Bassett Creek Watershed Management Commission

Public Hearing & Regular Meeting
Thursday August 16, 2018
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 – July 19, 2018 Commission Meeting
   - B. Acceptance of August 2018 Financial Report
   - C. Approval of Payment of Invoices
     - i. Keystone Waters, LLC – July 2018 Administrative Services
     - ii. Keystone Waters, LLC – July 2018 Meeting Materials Distribution Expenses
     - iii. Barr Engineering – July 2018 Engineering Services
     - iv. Triple D Espresso – August 2018 Meeting Refreshments
     - v. Wenck – July 2018 WOMP Monitoring
     - vi. Lawn Chair Gardener – July 2018 Administrative and Education Services
     - vii. Wenck – Local Water Management Plan Review Services
     - viii. Metro Blooms – Harrison Neighborhood Grant Reimbursement
     - ix. Kennedy Graven – June 2018 Legal Services
   - D. Approval to Adopt Minor Amendment to 2015 Bassett Creek Watershed Management Plan

5. **PUBLIC HEARING**
   - A. Receive Comments on Proposed 2019 CIP Projects: DeCola Ponds B & C Improvement Project (BC-2,3,8) and Westwood Lake Water Quality Improvement Project (WST-2)

6. **BUSINESS**
   - A. Consider Approval of Resolution 18-05 Ordering 2019 Improvements (15 minutes)
     - i. Ordering 2019 Improvements
     - ii. Making Findings Pursuant to Minnesota Statutes Section 103B.251
     - iii. Certifying Costs to Hennepin County
     - iv. Approving Agreement with City of Golden Valley for Construction of DeCola Ponds B & C Improvement Project (BC-2,3,8)
     - v. Approving Agreement with City of St. Louis Park for Construction of Westwood Lake Water Quality Improvement Project (WST-2)

B. Consider Approval of 90% Design Plans for Westwood Lake Improvement Project (WST-2) (20 minutes)
C. Receive Presentation on Sweeney Lake Aeration Study Results (30 minutes)
D. Review Status of 2018 Operating Budget (15 minutes)
E. Consider Approval of 2019 Operating Budget (15 minutes)

7. COMMUNICATIONS (15 minutes)

A. Administrator's Report
   i. Master Water Stewards Recruitment
   ii. Update on Smart Salt Certification Course
   iii. Update on Water Resources Conference Abstract Submittal
B. Chair
C. Commissioners
D. TAC Members
E. Committees
   i. CIP Prioritization Committee
F. Legal Counsel
G. Engineer
   i. AIS in Medicine Lake

8. INFORMATION ONLY (Information online only)

A. Administrative Calendar
B. CIP Project Updates http://www.bassettcreekwmo.org/projects
C. Grant Tracking Summary and Spreadsheet
D. Final Grant Report: Clean Water Fund, Northwood Lake Improvement Project
E. Interim Grant Report: Met Council Stormwater Harrison Neighborhood Project
F. WCA Notices of Application and Decision, Plymouth

9. ADJOURNMENT

Upcoming Meetings & Events

- Golden Valley Arts and Music Festival: September 15th, 10:00 a.m. – 3:00 p.m., Golden Valley City Hall
- BCWMC Regular Meeting: September 20th, 8:30 a.m., Golden Valley City Hall
- Smart Salt Certification Training: September 26th, 8:30 a.m. – 1:30 p.m., Crystal Community Center

Bassett Creek Watershed Management Commission

AGENDA MEMO
Date: August 7, 2018
To: BCWMC Commissioners
From: Laura Jester, Administrator
RE: Background Information for 8/16/18 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 – July 19, 2018 Commission Meeting- **ACTION ITEM with attachment**
   B. Acceptance of August 2018 Financial Report - **ACTION ITEM with attachment**
   C. Approval of Payment of Invoices **- ACTION ITEM with attachments (online) –** *I reviewed the following invoices and recommend approval of payment.*
      i. Keystone Waters, LLC – July 2018 Administrative Services
      ii. Keystone Waters, LLC – July 2018 Meeting Materials Distribution Expenses
      iii. Barr Engineering – July 2018 Engineering Services
      iv. Triple D Espresso – August 2018 Meeting Refreshments
      v. Wenck – July 2018 WOMP Monitoring
      vi. Lawn Chair Gardener – July 2018 Administrative and Education Services
      vii. Wenck – Local Water Management Plan Review Services
      viii. Metro Blooms – Harrison Neighborhood Grant Reimbursement
      ix. Kennedy Graven – June 2018 Legal Services

