
- CONIFEROUS TREE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- FIBER OPTIC BOX
- ELECTRICAL BOX
- COMMUNICATIONS BOX

PROPOSED CONDITIONS

- PROPOSED 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED STORM SEWER
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- BITUMINOUS TRAIL CROSS SLOPE DIRECTION
- ORANGE CONSTRUCTION FENCE
- PROPOSED COMPOSITE FENCE

1 / - PLAN: PROPOSED CONDITIONS - DOVER HILLS APARTMENTS' EASEMENT AREA
1"=40'-0"

N

0 40 80
SCALE IN FEET

90% DESIGN DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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.

PRINTED NAME KURT A. LEUTHOLD

SIGNATURE

DATE _____ LICENSE # _____

CLIENT	03/22							
BID								
CONSTRUCTION								
RELEASED TO/FOR	A	B	C	0	1	2	3	
	DATE RELEASED							

BARR
Corporate Headquarters:
Minneapolis, Minnesota
Ph: 1-800-632-2277

city of golden valley

Scale	AS SHOWN
Date	03/22/2019
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

CITY OF GOLDEN VALLEY
GOLDEN VALLEY, MN

DECOLA PONDS B&C
IMPROVEMENT PROJECT

PROPOSED GRADING AND STORM SEWER
DOVER HILLS APARMENT EASEMENT AREA

BARR PROJECT No.	23/27-1677.00
CLIENT PROJECT No.	#18-06
DWG. No.	C-12
REV. No.	A

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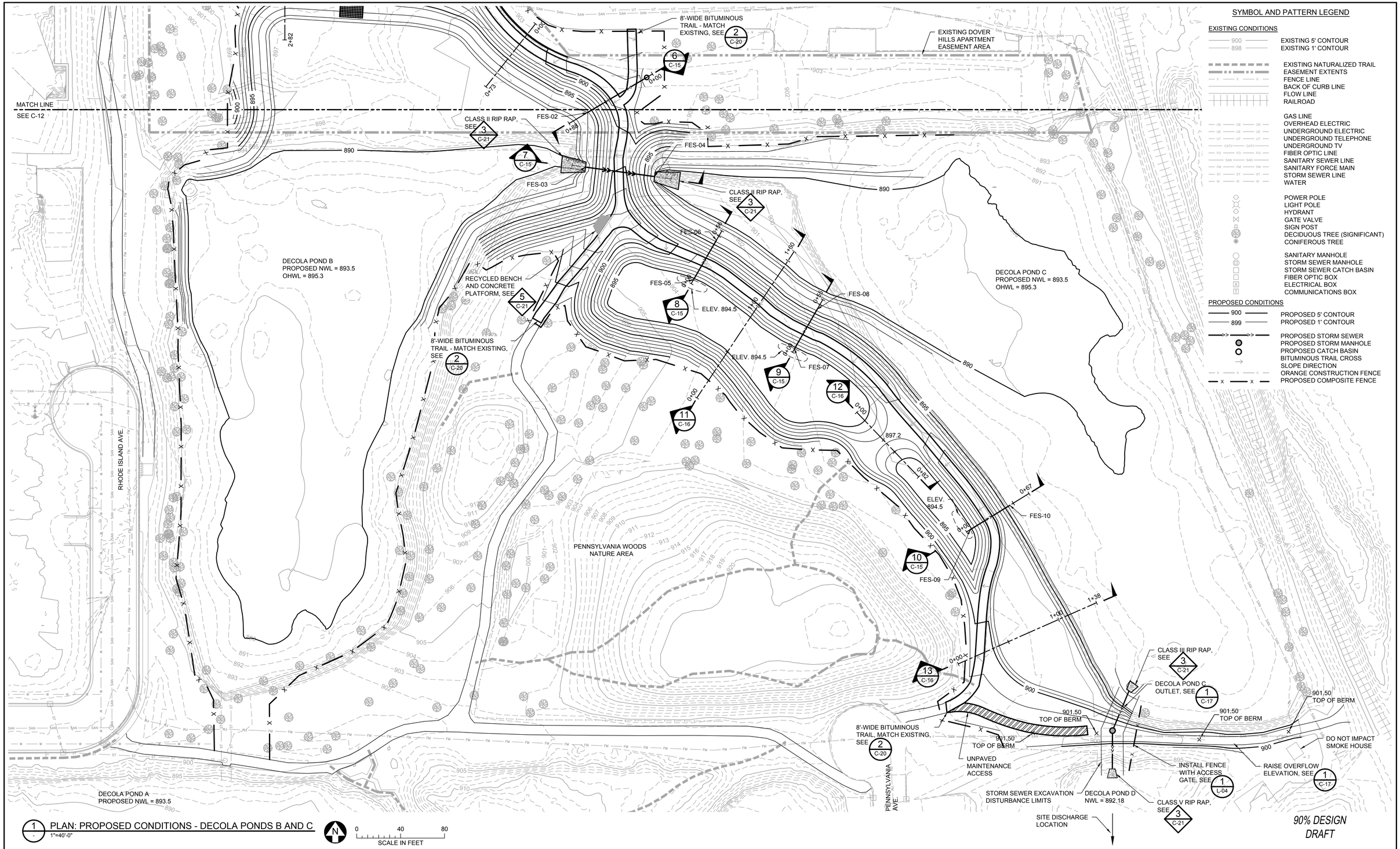

SYMBOL AND PATTERN LEGEND

EXISTING CONDITIONS

- 900 / 898 — EXISTING 5' CONTOUR / EXISTING 1' CONTOUR
- EXISTING NATURALIZED TRAIL
- EASEMENT EXTENTS
- FENCE LINE
- BACK OF CURB LINE
- FLOW LINE
- RAILROAD
- GAS LINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNDERGROUND TV
- FIBER OPTIC LINE
- SANITARY SEWER LINE
- SANITARY FORCE MAIN
- STORM SEWER LINE
- WATER
- POWER POLE
- LIGHT POLE
- HYDRANT
- GATE VALVE
- SIGN POST
- DECIDUOUS TREE (SIGNIFICANT)
- CONIFEROUS TREE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- FIBER OPTIC BOX
- ELECTRICAL BOX
- COMMUNICATIONS BOX

PROPOSED CONDITIONS

- 900 / 899 — PROPOSED 5' CONTOUR / PROPOSED 1' CONTOUR
- PROPOSED STORM SEWER
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- BITUMINOUS TRAIL CROSS SLOPE DIRECTION
- ORANGE CONSTRUCTION FENCE
- PROPOSED COMPOSITE FENCE

1 — PLAN: PROPOSED CONDITIONS - DECOLA PONDS B AND C
1"=40'-0"

N

0 40 80
SCALE IN FEET

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION

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.

PRINTED NAME KURT A. LEUTHOLD

SIGNATURE _____

DATE _____ LICENSE # _____

		A	B	C	0	1	2	3
CLIENT	03/22							
BID								
CONSTRUCTION								
RELEASED TO/FOR	DATE RELEASED							

BARR
Corporate Headquarters:
Minneapolis, Minnesota
Ph: 1-800-632-2277

city of golden valley

Scale	AS SHOWN
Date	03/22/2019
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

CITY OF GOLDEN VALLEY
GOLDEN VALLEY, MN

DECOLA PONDS B&C
IMPROVEMENT PROJECT

PROPOSED GRADING AND STORM SEWER
DECOLA PONDS B & C

BARR PROJECT No.	
23/27-1677.00	
CLIENT PROJECT No.	
#18-06	
DWG. No.	REV. No.
C-13	A

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CONNECT TO EXISTING TRAIL

901.42 903.13 903.66 901.34 903.05 903.17 903.50 903.00 903.07

CONNECT TO EXISTING PAVING

903.86 903.91

EXISTING DOVER HILLS APARTMENT EASEMENT AREA

901.20 901.25 899.05 899.17

902.04 901.96 902.20 902.44 902.04

DECOLA POND B
PROPOSED NWL = 893.5
OHWL = 895.3

906.90 906.92

CONNECT TO EXISTING TRAIL

DECOLA POND C
PROPOSED NWL = 893.5
OHWL = 895.3

BITUMINOUS TRAIL FLOW ARROW, TYPICAL

8' WIDE BITUMINOUS TRAIL, TYPICAL

PENNSYLVANIA WOODS NATURE AREA

899.10 899.10

UNPAVED MAINTENANCE ACCESS

CONNECT TO EXISTING TRAIL

902.09 902.05

PENNSYLVANIA AVE.

SYMBOL AND PATTERN LEGEND

EXISTING CONDITIONS

- 900 — EXISTING 5' CONTOUR
- 898 — EXISTING 1' CONTOUR
- EXISTING NATURALIZED TRAIL
- EASEMENT EXTENTS
- FENCE LINE
- BACK OF CURB LINE
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- STORM SEWER CATCH BASIN
- FIBER OPTIC BOX
- ELECTRICAL BOX
- COMMUNICATIONS BOX

PROPOSED CONDITIONS

- 900 — PROPOSED 5' CONTOUR
- 899 — PROPOSED 1' CONTOUR
- PROPOSED STORM SEWER
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- BITUMINOUS TRAIL CROSS SLOPE DIRECTION
- PROPOSED COMPOSITE FENCE

1 - PLAN: PROPOSED BITUMINOUS TRAIL
1"=40'-0"

N

0 50 100
SCALE IN FEET

90% DESIGN DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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PRINTED NAME KURT A. LEUTHOLD

SIGNATURE

DATE LICENSE #

	03/22						
CLIENT							
BID							
CONSTRUCTION							
RELEASED TO/FOR	A	B	C	0	1	2	3
	DATE RELEASED						

BARR
Corporate Headquarters:
Minneapolis, Minnesota
Ph: 1-800-632-2277

city of golden valley

Scale	AS SHOWN
Date	04/05/2019
Drawn	KJN2
Checked	JAK2
Designed	JAK2
Approved	KAL