   D. Approval to Adopt Minor Amendment to 2015 Bassett Creek Watershed Management Plan – **ACTION ITEM with attachment** – *At the April meeting, the Commission approved a 5-year CIP and directed staff to begin a minor plan amendment process to incorporate new projects into the CIP. On June 21, 2018, the Commission held a public hearing on the plan amendment and reviewed correspondence from review agencies indicating they had no comments. There were no comments during the public hearing. The Commission extended the deadline for review to July 25, 2018 to allow Hennepin County time to review and comment. At their meeting on July 24th the Hennepin County Board of Commissioners approved the minor plan amendment. Staff recommends adopting the plan amendment.*

5. **PUBLIC HEARING**
   A. Receive Comments on Proposed 2019 CIP Projects: DeCola Ponds B & C Improvement Project (BC-2,3,8) and Westwood Lake Water Quality Improvement Project (WST-2) **PUBLIC INPUT ITEM with attachment - *The public hearing will be opened and the public will be asked for comments on the 2019 CIP projects. All comments will be entered into the public record and will be considered before the Commission approves the resolution in 6A below.***

6. **BUSINESS**
   A. Consider Approval of Resolution 18-05 Ordering 2019 Improvements (15 minutes) - **ACTION ITEM with attachments** - *Pending the outcome of the public hearing in 5A, the attached resolution should be considered for approval to order the project, designate members responsible for construction, make findings pursuant to MN Statutes 103B.25, certify the costs of the 2019 projects to Hennepin County, and approving agreements with the cities of Golden Valley and St. Louis Park for construction. Staff*

recommends approval of the resolution which, in turn, approves the following:

i. Ordering 2019 Improvements
ii. Making Findings Pursuant to Minnesota Statutes Section 103B.251
iii. Certifying Costs to Hennepin County - **with attachment –** *The attached memo shows the breakdown of estimated project costs for the 2019 projects and recommends the Commission direct staff to certify for payment by Hennepin County in 2019 a total (final) tax levy of $1,436,000.*
iv. Approving Agreement with City of Golden Valley for Construction of DeCola Ponds B & C Improvement Project (BC-2,3,8) - **with attachment -** *The attached agreement between the City of Golden Valley and the BCWMC includes expectations and requirements of the city and the Commission for implementation of the Project.*
v. Approving Agreement with City of St. Louis Park for Construction of Westwood Lake Water Quality Improvement Project (WST-2) - **with attachment -** *The attached agreement between the City of St. Louis Park and the BCWMC includes expectations and requirements of the city and the Commission for implementation of the Project.*

B. Consider Approval of 90% Design Plans for Westwood Lake Improvement Project (WST-2) (20 minutes) – **ACTION ITEM with attachment** - *At their meeting in May, the Commission approved the final feasibility report for this project and chose "Concept 3" – a linear water feature that will capture roof runoff and offer interactive educational opportunities. The Hennepin County Board recently approved the maximum levy for the project. The City hired Barr Engineering to design the project and 50% designs were approved at the July meeting. Barr staff will present the attached 90% designs. Staff recommends approval. At this meeting the Commission should also discuss the "watershed" educational sign that should be included in the overall project.*

C. Receive Presentation on Sweeney Lake Aeration Study Results (30 minutes) – **INFORMATION ITEM with attachment** – *At their meeting in August 2016, the Commission approved a study by the Commission Engineer of the aeration system in Sweeney Lake to determine if the aerators are improving or degrading water quality in the lake. The study got underway with field work last summer. Analyses and modeling were recently completed. On August 1st an informational meeting for lake residents was held with a presentation of results and small and large group conversations about the findings and next steps. The Commission Engineer will present the results of the study at this meeting. A fact sheet on the study is attached.*

D. Review Status of 2018 Operating Budget (15 minutes) – **ACTION ITEM with attachment** – *There are several items where Commission expenses will exceed the budgeted amount this year, including significant unexpected expenses with the Sweeney Lake Aeration Study. There are other areas where activities will be under budget. Please see the attached memo with my review of the budget status and recommendations.*