CITY OF GOLDEN VALLEY
GOLDEN VALLEY, MN

DECOLA PONDS B&C
IMPROVEMENT PROJECT

PROPOSED BITUMINOUS TRAIL PLAN
DECOLA PONDS B & C

BARR PROJECT No. 23/27-1677.00
CLIENT PROJECT No. #18-06
DWG. No. C-18
REV. No. A

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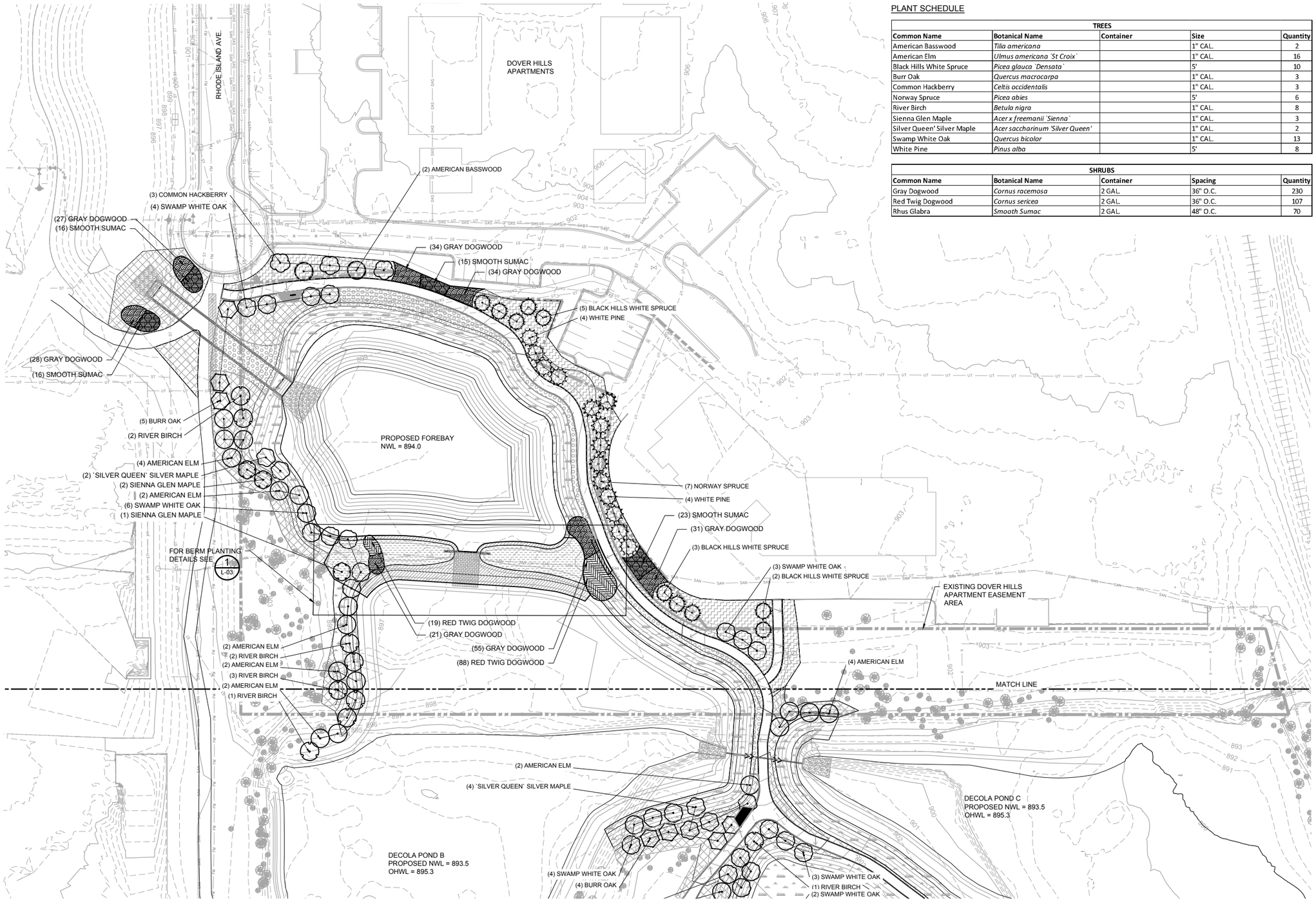

1 PLAN: RESTORATION - DOVER HILLS APARTMENTS' EASEMENT AREA
1"=40'-0"

N 0 40 80
SCALE IN FEET

PLANT SCHEDULE

TREES				
Common Name	**Botanical Name**	**Container**	**Size**	**Quantity**
American Basswood	*Tilia americana*		1" CAL.	2
American Elm	*Ulmus americana `St Croix`*		1" CAL.	16
Black Hills White Spruce	*Picea glauca `Densata`*		5'	10
Burr Oak	*Quercus macrocarpa*		1" CAL.	3
Common Hackberry	*Celtis occidentalis*		1" CAL.	3
Norway Spruce	*Picea abies*		5'	6
River Birch	*Betula nigra*		1" CAL.	8
Sienna Glen Maple	*Acer x freemanii `Sienna`*		1" CAL.	3
Silver Queen' Silver Maple	*Acer saccharinum 'Silver Queen'*		1" CAL.	2
Swamp White Oak	*Quercus bicolor*		1" CAL.	13
White Pine	*Pinus alba*		5'	8

SHRUBS				
Common Name	**Botanical Name**	**Container**	**Spacing**	**Quantity**
Gray Dogwood	*Cornus racemosa*	2 GAL.	36" O.C.	230
Red Twig Dogwood	*Cornus sericea*	2 GAL.	36" O.C.	107
Rhus Glabra	*Smooth Sumac*	2 GAL.	48" O.C.	70

SYMBOL AND PATTERN LEGEND

EXISTING CONDITIONS

- 900 — EXISTING 5' CONTOUR
- 898 — EXISTING 1' CONTOUR
- EXISTING NATURALIZED TRAIL
- EASEMENT EXTENTS
- FENCE LINE
- BACK OF CURB LINE
- FLOW LINE
- RAILROAD
- GAS LINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
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- POWER POLE
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- HYDRANT
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- SIGN POST
- DECIDUOUS TREE (SIGNIFICANT)
- DECIDUOUS TREE
- CONIFEROUS TREE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- FIBER OPTIC BOX
- ELECTRICAL BOX
- COMMUNICATIONS BOX

PROPOSED CONDITIONS

- 900 — PROPOSED 5' CONTOUR
- 899 — PROPOSED 1' CONTOUR
- PROPOSED STORM SEWER
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- BITUMINOUS TRAIL CROSS SLOPE DIRECTION
- PROPOSED COMPOSITE FENCE

RESTORATION PLAN

- UPLAND ZONE (899+): PRI SAVANNA GRASS SEED MIX AND EROSION CONTROL BLANKET
- UPLAND ZONE (899+): PRI SAVANNA WILD FLOWER SEED MIX AND EROSION CONTROL BLANKET
- WET MEADOW ZONE (NWL TO 899): PRI SHORLINE GRASS SEED MIX AND EROSION CONTROL BLANKET
- WET MEADOW ZONE (895+): PRI SHORLINE GRASS SEED MIX WITH EROSION CONTROL BLANKET AND UPPER BERM OVERFLOW NATIVE GRASS SEED AND PLUGS (SEE 1 L-03 FOR MORE DETAILS)
- WET MEADOW ZONE (<895): PRI SHORLINE GRASS SEED MIX WITH EROSION CONTROL BLANKET AND LOWER BERM OVERFLOW NATIVE GRASS SEED AND PLUGS (SEE 1 L-03 FOR MORE DETAILS)
- LOW MAINTENANCE TURF MIX (MnDOT 25-131, SEE MnDOT SEEDING MANUAL 2014 EDITION) WITH EROSION CONTROL BLANKET

90% DESIGN DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINTED NAME FRED ROZUMASKI
SIGNATURE
DATE _____ LICENSE # 26559

RELEASED TO/FOR: CLIENT 03/22 | BID | CONSTRUCTION
DATE RELEASED: A B C 0 1 2 3

BARR
Corporate Headquarters: Minneapolis, Minnesota
Ph: 1-800-632-2277

city of golden valley

Scale	AS SHOWN
Date	03/22/2019
Drawn	EEF
Checked	JAK2
Designed	FJR
Approved	KAL

CITY OF GOLDEN VALLEY
GOLDEN VALLEY, MN

DECOLA PONDS B&C
IMPROVEMENT PROJECT

RESTORATION AND LANDSCAPE PLAN
DOVER HILLS APARMENT EASEMENT AREA

BARR PROJECT No. 23/27-1677.00
CLIENT PROJECT No. #18-06
DWG. No. L-01
REV. No. A

MATCH LINE

(2) AMERICAN ELM
(2) RIVER BIRCH
(2) AMERICAN ELM
(3) RIVER BIRCH
(2) AMERICAN ELM
(1) RIVER BIRCH

EXISTING DOVER HILLS APARTMENT EASEMENTAREA

(4) AMERICAN ELM

(2) AMERICAN ELM
(4) `SILVER QUEEN` SILVER MAPLE

(4) SWAMP WHITE OAK
(4) BURR OAK
(4) SWAMP WHITE OAK
(1) AMERICAN ELM
(3) RIVER BIRCH
(3) AMERICAN BASSWOOD

(3) SWAMP WHITE OAK
(1) RIVER BIRCH
(2) SWAMP WHITE OAK
(1) AMERICAN ELM
(1) SWAMP WHITE OAK
(1) RIVER BIRCH
(2) SWAMP WHITE OAK
(2) RIVER BIRCH
(2) SWAMP WHITE OAK

(3) COMMON HACKBERRY
(3) AMERICAN BASSWOOD

(3) RIVER BIRCH
(14) TAMARACK

(14) TAMARACK

(3) COMMON HACKBERRY
(2) AMERICAN ELM
(2) SWAMP WHITE OAK

(2) AMERICAN ELM
(3) COMMON HACKBERRY
(3) AMERICAN BASSWOOD

(1) `SILVER QUEEN` SILVER MAPLE
(30) TAMARACK

DECOLA POND B
PROPOSED NWL = 893.5
OHWL = 895.3

PENNSYLVANIA WOODS NATURE AREA

FOR PLANTING DETAILS SEE 2 / L-03

(3) AMERICAN ELM
(4) SWAMP WHITE OAK

(2) RIVER BIRCH
(4) SWAMP WHITE OAK
(3) BURR OAK

(11) 'CARDINAL' RED TWIG DOGWOOD

(5) RIVER BIRCH
(5) BURR OAK
(4) AMERICAN ELM

(14) 'CARDINAL' RED TWIG DOGWOOD

DECOLA POND A
PROPOSED NWL = 893.5
OHWL = 895.3

DECOLA POND D
NWL = 892.18

PLANT SCHEDULE

TREES				
Common Name	**Botanical Name**	**Container**	**Size**	**Quantity**
American Basswood	*Tilia americana*		1" CAL.	9
American Elm	*Ulmus americana `St Croix`*		1" CAL.	14
Burr Oak	*Quercus macrocarpa*		1" CAL.	11
Common Hackberry	*Celtis occidentalis*		1" CAL.	9
River Birch	*Betula nigra*		1" CAL.	15
Silver Queen' Silver Maple	*Acer saccharinum 'Silver Queen'*		1" CAL.	5
Swamp White Oak	*Quercus bicolor*		1" CAL.	27
Tamarack	*Larix laricina*		5'	57

SHRUBS				
Common Name	**Botanical Name**	**Container**	**Spacing**	**Quantity**
Cardinal' Red Twig Dogwood	*Cornus sericea 'Cardinal'*	2 GAL.	36" O.C.	25

SYMBOL AND PATTERN LEGEND

EXISTING CONDITIONS

- EXISTING 5' CONTOUR
- EXISTING 1' CONTOUR
- EXISTING NATURALIZED TRAIL
- EASEMENT EXTENTS
- FENCE LINE
- BACK OF CURB LINE
- FLOW LINE
- RAILROAD
- GAS LINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE
- UNDERGROUND TV
- FIBER OPTIC LINE
- SANITARY SEWER LINE
- SANITARY FORCE MAIN
- STORM SEWER LINE
- WATER
- POWER POLE
- LIGHT POLE
- HYDRANT
- GATE VALVE
- SIGN POST
- DECIDUOUS TREE (SIGNIFICANT)
- DECIDUOUS TREE
- CONIFEROUS TREE
- SANITARY MANHOLE
- STORM SEWER MANHOLE
- STORM SEWER CATCH BASIN
- FIBER OPTIC BOX
- ELECTRICAL BOX
- COMMUNICATIONS BOX

PROPOSED CONDITIONS

- PROPOSED 5' CONTOUR
- PROPOSED 1' CONTOUR
- PROPOSED STORM SEWER
- PROPOSED STORM MANHOLE
- PROPOSED CATCH BASIN
- BITUMINOUS TRAIL CROSS SLOPE DIRECTION
- PROPOSED COMPOSITE FENCE

RESTORATION PLAN

- UPLAND ZONE (899+): PRI SAVANNA GRASS SEED MIX AND EROSION CONTROL BLANKET
- UPLAND ZONE (899+): PRI SAVANNA WILD FLOWER SEED MIX AND EROSION CONTROL BLANKET
- UPLAND ZONE (899+): PRI SAVANNA WILD FLOWER SEED MIX AND TURF REINFORCEMENT MAT
- UPLAND ZONE (899+): PRI SAVANNA GRASS SEED MIX AND TURF REINFORCEMENT MAT
- WET MEADOW ZONE (NWL TO 899): PRI SHORLINE GRASS SEED MIX AND EROSION CONTROL BLANKET
- WET MEADOW ZONE (NWL TO 899): PRI SHORLINE GRASS SEED MIX AND TURF REINFORCEMENT MAT
- LOW MAINTENANCE TURF MIX (MnDOT 25-131, SEE MnDOT SEEDING MANUAL 2014 EDITION) WITH EROSION CONTROL BLANKET

1 / - PLAN: RESTORATION - DECOLA PONDS B AND C
1"=40'-0"

N

0 40 80
SCALE IN FEET

90% DESIGN DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME FRED ROZUMALSKI
SIGNATURE
DATE . LICENSE # 26559

CLIENT	03/22							
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	DATE RELEASED							

BARR
Corporate Headquarters:
Minneapolis, Minnesota
Ph: 1-800-632-2277

city of golden valley

Scale	AS SHOWN
Date	03/22/2019
Drawn	EEF
Checked	JAK2
Designed	FJR
Approved	KAL

CITY OF GOLDEN VALLEY
GOLDEN VALLEY, MN

DECOLA PONDS B&C
IMPROVEMENT PROJECT

RESTORATION AND LANDSCAPE PLAN
DECOLA PONDS B & C

BARR PROJECT No. 23/27-1677.00
CLIENT PROJECT No. #18-06
DWG. No. L-02
REV. No. A

CADD USER: Erin E. Feehily FILE: M:\DESIGN\2327\1677.00\2327167700_L-02_RESTORATIONPLAN_DECOLAB_C.DWG PLOT SCALE: 1:1 PLOT DATE: 4/10/2019 12:34 PM

Item 5B.
BCWMC 4-18-19
Full Document Online

Jevne Park Stormwater Improvement Project Feasibility Study

Medicine Lake, Minnesota

April 2019 DRAFT

Prepared for
Bassett Creek Watershed Management Commission

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Jevne Park Stormwater Improvement Project Feasibility Study

April 2019 DRAFT

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1.0 Executive Summary

1.1 Background

As the City of Medicine Lake is nearly completely surrounded by Medicine Lake, maintaining and improving the quality of the lake itself is of paramount importance to the city. Given the city's size, current infrastructure, and limited opportunity to construct projects in other locations in the city, constructing the stormwater improvement project in the Jevne Park area will offer the opportunity to improve drainage, provide additional flood storage volume for the smaller, more frequent events, and provide additional water quality volume that will reduce pollutant loads to Medicine Lake, an impaired water body due to excess nutrients.

1.2 Site Conditions

Jevne Park is a public park located on the peninsula that includes the City of Medicine Lake. The park is surrounded by Peninsula Road (see Figure 2-1). The proposed project will be fully within the park area, focusing on the existing low area/wetland in the park. This wetland is located completely in the park, and receives runoff from the adjacent road and residential areas. Water discharges from the wetland area via a 15" diameter corrugated metal pipe (CMP) culvert, which carries the water to the ditch on the south side of Peninsula Road. The outlet from the ditch is an 18" diameter CMP culvert that discharges into a small channel directly connected to Medicine Lake.

The normal water level (NWL) of the wetland in Jevne Park is controlled by the 18" culvert, and the invert of this culvert (887.7 ft MSL (NAVD88)) is the same as the NWL of Medicine Lake. The Minnesota Department of Natural Resources' (MnDNR) ordinary high water level (OHWL) for Medicine Lake is 889.3 ft MSL (NAVD88), Although the wetland area in Jevne Park area is not mapped as a MnDNR public water or wetland, the MnDNR has jurisdiction over work completed in Jevne Park because the wetland is hydraulically connected to Medicine Lake and below the OHWL of Medicine Lake.

1.3 Project Alternatives

Two conceptual designs were evaluated for developing water quality and flood storage volume along with improved habitat within the Jevne Park area. The first conceptual design focused on developing water quality treatment volume and flood storage in the existing wetland footprint, and the second concept concentrated on developing water quality and flood storage in an expanded footprint.

In addition to expanding flood storage across varying footprints within the project area, measures considered for potential implementation in all scenarios included the following:

- Increasing the Jevne Park flood storage volume area will help improve conditions for smaller, more frequent storm events where Peninsula Road is temporarily inundated. However, this project is not intended to reduce the 100-year flood elevations resulting from the influence of Medicine Lake.

- Increasing the Jevne Park water quality treatment volume through expanding contours below the NWL. The proposed expansion will lower the overall depth of the existing ponds, and will provide additional water quality treatment volume and reduce pollutant loads to Medicine Lake.
- Slightly modifying the bituminous surface on Peninsula Road east of Jevne Park to redirect runoff from the south side of Peninsula Road to the expanded pond in Jevne Park; this modification will allow more runoff to be treated before draining into Medicine Lake.
- The modifications to the ponding area will provide the opportunity to restore/expand wetland habitat, create additional aquatic habitat for fish, turtles, waterfowl, macroinvertebrates, and macrophytes, and establish/expand a 25-foot wetland buffer around the open water areas, as space allows.

The alternatives are discussed in more detail in Sections 5.0 and 6.0.

1.4 Relationship to Watershed Management Plan

The Bassett Creek Watershed Management Commission (BCWMC) included the Jevne Park Stormwater Improvement Project in its Capital Improvement Plan (CIP), based on the following "gatekeeper" policy from the BCWMC Plan. Those items in bold italics represent those that directly apply to the Jevne Park Improvement Project.

110. The BCWMC will consider including projects in the CIP that meet one or more of the following "gatekeeper" criteria.

- Project is part of the BCWMC trunk system (see Section 2.8.1, Figure 2-14 and Figure 2-15 of the report)
- ***Project improves or protects water quality in a priority waterbody***
- ***Project addresses an approved TMDL or watershed restoration and protection strategy (WRAPS)***
- Project addresses flooding concern

The BCWMC will use the following criteria, in addition to those listed above, to aid in the prioritization of projects:

- Project protects or restores previous Commission investments in infrastructure
- Project addresses intercommunity drainage issues
- Project addresses erosion and sedimentation issues
- ***Project will address multiple Commission goals (e.g., water quality, runoff volume, aesthetics, wildlife habitat, recreation, etc.)***
- Subwatershed draining to project includes more than one community
- Addresses significant infrastructure or property damage concerns

The BCWMC will place a higher priority on projects that incorporate multiple benefits, and will seek opportunities to incorporate multiple benefits into BCWMC projects, as opportunities allow.

The Jevne Park Stormwater Improvement Project several gatekeeper criteria— the project will improve water quality as its primary goal by reducing the amount of sediment and pollutants that go into Medicine Lake. Additionally, this project will also help address multiple BCWMC goals by capturing increased runoff volume, improving drainage conditions during more frequent events, enhancing water quality, providing recreation opportunities, and improving wildlife habitat.

1.5 Project Impacts and Estimated Costs

Potential impacts of the proposed project (increasing the flood storage and water quality treatment volumes of Jevne Park) are summarized in Table 6-1 and discussed in Section 6.0. This section also summarizes permit requirements (e.g., Minnesota Department of Natural Resources public waters work permit), temporary impacts to wetlands, tree loss, and temporary closure of part of the park.

The proposed project will redirect currently untreated water to an expanded wetland area and will result in increased permanent pooling volume in the wetland and wetland depth, therefore, reducing sediment and phosphorus loading to Medicine Lake. Estimates of existing pollutant loadings are presented in Section 6.0. The estimated increase in annual total phosphorus removal ranges from approximately 4.1 pounds per year (Concept 1) to 4.9 pounds per year (Concept 2).

This project is not intended to solve the flooding associated wither larger storm events as flooding during these events (e.g. 100-year event) is the result of high water levels on Medicine Lake. Concept 1 lowers the flood elevations of the 1-year and 2-year events by 0.2 ft, while Concept 2 lowers the flood elevations for the 1-year, 2-year, and 10-year events by 0.5 ft, 0.5 ft, and 0.2 ft, respectively. Further information on flood levels and reductions are discussed in Section 6.0.

In order to develop the flood storage and water quality volume, some tree removal will be required within the project disturbance/grading limits. Wetland and upland restoration, including planting of new trees and shrubs, will occur in all areas disturbed by construction. Tree replanting and restoration will be taken into the consideration during final design and is included in the feasibility-level opinion of cost estimate.

The feasibility-level opinion of costs for implementing the various concepts for the 2020-2021 Jevne Park Improvement Project is presented in Table 1-1. This table also lists the 30-year annualized total phosphorus reduction costs. The annualized cost per pound of phosphorus removed for this project using the current P8 model analysis is high when compared to most other BCWMC CIP projects, but within the range of other costly projects. For example, the Northwood Lake Improvement Project had a cost per pound of phosphorus removal of $5,900. For this project, the high cost is due to the relatively small tributary area for this project which does not generate a large amount of phosphorus load. However, there may be opportunities to optimize the design during final design to reduce overall project costs.

For a complete summary of the estimated impacts and costs of the concepts, including the methodology and assumptions used for the cost estimate, refer to Section 0, Section 7.0, and Table 6-1.

Concept Design: Summary Matrix

Category	Item	Existing Conditions	Concept 1	Concept 2
Flood Mitigation	Flood mitigation volume	2.52 ac-ft	2.90 ac-ft	3.45 ac-ft
	2-year flood	889.6 ft MSL	889.4 ft MSL (-0.2 ft)	889.1 ft MSL (-0.5 ft)
	10-year flood	890.0 ft MSL	890.0 ft MSL (0.0 ft)	889.8 ft MSL (-0.2 ft)
	100-year flood	890.4 ft MSL	890.4 ft MSL (0.0 ft)	890.4 ft MSL (0.0 ft)
Water Quality	Total phosphorus removal	2.9 pounds/year	7.0 pounds/year (+4.1)	7.7 pounds/year (+4.8)
Habitat	Open water	0.06 ac	0.39 ac	0.72 ac
	Total wetland area (including open water)	0.86 ac	0.92 ac	1.16 ac
	Wetland and buffer area	0.15 ac	0.47 ac	0.53 ac
Project Costs	Planning-level cost estimate (-20%/+30%) (BCWMC CIP budget = $500,000)	N/A	$404,000	$562,000
	Cost benefit	N/A	$5,800 per lb TP/year	$6,700 per lb TP/year

Table 1-1 Feasibility-level Cost Estimates Summary

Concept	Total Project Cost (-20%/30%)	30-Year Annualized Cost per Pound of Total Phosphorus Removed
1	$404,000 ($324,000-526,000)	$5,800
2	$562,000 ($450,000-731,000)	$6,700

1.6 Recommendations

Based on review of the project impacts; feedback from the Medicine Lake City Council, the public, and the Medicine Lake representatives; and the overall project costs and benefits, the BCWMC Engineer recommends constructing Concept 1, which provides the necessary volume to achieve the goals of the project.

With a larger footprint, Concept 2 develops more flood and water quality treatment volume than Concept 1. This results in more significant reductions in the peak flood elevations for the smaller, more frequent storm events and temporary inundation of Peninsula Road. However, most residents who attended the public open house did not indicate they had significant concern about the inundation of Peninsula Road.