E. Consider Approval of 2019 Operating Budget (15 minutes)- **ACTION ITEM with attachment** – *At the May meeting the Commission approved a 2019 operating budget recommended by the Budget Committee. The proposed budget and assessments were sent to city clerks for their review and comment. No comments were received from cities. As indicated in my memo for 6D, it's likely the Commission's fund balance will be less than anticipated at the beginning of FY 2019. However, staff still recommends approving the 2019 operating budget as originally proposed.*

7. COMMUNICATIONS (15 minutes)

A. Administrator's Report - **INFORMATION ITEM with attachments**
   i. Master Water Stewards Recruitment
   ii. Update on Smart Salt Certification Course
   iii. Update on Water Resources Conference Abstract Submittal
B. Chair
C. Commissioners
D. TAC Members
E. Committees
   i. CIP Prioritization Committee
F. Legal Counsel
G. Engineer
   i. AIS in Medicine Lake

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Item 4A.
BCWMC 8-16-18

Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting
Thursday, July 19, 2018
8:30 a.m.
Golden Valley City Hall, Golden Valley MN

1. CALL TO ORDER and ROLL CALL

On Thursday, July 19, 2018 at 8:33 a.m. in the Council Conference Room at Golden Valley City Hall (7800 Golden Valley Rd.), Chair de Lambert called to order the meeting of the Bassett Creek Watershed Management Commission (BCWMC) and asked for roll call to be taken.

Commissioners and city staff present:

City	Commissioner	Alternate Commissioner	Technical Advisory Committee Members (City Staff)
Crystal	*NA*	*NA*	Mark Ray
Golden Valley	Stacy Harwell	Jane McDonald Black	Jeff Oliver
Medicine Lake	Clint Carlson	Gary Holter	*Absent*
Minneapolis	Michael Welch	*NA*	Liz Stout
Minnetonka	*Absent*	Bill Monk	*Absent*
New Hope	*Absent*	Pat Crough	Megan Albert
Plymouth	Jim Prom*	John Byrnes	Derek Asche
Robbinsdale	*Absent*	*Absent*	Marta Roser
St. Louis Park	Jim de Lambert	*Absent*	*Absent*
Administrator	Laura Jester, Keystone Waters		
Engineer	Karen Chandler and Michelle Kimble, Barr Engineering		
Recorder	Dawn Pape, Lawn Chair Gardener		
Legal Counsel	Troy Gilchrist, Kennedy & Graven		
Presenters/ Guests/Public	David Wellington, Wellington Management; Beth Grosen, City of Minneapolis; Kim Donat, Wellington Management; Steve Hegland, Wenck Associates; Becky Rice, Metro Blooms; Dave Anderson, Crystal Resident		

*Arrived after business started

2. CITIZEN FORUM ON NON-AGENDA ITEMS

None.

3. APPROVAL OF AGENDA

MOTION: Commissioner Welch moved to approve the agenda. Commissioner Carlson seconded the motion. Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

[Commissioner Prom arrives.]

4. CONSENT AGENDA

MOTION: Commissioner Prom moved to approve the consent agenda. Alternate Commissioner Carlson seconded the motion. Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

The following items were approved as part of the consent agenda: June 21, 2018 Commission meeting minutes, July 2018 financial report, payment of invoices, reimbursement to the City of Plymouth for the Plymouth Creek Restoration Project.

The general and construction account balances reported in the July 2018 Financial Report are as follows:

Checking Account Balance	$ 644,101.94
TOTAL GENERAL FUND BALANCE	$ 644,101.94
TOTAL CASH & INVESTMENTS ON-HAND (7/11/18)	$ 3,139,488.26
CIP Projects Levied – Budget Remaining	($ 3,982,995.09)
Closed Projects Remaining Balance	($ 843,506.83)
2012-2016 Anticipated Tax Levy Revenue	$ 4,537.93
2017 Anticipated Tax Levy Revenue	$ 3,895.88
Anticipated Closed Project Balance	($ 835,073.02)

5. Business

A. Presentation from Wellington Management on Potential Bassett Creek Valley Redevelopment

Administrator Jester introduced David Wellington, from Wellington Management Inc, and noted that she, Commission engineers, and Commissioner Welch had met with Wellington Management on two occasions to discuss possible redevelopment in the Bassett Creek Valley. She noted that Commissioners are likely interested in potential plans for this area and are likely to review redevelopment projects in the future. Mr. Wellington gave an overview of the company—it's a family owned and operated company based in Saint Paul that currently owns and manages a $400 million portfolio of more than 100 properties in 23 Twin Cities communities, totaling over four million square feet. Mr. Wellington noted the company takes a long-term view of property management and development work, usually developing and holding properties rather than developing and flipping properties. He noted they actively engage with leaders in the communities and work collaboratively to accomplish sound urban design.