Although Concept 2 provides slightly more pollutant removal than Concept 1 (an increase in total phosphorus removal of 4.9 lbs per year versus 4.1 lbs per year), the cost-benefit for pollutant removal is better for Concept 1, suggesting that Concept 1 is a more cost-effective project.

The estimated tree removal for Concept 1 is only 8 trees (three times fewer trees than estimated for Concept 2). Concept 1 results in a total wetland area of 0.92 acre, including the open water area, and also develops a 0.47 acres wetland buffer. This concept also provides an opportunity to incorporate additional wildlife habitat such as turtle logs and water fowl nesting structures, along with educational opportunities.

The planning level estimated cost for the recommended Concept1 is $404,000 (-20%/+30%). The BCWMC CIP funding (ad valorem tax levied by Hennepin County on behalf of the BCWMC), will be the sole source of funding for this project.

2.0 Background and Objectives

As the City of Medicine Lake is nearly completely surrounded by Medicine Lake, maintaining and improving the quality of the lake itself is of paramount importance to the city. Given the city's size, current infrastructure, and limited opportunity to construct projects in other locations in the city, constructing the stormwater improvement project in the Jevne Park area will offer the opportunity to improve drainage, provide additional flood storage volume for the smaller, more frequent events, and provide additional water quality volume that will reduce pollutants loads to Medicine Lake.

Medicine Lake is listed as impaired on the Minnesota Pollution Control Agency (MPCA) 303d list for mercury, chlorides, and excess nutrients (e.g. total phosphorus), and a Total Maximum Daily Load study (TMDL) for the excess nutrients impairments was approved in 2011. The TMDL identified a needed reduction in watershed total phosphorus loads to Medicine Lake by 28 percent (1,287 pounds/year); however, the waste load allocation assigned in the TMDL was categorical, meaning the City of Medicine Lake was not assigned a specific load reduction.

2.1 Project Area Description

Jevne Park is a public park located on the peninsula that includes the City of Medicine Lake. The park is surrounded by Peninsula Road (see Figure 2-1). The proposed project will be fully within the park area, focusing on the existing low area/wetland in the park. This wetland is located completely in the park, and receives runoff from the adjacent road and residential areas.

The topographic survey indicates that the existing bottom elevation of the wetland in Jevne Park is 886.6 ft MSL (NAVD88). Water discharges from the wetland area via a 15" diameter corrugated metal pipe (CMP) culvert, which carries water to the ditch on the south side of Peninsula Road. The outlet from the ditch is an 18" diameter CMP culvert that discharges into a small channel directly connected to Medicine Lake.

The normal water level (NWL) of the wetland in Jevne Park is controlled by the 18" culvert, and the invert of this culvert (887.7 ft MSL (NAVD88)) is the same as the NWL of Medicine Lake.

The wetland area in Jevne Park area is not mapped as a Minnesota Department of Natural Resources' (MnDNR) public water or wetland. However, through communications with MnDNR staff during the feasibility study process, the MnDNR would take jurisdiction over work completed in Jevne Park because the wetland is hydraulically connected to Medicine Lake and below the ordinary high water level (OHWL) of Medicine Lake (889.3 ft MSL (NAVD88)).

This area is mapped as wetland as part of the National Wetlands Inventory (NWI) and is also flagged as a potential wetland in the Hennepin County Wetlands Inventory. A wetland delineation was completed in 2018 as part of this study (see Section 3.0).

Figure 2-1 shows the Jevne Park project area. Figure 2-2 shows the tributary subwatersheds (MLD-039A, MLD-039B, MLD-039C, MLD-039D, MLD-039E, MLD-039F, MLD-039G,), drainage patterns, and sanitary sewers.

2.2 Goals and Objectives

The goals and objectives of the feasibility study are to:

1. Review the feasibility of developing increased open water area including the development of additional flood and water quality treatment volume in Jevne Park, and identify and evaluate up to three alternatives.

2. Develop up to three conceptual designs, including preliminary grading in AutoCAD Civil 3D, modeling hydrology and hydraulics using XP-SWMM, and modeling water quality improvements using P8.

3. Provide a planning level opinion of cost for design and construction of the alternatives.

4. Identify potential project impacts and permitting requirements.

5. Develop visual representations of up to three alternatives for public input.

The goals and objectives of the stormwater improvement project are to:

1. Better manage stormwater runoff, as the city has no municipal storm sewer system.

2. Increase capacity for stormwater storage within the existing natural pond/wetland and swale in Jevne Park.

3. Provide a better way to route, carry and store excess stormwater to minimize flooding within Jevne Park and on adjacent residential properties (approximately 15).

4. Reduce sediment and phosphorus loading to Medicine Lake.

5. Reduce City of Medicine Lake capital and maintenance expenditures associated with road and culvert repair caused by excessive volumes and rates of runoff.

6. Sustain/expand existing waterfowl and wildlife habitats.

2.3 Considerations

Key considerations for project alternatives included:

1. Maximizing the amount of permanent pool storage to provide water quality benefits, and maximize flood storage for smaller, more frequent events.

2. Minimizing the permitting required to construct the project.

3. Maintaining or improving the functionality of Jevne Park, including water quality, flood control, and habitat functions.

4. Minimizing wetland impacts.

5. Balancing tree loss and flood/water quality storage development.

The considerations listed above played a key role in determining final recommendations and will continue to play a key role through final design.

3.1.8 Ordinary High Water Level

Being surrounded by Medicine Lake, the Jevne Park wetland's water level is directly affected by the lake. As defined in Minnesota Statutes 103G.005, the OHWL for water basins is "an elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial." The MnDNR determined that the OHWL for Medicine Lake is 889.3 ft MSL (NAVD88). Based on conversations with MnDNR staff and the hydraulic connection between Jevne Park and Medicine Lake, the Jevne Park area is considered part of Medicine Lake and therefore has the same OHWL.

4.0 Stakeholder Input

4.1 Medicine Lake Representatives

Unlike the other cities within the BCWMC, the City of Medicine Lake does not have city staff (e.g. city engineer, etc.). Therefore, four resident representatives were selected to participate in the feasibility study process. These representatives included the following:

- Clint Carlson – BCWMC Commissioner
- Gary Holter – BCWMC Alternative Commissioner
- Susan Wiese – BCWMC Technical Advisory Committee (TAC) Representative
- Chris Klar – City of Medicine Lake Public Works Representative

4.2 Public Stakeholder Meetings

4.2.1 Project Kick-off Meeting with BCWMC staff and Medicine Lake Representatives

A project kick-off meeting was held in Medicine Lake City Hall with BCWMC staff and Medicine Lake representatives on August 13, 2018. At this meeting, BCWMC staff, the city representatives, and Barr staff shared their respective information regarding the Jevne Park area, which included the historic ownership agreement and existing flood situation.

The city representatives expressed their request to maintain Jevne Park's use as a scenic park, and suggested limiting the storage expansion outside of the current wetland footprint.

After the meeting, BCWMC staff drafted letters to the residents adjacent to the park, south of Peninsula Road to gather feedback on potential participation with the BCWMC on this project and to gain permission to access their property for field data collection.

4.2.2 Meeting with Medicine Lake Representatives

A second meeting with the city representatives was held on December 17, 2018. Barr shared the existing conditions information collected from the surveys, and compiled from the refined models. Permitting and habitat considerations were also discussed.

Three proposed concepts were presented with the proposed site footprint, and the addition of flood storage and water quality volume for each concept. The first two concepts would be located completely within Jevne Park, while the third concept would also include expanding water quality and flood storage volume on the private property south of Peninsula Road. However, based on preliminary evaluation of the contributing watershed areas and the water quality and flood storage volumes in the wetlands south of Peninsula Road, it was determined these areas were already providing an appropriate level of treatment for the watershed. Based on this conversation, the city representatives expressed their preference for continuing with the evaluation of the first two concepts for the feasibility study, and eliminating the evaluation of the work on the private property south of Peninsula Road.

The city representatives expressed concerns about the operations and maintenance costs of managing sediments and the wetland buffer and requested that the concepts be discussed with the Medicine Lake City Council before holding a public meeting.

4.2.3 City Council Meeting

The BCWMC Administrator and Engineer attended the February 4, 2019 City of Medicine Lake City Council meeting held in Medicine Lake City Hall. The BCWMC CIP program was presented to the Council, along with an overview of the Jevne Park stormwater improvement project. The two refined concepts were presented during the meeting, along with the estimated flood level reduction and pollutant removal for each concept. Project capital costs and operations and maintenance costs were presented as well.

The City Council asked questions regarding the project and the concepts and expressed support for the project to move forward, noting a preference for Concept 1. The operation and maintenance costs of each concept were further refined prior to the public open house based on the questions from the City Council.

4.2.4 Public Open House

The public open house was held on February 28, 2019 in Medicine Lake City Hall to give residents the opportunity to discuss the concepts and ask questions related to the project. Approximately 15 residents attended the open house. Concepts 1 and 2 were presented to the public, including a detailed description, the estimated flood level reduction and water quality improvement performance, the estimated costs (capital and operations and maintenance), and benefits.

Conversations with most residents at the open house did not indicate that they were concerned about the temporary inundation of Peninsula Road during smaller, more frequent events and all attendees recognized that this project would not impact the standing water on the roadway during the larger events due to high water levels on Medicine Lake.

Some residents did indicate concern about safety in relation to children playing in the park adjacent to an open water area and the safety of the sheet pile weir diversion (intended to extend the runoff flow path). Each conceptual design includes a 10:1 safety bench. We also discussed that during final design, plantings in the buffer and along the edge of the pond can be used to prevent access to the wetland. However, safety should be considered during final design. We also discussed that the final design can consider any known future park plans, such as trails, etc. if this plan/direction can be provided by the city in advance of the final design. This park planning effort would need to be completed by the city and is not part of the BCWMC CIP project scope.

Additionally, one resident indicated that the existing culvert outlet from the wetland in Jevne Park to the ditch on the south side of Peninsula Road is in poor condition and may be partially collapsed. This should be further evaluated during final design.

After discussing the concepts with BCWMC staff, residents were asked to provide a response regarding which concept they preferred or if they preferred to do nothing, based on their understanding of each concept and the anticipated impact on their perceived drainage and water quality concerns.

Based on the response received, the following were the public input results in relation to the preferred concept:

- Do nothing: 8%
- Concept 1: 75%
- Concept 2: 17%

4.3 Technical Stakeholder Meeting

An agency meeting was held with technical stakeholders to solicit feedback on and discuss permitting requirements for the proposed project on November 7, 2018.

Attendees included representatives from the BCWMC, the City of Medicine Lake, the MnDNR, and the MPCA. Information regarding the existing conditions, the general goals, and design concept for the project were presented, which was followed by discussion related to technical feedback and permitting input. The items discussed included:

- Review of project background and history
- Review of site information compiled to date and site investigation work completed
- Review of potential design concepts
- Discussion of regulatory issues, potential permit requirements and other considerations
- Discussion of next steps

Section 6.4 of this feasibility study summarizes the anticipated permitting requirements, based on the discussion at the agency meeting and follow-up correspondence.

5.0 Project Concepts

This section provides a summary of the two conceptual designs developed and evaluated for the Jevne Park stormwater improvement project feasibility study.

5.1 Analyzed Alternatives for Jevne Park Stormwater Improvement Project

When selecting a conceptual design alternative for detailed design and construction, the BCWMC and the City of Medicine Lake may decide to select one of the alternatives, but further discussions and suggestions are encouraged to best meet the overall project budget and goals.

As previously mentioned, a third concept was initially considered, which also included expansion of flood and water quality treatment volume in the wetlands and low areas on the private property south of Peninsula Road. However, after preliminary evaluation of the topographic information and evaluation of the watershed and discussion with the Medicine Lake representatives, it was determined that these wetlands are already providing an appropriate amount of treatment and storage for the contributing area. As a result, this concept was eliminated from further consideration and evaluation.

The following sections outline the components of the two remaining concepts. Section 6.0 summarizes the impacts of the conceptual designs. Although not explicitly included in the cost estimate, an education kiosk could be included in either concept design, and the relatively modest cost (about $5,000) could be covered by the construction contingency.

5.1.1 Concept 1— Water Quality and Flood Storage in Existing Wetland Footprint

The primary focus of the Concept 1 design is developing water quality and flood storage volume primarily in the existing wetland footprint. Figure 5-1 shows a visual representation of the proposed features of Concept 1. This alternative includes the following design components:

- Expanding the flood mitigation volume in Jevne Park by 0.38 acre-feet to reduce peak flood elevations during smaller, more frequent events.
- Increasing the permanent pool volume for Jevne Park Pond by 0.69 acre-feet from existing conditions through excavation primarily within the existing wetland footprint. This includes creating 0.33 acres of additional open water area and lowering the bottom of the existing wetland to elevation 884 feet MSL, creating a maximum pond depth of 3.7 feet. Ponding depths greater than 3 feet provide more water quality improvement benefits, and ponding depths less than 4 feet create better habitat. The proposed expansion will change the average depth from 0.6 feet to 1.9 feet.

- Maximizing water quality improvement performance by installing a sheetpile diversion wall between the main inflow locations and the existing pond outlet to increase the flow path through the wetland.

- Slightly modifying the bituminous surface on Peninsula Road east of Jevne Park to redirect runoff from the south side of Peninsula Road to the expanded pond in Jevne Park; this modification will allow more runoff to be treated before draining into Medicine Lake.

- Restoring the wetland and establishing a 25-foot wetland buffer (as space allows) around the proposed wetland area. Concept 1 results in a total wetland area of 0.92 acre, including open water and 0.47 acres of wetland buffer, an increase of 0.06 acres from existing conditions. This restoration will allow for the creation of habitat for wildlife, waterfowl, fish, macroinvertebrates, and macrophytes, and installation of habitat features, such as turtle logs and waterfowl nesting boxes.

- Removing and replacing an estimated 8 trees.

5.1.2 Concept 2— Water Quality and Flood Storage in Expanded Footprint

Conceptual design 2 includes the development of more water quality and flood storage volume in an expanded footprint within Jevne Park. Figure 5-2 shows a visual representation of the proposed features of Concept 2. This alternative includes the following design components:

- Expanding the flood mitigation volume in Jevne Park by 0.93 acre-ft to reduce peak flood elevations during smaller, more frequent events.

- Increasing the permanent pool volume for Jevne Park Pond by 1.6 acre-feet from existing conditions through excavation primarily within the existing wetland footprint. This includes creation of 0.62 acres of additional open water area and lowering the bottom of the existing wetland to elevation 884 ft MSL, creating a maximum pond depth of 3.7 feet. Ponding depths greater than 3 feet provide more water quality improvement benefits, and ponding depths less than 4 feet create better habitat. The proposed expansion will change the average depth from 0.6 feet to 1.6 feet.

- Maximizing the water quality improvement performance by installing a sheetpile diversion wall between the main inflow locations and the existing outlet of the pond to increase the flow path through the wetland.

- Slightly modifying the bituminous surface on Peninsula Road east of Jevne Park to redirect runoff from the south side of Peninsula Road to the expanded pond in Jevne Park; this modification will allow more runoff to be treated before draining into the Medicine Lake.

- Restoring the wetland and establishing a 25-feet wetland buffer (as space allows) around the proposed wetland area. Concept 2 results in a total wetland area of 1.16 acres, including open water and 0.53 acres of wetland buffer, an increase of 0.3 acres from existing conditions. This restoration will allow for the creation of habitat for wildlife, water fowl, fish, macroinvertebrates,

and macrophytes, and installation of habitat features, such as turtle logs and water fowl nesting boxes.

- Removing and replacing an estimated 24 trees.

6.0 Project Modeling Results and Potential Impacts

This section discusses the results of the hydrologic, hydraulic, and water quality modeling and provides information on potential project impacts of each concept, including permitting requirements. Table 6-1 summarizes the design features and potential impacts of the concepts, in comparison to the project area's existing conditions.

6.1 Hydrologic, Hydraulic, and Water Quality Modeling

Hydrologic and hydraulic information and water quality information are available for the project area in the form of a XP-SWMM hydrologic and hydraulic model and a P8 water quality model. The BCWMC completed the Phase 2 XP-SWMM model in 2017 for Bassett Creek and its contributing watersheds. The BCWMC developed the P8 model in 2012 for Bassett Creek and its contributing watersheds, and updates the model annually. These tools were used to evaluate the impact of each concept.

Final design efforts should include additional refinements to the XP-SWMM and P8 water quality modeling. The improvements that will ultimately be constructed should also be incorporated into the BCWMC XP-SWMM model and the P8 model after completion of the project.

6.1.1 XP-SWMM Modeling Results

The 2017 BCWMC Phase 2 XP-SWMM model was utilized for hydrologic and hydraulic modeling efforts for this project. This existing BCWMC Phase 2 model subwatersheds around Jevne Park were refined by subdividing the area into seven subwatersheds. This updated model was used to evaluate existing conditions for the project area and the flood elevation results were used as a basis of comparison for the proposed conceptual designs. Additionally, the surveyed culvert information (inverts, diameters, materials) were incorporated into the model.

The updated existing conditions BCWMC Phase 2 XP-SWMM model was hydraulically modified to model each of the two conceptual designs. Storage curves were revised to represent the proposed grading contours for the two concepts. Maximum flood elevations for the Atlas 14 1-, 2-, 10-, and 100-year recurrence intervals were analyzed and compared for the conceptual designs.

Table 6-1 (the comparative matrix) provides the maximum 1-, 2-, 10-year and 100-year flood elevations for existing conditions and the two conceptual designs for the Jevne Park wetland/pond. Figure 6-3 and Figure 6-4 show the proposed 2- and 10-year inundation maps of Concept 1 and Concept 2, respectively.

The primary goal of the Jevne Park stormwater improvement project is to develop water quality volume; another purpose is to reduce flood elevations on the Jevne Park wetland/pond for the smaller, more frequent events.

For the 1-year event and 2-year event, the expansion of flood storage reduces the flood elevations on the Jevne Park wetland/pond by 0.2 feet (Concept 1) and 0.5 feet (Concept 2). Concept 1 reduces the inundation on Peninsula Road during the 2-year event, while Concept 2 eliminates the inundation on Peninsula Road during the 2-year event.

For the two concepts, Concept 1 will not change the 10-year flood elevations, having minimal impact on inundation on Peninsula Road, while Concept 2 reduces the 10-year flood elevations on the Jevne Park wetland/pond by 0.2 feet, having a slight impact on the inundation on Peninsula Road.

For the 100-year event, the flood elevations on the Jevne Park wetland/pond are impacted by the backup of Medicine Lake. Because the proposed concepts will not impact the peak flood elevation of Medicine Lake, the 100-year event flood elevation would be maintained in both concepts, compared to the existing condition.

The proposed minor modification of the road surface of Peninsula Road will improve drainage to the pond in Jevne Park and will redirect the watershed area on the south side of Peninsula Road, east of the park, to the park, to the pond for additional storage/treatment.

The results of the XP-SWMM modeling indicate that both concepts will achieve this goal.

6.1.2 P8 Water Quality Modeling Results

This study also included updating the BCWMC P8 model with current site conditions for the Jevne Park wetland/pond area, and using the P8 water quality model to estimate the water quality improvement expected from each proposed concept.

The pollutant (total phosphorus) removals for the Jevne Park wetland/pond for each conceptual design alternative were estimated using the BCWMC P8 model. The model was first refined to reflect existing conditions, using the bathymetric survey data collected during this feasibility study. The model was then updated to reflect the additional permanent pool and flood pool volumes provided by each of the concepts, including the lowered pond bottom, the expansion of the volume in the Jevne Park wetland/pond, and the rerouting of additional drainage area to the expanded pond footprints.

Under current conditions, the P8 model estimates that the Jevne Park wetland/pond removes approximately 2.9 pounds per year of total phosphorus. With implementation of Concept 1, the total phosphorus removal rate would increase to approximately 7.0 pounds per year (additional removals of 4.1 pounds of total phosphorus per year). The implementation of Concept 2 would increase the total phosphorus removal rate to around 7.7 pounds per year (additional removal of 4.9 pounds of total phosphorus removal per year). The performance of the Jevne Park stormwater improvement project on pollutant removals is summarized in Table 6-1.

6.2 Wetland and Upland Creation and Restoration

Because the Jevne Park wetland area will be disturbed during the construction, wetland and upland habitat creation and/or restoration is a major component of this project. The final restoration approach will consider water level fluctuations, a variety of habitat restoration, as well as the park user experience, based on direction to be provided by the City of Medicine Lake at the time of final design.

Based on guidance from the MnDNR in relation to aquatic wildlife habitat creation (MnDNR, 2002), important considerations include:

- A complex of wetland types interspersed with upland provides optimum habitat
- Shallow water (no more than 4 feet deep)
- Flatter slopes
- Variable/undulating depths
- Larger, irregular shape
- Floating logs, nest boxes, etc.
- Seeding and planting of more diverse species
- Inclusion of a wetland buffer

For both concepts, there will be ample opportunity for the creation of additional upland and aquatic habitat. Enhanced wetland areas should allow for increased water quality treatment and enriched wetland fringe communities for animal and plant species. The total wetland areas for each concept are summarized in Table 6-1.

For both conceptual designs, tree removal will be required within the disturbance limits to develop the additional flood storage and water quality volume. However, replanting will be considered in the upland areas, which will be restored with native plants, shrubs, and trees, with specific details to be determined during final design. Existing trees will be preserved in areas outside the disturbance/grading limits.

6.3 Easement Acquisition

All of the proposed work is located on public property, so no additional easement acquisition is anticipated. Also, no temporary construction easements are anticipated to be needed, as all access to the site, construction staging, and grading efforts should all be possible from the roadway or park area. Therefore, the feasibility planning level opinions of cost does not include the estimated cost of permanent or temporary easement acquisition in this area.

6.4 Required Project Permits

The proposed project is expected to require the following permits/approvals, regardless of the selected concept:

- Clean Water Act Section 404 Permit (USACOE)
- Public Waters Work Permit (MnDNR) – much of the proposed work is below the OHWL of Medicine Lake and falls within the jurisdiction of the MnDNR. A permit will be required for impacts below the OHWL, as well as for any temporary water level drawdown activities below the OHWL.
- Section 401 Water Quality Certification (MPCA)
- Construction Stormwater General Permit (MPCA) – required for disturbance areas greater than 1 acre
- Compliance with the Minnesota Wetland Conservation Act (WCA) – There are small portions of the delineated wetland that will be disturbed that are above the OHWL (not within the MnDNR jurisdiction). Correspondence to date suggests that MnDNR will not take jurisdiction over these areas and the WCA will apply.
- City of Medicine Lake permits – the city does not have specific regulations for trees, but in the event the project would trigger a variance or conditional use permit (CUP), the city may want to review loss of trees larger than 12 inches in diameter.

Although both concepts propose work below the OHWL of a public water and will change the public water cross section, because the anticipated disturbance footprints for the two concepts within the Jevne Park wetland area are less than one acre, the project should not trigger the Minnesota Environmental Quality Board (EQB) Environmental Assessment Worksheet (EAW) process.