He also introduced Beth Grosen with the City of Minneapolis, Kim Donat, legal counsel with Wellington Management, and Steve Hegland with Wenck Associates. He explained that Wellington Management is co-developing 100 acres in the Bassett Creek Valley along with the city and that they had recently redeveloped the "Leif Property" in the area with affordable housing and commercial space.

Mr. Wellington then went on to explain that Wellington Management is the "developer of record" for three city-owned parcels just west of downtown. He noted the parcel at the southwest corner of 2nd Ave. and Van White Blvd. will be

redeveloped first and that the current city impound lot west of Van White Blvd. will also be redeveloped. He noted the area is extremely polluted because of previous land uses. He reported that since the land is near Bassett Creek, they are working closely with Minneapolis, performing geotechnical, environmental, and civil investigations sponsored by grants from Hennepin County and Met Council to get the area cleaned up before it is redeveloped.

Mr. Wellington then walked through maps showing the area with the creek in its current alignment and a possible future meandered alignment. He asked that the Commission consider different approaches to mitigating impacts in the area, including moving/meandering the stream. Commission Engineer Chandler commented on his ideas from an engineering perspective mentioning the creek meander isn't "minor" and that it might not stay re-meandered due to its shape. She also said that floodplain storage is a significant consideration in this area, the Commission has oversight regarding floodplain mitigation and significant temporary floodplain impacts cannot be allowed.

Mr. Wellington acknowledged that re-meandering the creek through a superfund site is a big undertaking which is why he is looking for support from public agencies like the BCWMC. He noted that as a private developer, his firm is ill-equipped to handle all of the complexities of the site without technical help and support and he is seeking a broad, multi-agency partnership to help plan for redevelopment in the area.

Commissioner Welch said there is a reason why only one developer responded to the request for proposals to be the "developer of record" for this area; because of the significant contamination and nature of the spongy soils. He added that the Commission has a stream erosion repair project in this area slated for construction next spring.

Alternate Commissioner Byrnes asked about the timetable for redevelopment in the area. Mr. Wellington indicated he hoped the area would be redeveloped within approximately 5 years.

Commissioner Harwell asked about the process of cleaning up brown fields. It was re-stated that this would require a broad multi-disciplinary approach.

Alt. Commissioner Monk inquired about drainage maps and if the Commission could review copies. Mr. Wellington said he has maps that BCWMC could review. Engineer Chandler wanted to review them as well and make sure BCWMC floodplain maps—not FEMA maps—are being used.

Commissioner Prom brought up the point that this project seems similar to Agora project and he would like to understand the specifics of what Wellington Management is asking of the Commission.

Commissioner Welch said he perceives the "ask" right now as a more general show of support as the company is trying to get momentum to get up a steep hill.

Administrator Jester said her sense was that this project isn't more of a time commitment than other projects and there is a budget to cover her time. She noted the more significant time would be for consultations and discussions with Commission engineers and that the current fiscal policy states that the engineers can spend up to $2,000 on distinct projects without prior approval from the Commission.

MOTION: Alt. Commissioner Monk moved to direct staff to stay engaged with the project and encourage the developer to submit more detailed drainage plans to the Commission to look for fatal flaws with project design. Commissioner Welch seconded with a "friendly" amendment that a progress report should be made in six months or with significant developments.

Discussion: Becky Rice with Metro Blooms said that she has heard positive feedback from community members about Wellington Management and that this project has been long-awaited by community.

Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

B. Consider Approval of 50% Design Plans for Westwood Lake Improvement Project (WST-2)

Michelle Kimble with Barr Engineering walked the Commission through the 50% design, which includes a linear water feature that will capture roof runoff and offer interactive educational opportunities. She noted the project is likely to

capture more volume than originally anticipated in the feasibility study and that a bog area was added at the city's request to add a different habitat. She noted the bog will also capture and treat runoff.

Alt. Commissioner Monk suggested removing an opening in the sidewalk to reduce possible injury. Administrator Jester asked about educational signage, wondering how many there will be and what the content and messages will be. Commissioner de Lambert stated that he would like a sign to include the BCWMC logo.