6.5 Temporary Closure

A portion of Jevne Park will need to be closed to the public during the construction. Additionally, depending on construction access, there may be temporary closures of Peninsula Road, or a lane of Peninsula Road, adjacent to Jevne Park.

7.0 Project Cost Considerations

This section presents the feasibility-level opinion of cost of the evaluated alternatives, discusses funding sources, and provides an approximate project schedule.

7.1 Opinion of Cost

The opinion of cost is a Class 4 feasibility-level cost estimate as defined by the American Association of Cost Engineers International (AACI International) and uses the assumptions listed below and detailed in the following sections.

1. The cost estimate assumes a 30% construction contingency.
2. Costs associated with design, permitting, and construction observation (collectively "engineering") is assumed to be 30% of the estimated construction costs.

The Class 4 level cost estimates have an acceptable range of between -15% to -30% on the low range and +20% to +50% on the high range. Based on the development of concepts and initial vetting of the concepts by the City of Medicine Lake, it is not necessary to utilize the full range of the acceptable range for the cost estimate; and we assume the final project costs may be between -20% and +30% of the estimated project budget.

Table 7-1summarizes the feasibility-level total construction cost estimates, the cost per acre-foot of flood control volume, the 30-year annualized total construction cost estimates, and the annualized costs per pound of total phosphorus removed for each recommended concept. Appendix B provides the detailed cost-estimate tables for both concepts.

Table 7-1 Jevne Park Stormwater Improvement Project Concept Cost Summary

Item	Concept 1: Water Quality and Flood Storage in Existing Wetland Footprint	Concept 2: Water Quality and Flood Storage in Expanded Footprint
Construction Subtotal	$239,000	$332,000
Construction Contingency (30%)	$72,000	$100,000
Engineering, Design, Permitting, and Construction Observation (30%)	$93,000	$130,000
Feasibility Level Opinion of Cost	$404,000	$562,000
Feasibility Level Opinion of Cost Range (-20% to +30%)	$324,000-526,000	$450,000-731,000
Cost per Acre-Foot of Flood Mitigation Volume	$585,600	$351,300
30-Year Annualized Cost Estimate	$24,000	$32,000
Annualized Cost per Pound of Total Phosphorus Removed	$5,800	$6,700

7.1.1 Temporary Easements

The entire project is located on property owned by the City of Medicine Lake and therefore, no temporary easements are anticipated for project construction.

7.1.2 Wetland Mitigation

Although the existing wetland will be disturbed or converted into open water for the proposed project, the concept designs also incorporate wetland restoration and increases to the wetland buffer areas from existing conditions. The overall area of wetland will be increased with the project.

One of the goals of the proposed alternatives is to minimize the amount of wetland impacts, restore the impacted wetland areas to the existing wetland type, and develop new wetland habitat and wetland buffers in the disturbed extents. Therefore, it is not anticipated that the projects will require additional costs for wetland mitigation.

7.1.3 30-year Cost

The 30-year cost for each alternative is based on anticipated annual maintenance and replacement costs. The 30-year cost for each alternative is calculated as the future worth of the initial capital cost (including contingency and engineering costs) plus the future worth of annual maintenance and significant maintenance at the end of the alternative's estimated useful life. A 3% rate of inflation is assumed. The annualized cost for each alternative is calculated as the value of 30 equal, annual payments of the same future worth as the 30-year cost. Table 6-1 presents the 30-year annualized cost estimates for each concept.

The operation and maintenance (O&M) costs are based on the anticipated needed annual maintenance for the wetland and wetland buffer, and the potential future sediment removal required when the sediment accumulation impacts the water quality improvement performance of the proposed pond. We estimated the frequency of sediment removal based on the annual total suspended sediment load to the pond from the P8 model and an assumed sediment density. For concept 1, the estimated time until the sediment would need to be removed was approximately 60 years and for concept 2, the time was greater than 100 years.

The annual O&M cost for each concept is listed in Table 7-22.

Table 7-2 Annual O&M Cost Summary

Concept	Wetland/ Buffer Area (ac)	Annual Maintenance Cost for Wetland/Buffer ($/acre)	Annual Wetland/Buffer Maintenance Cost	Annual Sediment Maintenance	Total Annual O&M
Existing Condition	0.96	$3,000	$2,870	0	$2,900
1	1.00	$3,000	$3,000	$320	$3,300
2	0.97	$3,000	$2,900	$860	$3,800

7.1.4 Annualized Pollutant Reduction Cost

Section 6.1.3 and in Table 6-1 provide the estimated annual loading reductions for total phosphorus for each recommended conceptual design alternative. The total phosphorus load reductions were found by

modifying the BCWMC P8 model to include the proposed alternatives. The annualized pollutant-reduction cost for each alternative is the estimated annualized 30-year project cost divided by the annual load reduction.

The cost per pound of phosphorus removed for this project using the current P8 model analysis ($5,800 for Concept 1 and $6,700 for Concept 2) is high when compared to other BCWMC CIP projects, but within the range of other costly projects. For example, the Northwood Lake Improvement Project's annualized cost per pound of phosphorus removal was $5,900. The higher cost is due to the relatively small tributary area for this project, which does not generate a large amount of phosphorus load. There may also be opportunities to optimize the design during final design to reduce overall project costs.

7.2 Funding Sources

The planning level estimated cost for the recommended Concept 1 is $404,000 (-20%/+30%) (see Section 8.0). If the BCWMC orders the project, the BCWMC would use its CIP funds to pay for the Jevne Park Stormwater Improvement Project. However, other sources of funding could be considered such as the Hennepin County Natural Resource Opportunity grant for the creation of habitat, etc.

7.3 Project Schedule

For project construction to occur in 2020, project design would be scheduled to begin in fall 2019. The BCWMC will hold a public hearing at the September 19, 2019 BCWMC meeting on this project. Pending the outcome of the hearing, the project will be officially ordered by the BCWMC, the BCWMC will enter into an agreement with the City of Medicine Lake to design and construct the project, and the BCWMC will certify to Hennepin County a final 2020 tax levy for this project. Following this meeting, the City of Medicine Lake will need to take action finalizing and approving the agreement. Final design should not begin prior to the execution of the agreement between the BCWMC and the City of Medicine Lake.

The construction work would likely begin in the fall of 2020 with final restoration completion in 2021.

It is likely that some dewatering of the Jevne Park wetland will be necessary for construction, which will require a permit from the MnDNR (the work area is considered part of Medicine Lake). To meet the likely MnDNR permitting requirements regarding turtle mortality, dewatering will need to be completed by September 15 to provide any turtles an opportunity to relocate to other ponds and wetlands for winter hibernation. Also, because of northern long-eared bat concerns, tree removal (greater than 3" in diameter) should occur in the period from November 1 through April 15, outside of the northern long-eared bat's active season. Additionally, excavation during the winter would be appropriate to complete the major earthwork during periods with less frequent runoff events.

If project construction is scheduled to begin in the fall of 2020, late spring or early summer 2020 bidding is recommended. This will give contractors adequate scheduling time to complete the project at a reasonable price. In the intervening time, the city would gather public input, prepare the final design, and obtain necessary permits.

8.0 Alternatives Assessment and Recommendations

The existing wetland in Jevne Park provides limited treatment of runoff before discharging to Medicine Lake and has limited wetland buffer. Concept 1 and Concept 2 expand the flood storage and water quality treatment volume in the area while providing opportunities to create/restore/improve habitat and provide public education opportunities.

The point opinions of cost for Concept 1 and Concept 2 are $404,000 and $562,000, respectively. The estimated O& M costs are similar for both concepts.

With a larger footprint, Concept 2 develops more flood and water quality treatment volume than Concept 1. This results in more significant reductions in the peak flood elevations for the smaller, more frequent storm events and temporary inundation of Peninsula Road. However, as mentioned above, most residents who attended the public open house did not indicate they had significant concern about the inundation of Peninsula Road.

Although Concept 2 provides slightly more pollutant removal than Concept 1 (an increase in total phosphorus removal of 4.9 lbs per year versus 4.1 lbs per year), the cost-benefit for pollutant removal is better for Concept 1, suggesting that Concept 1 is a more cost-effective project. The difference in the increase in total phosphorus removal between Concept 1 and Concept 2 (10%) is not equivalent to the 40% difference in cost.

The estimated tree removal for Concept 1 is less than the removal estimated for Concept 2. Additionally, the concept results in the establishment of more total wetland and wetland buffer area than for existing conditions, and provides an opportunity to incorporate additional wildlife habitat such as turtle logs and water fowl nesting structures.

Based on review of the project impacts; feedback from the Medicine Lake City Council, public, and the Medicine Lake representatives; and the overall project costs and benefits, the Commission Engineer recommends constructing Concept 1, which provides the necessary volume to achieve the goals of the project.

Concept 1, the recommended concept, includes the following design components:

- Expanding the flood mitigation volume in Jevne Park by 0.38 acre-ft to reduce peak flood elevations during smaller, more frequent events.
- Increasing the permanent pooling volume for Jevne Park by 0.69 acre-feet from existing conditions, through excavation primarily within the existing wetland footprint. This includes creation of 0.33 acres of additional open water area and lowering the bottom of the existing wetland to elevation 884 ft MSL, creating a maximum wetland depth of 3.7 feet. Ponding depths greater than 3 feet provide more water quality improvement benefits, and ponding depths less than 4 feet create better habitat. The proposed expansion will change the average depth from 0.6 feet to 1.9 feet.

- Maximizing the maximize water quality improvement performance by installing a sheetpile diversion wall between the main inflow locations and the existing outlet of the wetland to increase the flow path through the wetland.
- Slightly modifying the bituminous surface on Peninsula Road east of Jevne Park to redirect runoff from the south side of Peninsula Road to the expanded wetland in Jevne Park, allowing for more runoff to be treated before draining into the Medicine Lake.
- Restoring the wetland and establishing a 25-foot wetland buffer (as space allows) around the proposed wetland area. Concept 1 results in a total wetland area of 0.92 acre, including open water and 0.47 acres of wetland buffer, an increase of 0.06 acres from existing conditions. This restoration will allow for the creation of habitat for wildlife, waterfowl, fish, macroinvertebrates, and macrophytes, and installation of habitat features, such as turtle logs and water fowl nesting boxes.
- Removing and replacing an estimated 8 trees.

The planning level cost for Concept 1 is $404,000 (-20%/+30%) and the annual O&M cost is $3,300.

9.0 References

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Peninsula Rd

Medicine Lake

Channel to Medicine Lake

Jevne Park

Plymouth

New Hope

Golden Valley

Medicine Lake

Channel

Contour Type

10-Foot Contour

2-Foot Contour

Jevne Park Boundary and Project Area

Parcels

N

0 50 100

Feet

Jevne Park
Project Area
BCWMC

FIGURE 2-1

Aerial Imagery: Nearmap May 2018

BARR

Barr Footer: ArcGIS 10.6.1, 2019-04-10 07:23 File: I:\Client\BassettCreek\Work_Orders\2018\JevneParkMaps\Reports\Figure2-1_ProjectArea_11x17_2.mxd User: RCS2

Sanitary Sewer Manholes
Runoff Direction
Culverts
Sanitary Sewer
Channel

Contour Type

10-Foot Contour
2-Foot Contour
Jevne Park Boundary and Project Area
Subwatersheds
Parcels

Bassett Creek Watershed Management Commission

0 100 200
Feet

Jevne Park Subwatershed Boundaries, Drainage Patterns, and Sanitary Sewers BCWMC

FIGURE 2-2

BARR

Install 25’ wetland buffer, where appropriate.

Peninsula Road

Jevne Park

Include habitat features such as turtle logs, water fowl nesting boxes, etc.

Peninsula Road

Install sheetpile weir to increase flow path through wetland

Modify bituminous to direct runoff toward and improve drainage to wetland

Medicine Lake

BARR

Approximate Wetland Boundary
Wetland Area
Open Water
Wetland Buffer
Existing Culverts
Sheet Pile Weir
Existing Topography
Proposed Topography
Surveyed Tree

Bassett Creek Watershed Management Commission

N

0 10 50 100
Feet

Jevne Park Concept Design 1- Water Quality and Flood Storage in Existing Wetland Footprint

BCWMC

Figure 5-1

Install 25’ wetland buffer, where appropriate.

Include habitat features such as turtle logs, water fowl nesting boxes, etc.

Install sheetpile weir to increase flow path through wetland

Modify bituminous to direct runoff toward and improve drainage to wetland

Peninsula Road

Peninsula Road

Jevne Park

Medicine Lake

Approximate Wetland Boundary
Wetland Area
Open Water
Wetland Buffer
Existing Culverts
Sheet Pile Weir
Existing Topography
Proposed Topography
Surveyed Tree

0 10 50 100
Feet

Bassett Creek Watershed Management Commission

BARR

Jevne Park
Concept Design 2-
Water Quality and Flood Storage in Exanded Wetland Footprint

BCWMC

Figure 5-2

Item 5Di.
BCWMC 4-18-19

Bassett Creek Watershed Management Commission

MEMO

To: BCWMC Commissioners
From: Laura Jester, Administrator
Date: April 9, 2019

RE: Technical Advisory Committee Recommendations: 2021- 2025 Capital Improvement Program

The BCWMC Technical Advisory Committee (TAC) met on March 8 and 26 to discuss possible projects to include in the 5-year Capital Improvement Program (CIP) and to score projects using the new CIP Project Scoring Matrix.

The 2021 – 2025 CIP table shows the TAC's recommendations with changes from the 2020 – 2024 CIP shown with underline and strikeout. Fact sheets for each of the projects on the 2021 – 2025 schedule are included with online meeting materials.

Proposed Additions and Changes to 2021 – 2025 CIP:

- Adding a project within the **Medicine Lake Rd and Winnetka Ave Long Term Flood Mitigation Plan Project** (BC- BC-2,3,8, 10). The DeCola Pond F Flood Storage & Diversion Project and the SEA School Flood Storage Project are each slated for $1.3M. Although it's not currently known which project will come first, these are slated for 2022/2023 and 2025/2026 in the CIP.

- Moving the **Restoration and Stabilization of Historic Bassett Cr Channel, Main Stem Watershed** (BC-9) until after 2025 to better align with the Blue Line LRT Project construction in the same area.

- Adding the **Sweeney Lake Water Quality Improvement Project** (SL-8) in 2020/2021 to provide the local match of $220,000 for the 319 grant to control carp in Schaper Pond and perform an alum treatment in Sweeney Lake.

The TAC scored the projects proposed for 2021 – 2025 (and the Sweeney Lake Water Quality Improvement Project). The scoring matrix shows scores ranging from 5.5 to 12.5. The TAC discussed the merits of the lowest scoring project, the Bassett Creek Park Water Quality Improvement Project (BC-11). While the details of the project aren't yet known, this project will coincide with redevelopment of MPRB's Bassett Creek Park in Minneapolis, and includes an opportunity to restore a historic wetland in a consistently wet area of the park. Since wetland restoration is a rare opportunity in the watershed, the TAC recommends leaving it on the CIP list despite a low score.

Other lower scoring projects include areas where significant gullies/ravines along tributaries to Medicine Lake (ML-20) and Parkers Lake (PL-7) would be stabilized. These projects will greatly reduce sediment and nutrients eroding from these areas into Priority 1 lakes, but have few other secondary

benefits, resulting in lower scores. Again, the TAC still recommends implementing these projects given the water quality benefits to the lakes.

The TAC also discussed the prospect of dredging Bassett Creek Park Pond in Crystal as the second phase of the Bassett Creek Park Pond/Winnetka Pond Dredging Project. However, the high cost/low benefits of the project make it difficult to justify at this point. The pond will need to be dredged in the future so it's included as a possible project in 2026. Alternatively, the TAC agreed that instead of dredging the pond, a streambank restoration project along the North Branch Bassett Creek from 32nd Ave. to Bassett Creek Park Pond might be more cost effective and beneficial, overall. The TAC also discussed dredging a forebay within the pond rather than dredging the whole pond as a stand-alone project or combining it with the stream restoration project. These options will be reviewed and considered between now and next year when the 2022 – 2026 CIP list will be compiled.

Item 5Dii.
BCWMC 4-18-19

RECOMMENDEND BCWMC Capital Improvement Program 2021 – 2025 (Changes shown from approved 2020-2024 list)

Project Name	City	Number	2019	2020	2021	2022	2023	2024	2025	2026	Totals
Medicine Lake Rd & Winnetka Ave Long Term Flood Mitigation Plan Project (DeCola Ponds B&C Improvement Proj. + DeCola Pond F Flood Storage & Diversion Project + SEA School Flood Storage Project)	GV, Crystal, New Hope	BC-2,3,8, 10	~~$1,100,000~~ $1,031,500 [1]	$500,000		$300,000	$1,000,000		$1,100,000	$200,000	~~$2,900,000~~ $4,131,500
Water quality improvements in Bryn Mawr Meadows, Main Stem Watershed	MPLS	BC-5		$100,000	$400,000						$500,000
Medley Park Stormwater Treatment Facility	GV	ML-12				$200,000	$300,000				$500,000
Restoration and stabilization of historic Bassett Cr channel, Main Stem Watershed	MPLS	BC-9				~~$500,000~~				$500,000[5]	$500,000
Mt. Olivet Stream Restoration Project	PLYM	ML-20			$400,000						$400,000
Dredging of accumulated sediment in Main Stem Bassett Creek just north of Hwy 55, Wirth Park	GV/MPLS	BC-7			~~$400,000~~ $100,000	$300,000					$400,000
Westwood Lake Water Quality Improvement Project	St. Louis Park	WST-2	~~$300,000~~ $404,500 [2]								$300,000
Stormwater Pond in Jevne Park to alleviate flooding/improve water quality	Medicine Lake	ML-21		$500,000							$500,000
Crane Lake Improvement Project via Ridgedale Drive	Minnetonka	CL-3		~~$300,000~~ $380,000[3]							$300,000
Parkers Lake Drainage Improvement Project	Plymouth	PL-7			$100,000	$300,000					$400,000
Bassett Creek Main Stem Restoration - Regent Ave to Golden Valley Rd	Golden Valley	2021-CR-M						$300,000	$200,000		$500,000
Bassett Creek Park Water Quality Improvement Project	Minneapolis	BC-11						$500,000			$500,000
Ponderosa Woods Stream Restoration	Plymouth	ML-22						$475,000			$500,000
Sweeney Lake Water Quality Improvement Project (alum + carp management) [4]	Golden Valley	SL-8		$20,000 [4]	$200,000 [4]						$220,000
Bassett Creek Park Pond Dredging Project OR North Branch Bassett Creek Restoration Project 32nd Ave. to Bassett Cr. Park Pond	Crystal	BCP-2 Phase II OR 2026-CR-NB								$600,000	$600,000
TOTAL Estimated Project Cost			**$1,436,000**	~~**$1,400,000**~~ **$1,500,000**	~~**$1,300,000**~~ **$1,200,000**	**$1,100,000**	**$1,300,000**	**$1,275,000**	**$1,300,000**	**$1,300,000**	

[1] CWF grant received which lowered levy amount; [2] Actual amount levied after final feasibility study approved; [3] BCWMC contribution of $378,500 approved with feasibility study March 2019; [4] Local match required if 319 grant awarded;
[5] Moved to better align with Blue Line LRT construction schedule

Item 5Diii.
BCWMC 4-18-19

BCWMC Project Prioritization Scoring Matrix

		Primary Benefit Factors				
Project Name		Protects/improves water quality of priority waterbody (reduces phosphorus loading)	Located in a total phosphorus loading "hot spot": 0 pt for <0.15 mg/L 1 pt for 0.15 - 0.20 mg/L 2 pt for 0.20 - 0.25 mg/L 3 pt for 0.25 - 0.30 mg/L 4 pt for >0.3 mg/L	Protects/improves WQ of priority waterbody by reducing chloride loading 1 point = reduction of impervious surface; 2 points = significant reduction of impervious surface; 3 points = project with the aim of reducing chlorides	Addresses approved TMDL or WRAPS	Addresses a flooding concern: 1 pt reduces local flooding <5 structures 2 pt reduces local flooding >5 structures 3 pt reduces intercommunity flooding <5 structures 4 pt reduces intercommunity flooding >5 structures
Score Range		**2**	**0-4**	**2**	**2**	**1-4**
DeCola Pond F flood storage and diversion	**2025 & 2026 Portions of BC-2, 3, 8, 10**	2	2	2	0	3
SEA School flood storage		2	1	1	0	3
Medley Park Stormwater Treatment Facility	**ML-12**	2	4	0	2	1
Mt. Olivet Stream Restoration Project	**ML-20**	2	0	0	2	0
Dredging of accumulated sediment in Main Stem Bassett Creek just north of Hwy 55, Wirth Park	**BC-7**	2	0	0	0	1
Parkers Lake Drainage Improvement Project	**PL-7**	2	4	0	0	0
Bassett Creek Main Stem Restoration - Regent Ave to Golden Valley Rd	**2021-CR_M**	2	3	0	0	0
Bassett Creek Park Water Quality Improvement Project	**BC-11**	2	0	0	0	0
Ponderosa Woods Stream Restoration	**ML-22**	2	3	0	2	0
Sweeney Lake Alum/Carp Mgmt	**SL- 8**	2	0	0	2	0

Continued

	"Jurisdiction" Factors			Opportunity Factors		Secondary Benefit Factors					
Project Name	Part of Trunk System	Protects/restores previous BCWMC investments in infrastructure (CIP projects and Flood Control Project)	Intercommunity watershed	Partnership with significant stakeholders (% funding threshold from non-BCWMC/City?)	Coordinated with redevelopment or City/agency infrastructure projects	Protect and enhance riparian or upland wildlife habitat as a secondary benefit	Increase quality and quantity of wetlands	Reduce runoff volume	Public education or demonstration value is emphasized through specific project elements	Minimize the spread and impact of AIS as a secondary benefit	**Total Score**
Score Range	**1**	**1**	**1**	**1**	**1**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	
DeCola Pond F flood storage and diversion	0	0	1	1	0	0.5	0	0	0	0	**11.5**
SEA School flood storage	0	0	1	1	1	0.5	0	0	0.5	0	**11**
Medley Park Stormwater Treatment Facility	0	0	1	0	1	0.5	0.5	0	0.5	0	**12.5**
Mt. Olivet Stream Restoration Project	0	0	0	1	0	0.5	0	0	0.5	0	**6**
Dredging of accumulated sediment in Main Stem Bassett Creek just north of Hwy 55, Wirth Park	1	1	1	1	0	0	0	0	0.5	0	**7.5**
Parkers Lake Drainage Improvement Project	0	0	0	1	0	0.5	0	0	0.5	0	**8**
Bassett Creek Main Stem Restoration - Regent Ave to Golden Valley Rd	1	1	1	1	0	0.5	0	0	0.5	0	**10**
Bassett Creek Park Water Quality Improvement Project	0	0	0	1	1	0.5	0.5	0	0.5	0	**5.5**
Ponderosa Woods Stream Restoration	0	1	0	0	0	0.5	0.5	0	0.5	0	**9.5**
Sweeney Lake Alum/Carp Mgmt	1	1	1	1	0	0	0	0	0	0.5	**8.5**

Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co. (Barr)
Subject: Item 5E – Proprietary Stormwater Treatment Devices
BCWMC April 18, 2019 Meeting Agenda
Date: April 11, 2019
Project: 23270051 2019 003

5E Proprietary Stormwater Treatment Devices

Executive Summary: The BCWMC Engineer has seen an increase in the use of proprietary stormwater treatment devices for development and redevelopment projects. The levels of treatment or pollutant removal efficiencies of these devices are not widely accepted. While most proprietary devices undergo third party testing, the third party testing varies and not all devices receive the same level of approval from third party testing organizations.

Recommendation: Direct the Technical Advisory Committee (TAC) to review standards for acceptance of proprietary stormwater treatment devices and provide guidance to the Commission for review and acceptance of these devices.

Background

The BCWMC Requirements for Improvements and Development Proposals (Requirements) document states that "in order to receive credit toward meeting the BCWMC [water quality] performance goals, [best management practices (BMPs)] must be designed in accordance with the Minnesota Stormwater Manual or as otherwise approved by the BCWMC." The application form fee schedule indicates that projects involving review of alternative BMPs (i.e. BMPs not included in the MN Stormwater manual) require a $1,000 add-on fee for review.

Specific Examples from Development Reviews

As part of the review process for development and redevelopment projects in the Bassett Creek Watershed, the BCWMC Engineer has reviewed proprietary stormwater treatment devices for the following projects.

Ridgedale Active Adults Apartments (BCWMC #2018-16):

The applicant submitted plans which included a Contech StormFilter Vault (see Figure 1), a Contech StormFilter Manhole, and sump manholes with SAFL baffles (see Figure 2) for water quality treatment. The manufacturer, Contech, provided the applicant with assumed pollutant removal efficiencies for the BMPs.

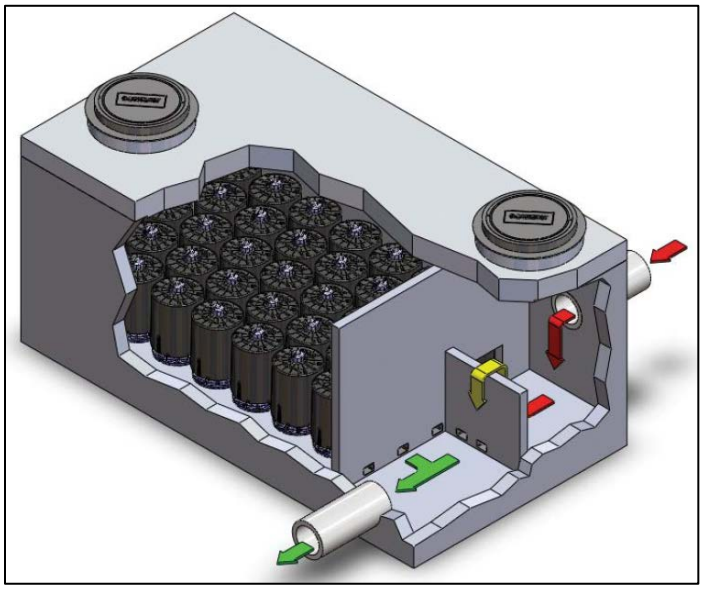

Figure 1: Contech StormFilter Vault

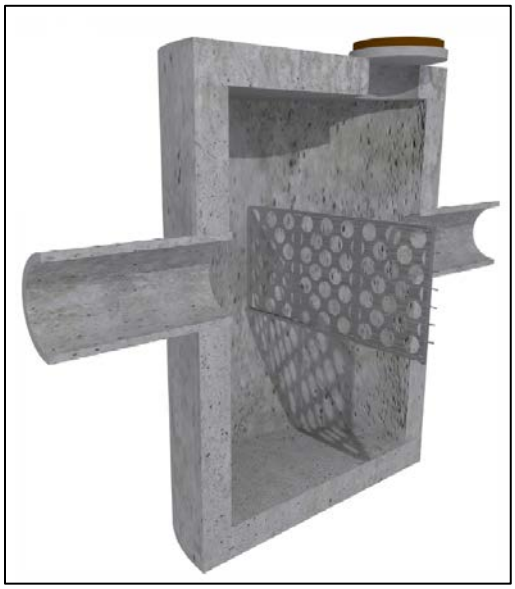

Figure 2: SAFL Baffle with Sump

Following BCWMC approval of the project, the applicant awarded the project to a contractor, who requested the use of different proprietary BMPs: a BioClean Kraken Filter (see Figure 3) and a BioClean SciClone Separator (see Figure 4) for water quality treatment.

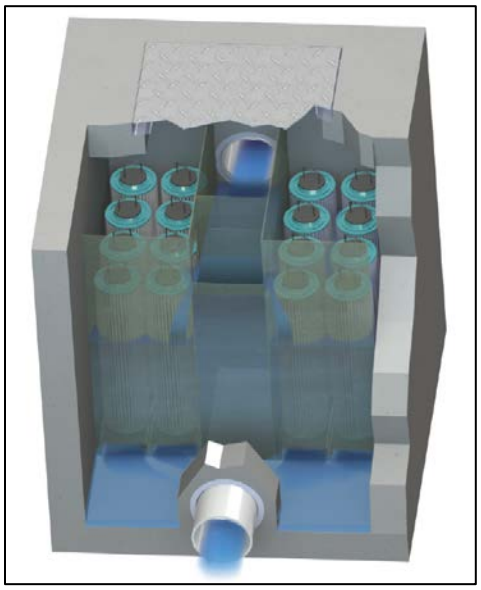

Figure 3: BioClean Kraken Filter

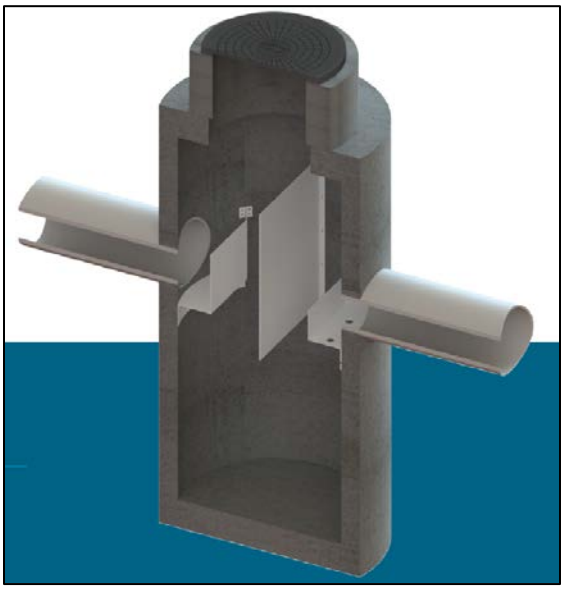

Figure 4: BioClean SciClone Separator

Ridgedale Executive Apartments (BCWMC #2018-28)

The applicant submitted plans which included multiple BioClean Kraken Filters (see Figure 3) and BioClean SciClone Separators (See Figure 4) for water quality treatment. The manufacturer, BioClean, provided the applicant with assumed pollutant removal efficiencies for the BMPs.

Marsh Run Apartments (BCWMC #2019-06)

The applicant submitted plans which included multiple Contech Jellyfish Filters (see Figure 5) for water quality treatment. The manufacturer, Contech, provided the applicant with assumed pollutant removal efficiencies for the BMPs.

Figure 5: Contech Jellyfish Filter

Third Party Testing

Manufacturers of proprietary stormwater treatment devices often subject their devices to third party testing to verify their claims for treatment and pollutant removal efficiency. Numerous entities perform third party testing of proprietary stormwater treatment devices and each entity provides varying levels of approval, including:

- State of Washington Department of Ecology: Technology Assessment Protocol – Ecology (TAPE)
    - Pilot Use Level Designation (PULD)
    - Conditional Use Level Designation (CULD)
    - General Use Level Designation (GULD)
- New Jersey Corporation for Advanced Technology (NJCAT)
    - Laboratory Verification
    - Field Verification
- State of New Jersey Department of Environmental Protection (NJDEP)
    - Certification
- Canadian Environmental Technology Verification (ETV) Program
    - Verification

Conclusion

The BCWMC Engineer has found that proprietary devices receive varying levels of third party certification, verification, and/or testing. Therefore, it is unclear what level of third party certification, verification, and/or testing is acceptable/should be required when reviewing and approving proposals for improvements and developments in the Bassett Creek watershed. Given the recent uptick in use of proprietary stormwater treatment devices, the BCWMC Engineer requests additional direction from the Commission and TAC regarding review and acceptance of proprietary stormwater treatment devices.

Item 6A.
BCWMC 4-18-19

Bassett Creek Watershed Management Commission

MEMO

Date: April 10, 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) (See Item 5A), Golden Valley: A feasibility study for this project was completed in May 2018 after months of study, development of concepts and input from residents at two public open houses. At the May 2018 meeting, the Commission approved Concept 3 and set a maximum 2019 levy. Also in May 2018, the Minnesota Legislature passed the bonding bill and the MDNR has since committed $2.3M for the project. The Hennepin County Board approved a maximum 2019 levy request at their meeting in July 2018. A BCWMC public hearing on this project was held on August 16, 2018 with no comments being received. Also at that meeting the Commission officially ordered the project and entered an agreement with the City of Golden Valley to design and construct the project. In September 2018, the City of Golden Valley approved the agreement with the BCWMC. The Sun Post ran an article on this project October 2018. Another public open house and presentation of 50% designs was held February 6, 2019. An EAW report was completed and available for public review and comment December 17 – January 16, 2019. At their meeting in February 2019, the Commission approved the 50% design plans. Another public open house was held April 10th and a public hearing on the water level drawdown is scheduled for April 16th. 90% Design Plans will be presented at this meeting. Project website: http://www.bassettcreekwmo.org/index.php?cID=433 .

2020 Bryn Mawr Meadows Water Quality Improvement Project (BC-5), Minneapolis (No change since 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 (See Item 5B): 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 will be presented at this 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): 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. An amended agreement with the city of Crystal was approved at the March Commission meeting. Pond dredging is complete and specifications are being drafted for the native buffer that will be installed by a separate contractor this spring.

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): 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 was sent to the State Historical Preservation Office (SHPO) in February. Construction will begin this summer. The contractor (Sunram Construction) and Barr Engineering staff will meet with landowners regarding access in the coming weeks.

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

- Reviewed Jevne Park Water Quality Improvement Project draft Feasibility Study
- Prepared 5-year CIP list and project fact sheets with TAC recommendations
- Determined CAMP monitoring kit needs and relayed list to Met Council
- Received quotes and secured contractor for curly-leaf pondweed treatment on Medicine Lake

Administration and Education

- Reviewed draft April education press release
- Reviewed materials needed for next step in 319 grant application; coordinated with MPCA staff and Commission Engineer
- Developed "save the date" message and list of invitees for 50th anniversary event
- Developed mockup of 50th Anniversary commemorative brochure
- Started drafting 2018 Annual Report
- Started drafting proposed 2020 Operating Budget items
- Coordinated with Commission Engineer on 2020 monitoring plans
- Attended West Metro Water Alliance meeting
- Reviewed materials for and attended Local Government Water Roundtable Workgroup meeting in St. Cloud
- Attended Metro MAWD meeting in St. Paul