Ms. Pape asked more questions about the education. She wanted to know what people will be learning from the rain gauge, water pump, and water feature. She pointed out that because this CIP project does not provide much water quality treatment and is instead a significant education project, it is important that the educational message helps meet the BCWMC's stormwater runoff educational goal. She wondered how the signage will impact behavior.

Commissioner Harwell added that messages on chloride pollution should be included as well. Alt. Commissioner Byrnes noted that nature center instructors should incorporate the water feature into curriculum. Alt. Commissioner Monk asked why the signage was not included with the 50% plans. Ms. Kimble replied that a subcontractor is preparing signs and they are not yet completed, and she noted the signage details will be brought back to the Commission with the 90% plans.

Commissioner Harwell said the Commission should stay engaged and asked if the Education Committee should be involved with the messaging.

MOTION: Alt. Commissioner Crough moved to approve the 50% Design Plans for Westwood Lake Improvement Project (WST-2). Commissioner Prom seconded the motion. Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

C. Consider Approval of Proposal to Develop Jevne Park Stormwater Improvement Project Feasibility Study (ML-21)

Commission Engineer Chandler reviewed the feasibility study proposal that was developed by the Commission Engineer at the request of the City of Medicine Lake. She noted the project area includes a public park in the middle of the City of Medicine Lake and it may expand onto a few private properties. She indicated the stormwater management feature, which will likely be a pond, will be used to improve water quality and to help alleviate flooding on the road. Commission Engineer Chandler outlined the tasks to be completed during the study including meetings, field investigations, evaluation and development of plans, and public engagement. She noted sediment sampling may not be needed, but it is included just in case. She reported the study would include development of three concept plans and input from stakeholders.

[Commissioner Prom departs. Alt. Commissioner Byrnes becomes Plymouth voting member.]

There was some discussion about commitment from the City of Medicine Lake to the Joint Powers Agreement (JPA). Alt. Commissioner McDonald Black wondered if it was an appropriate time to negotiate a longer-term JPA. There was consensus that this was not the right time to enter JPA negotiations.

Commission Engineer Chandler was asked about the previous Army Corps of Engineers (ACOE) Resource Management Plan pre-application consultation protocols. She reported that the proposed actions do meet the protocols previously developed with ACOE.

MOTION: Commissioner Carlson moved to approve the proposal to develop Jevne Park Stormwater Improvement Project Feasibility Study (ML-21). Alt. Commissioner Crough seconded the motion. Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

D. Consider Honeywell Pond Expansion Project Reimbursement Adjustment (BC-4)

Administrator Jester reviewed that at last month's meeting, the Commission approved the final report and reimbursement request from the City of Golden Valley for this project. She noted the Commission also directed staff to provide further information on the city costs vs. BCWMC costs in light of pollutant removal credits the city used for the adjacent Douglas Drive Project. Jeff Oliver with Golden Valley reviewed a letter from Golden Valley including findings and a recommendation to reimburse the BCWMC a portion of the CIP funds.

Commissioner Welch raised the policy question regarding whether credit should be allowed to be taken from CIPs for regulatory purposes and asked how the Commission and cities perform accounting for the CIP projects? Finally, he

recommended that the Commission should reconsider its structure and framework for implementing CIPs. He recommended that future agreements should include language that CIP projects are for water resources improvement, not for regulatory purposes.

MOTION: Alt. Commissioner Crough moved to accept the $60,324.83 from the City of Golden Valley as a reimbursement to the BCWMC CIP funds. Commissioner Carlson seconded the motion. Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

MOTION: Commissioner Welch moved to add language to future cooperative agreements indicating that Capital Improvement Projects are to be implemented for water resources improvement, not for meeting regulatory requirements. Alt. Commissioner Byrnes seconded the motion. Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

E. Review Process for Review and Approval of Local Water Management Plans

Attorney Gilchrist distributed and reviewed a memo outlining State Law and Rules regarding BCWMC approval of local water management plans along with recommendations on the review/approval timing and process. His comments included: Commission must review and approve (or disapprove) the local plan within 60 days and the review is concurrent with a 45-day Met Council review; cities may grant extensions to the review period; within 180 days after watershed approval, cities must amend local controls. Mr. Gilchrist noted that there is some frustration by Commission staff that cities have not updated ordinances by September of last year as required by the BCWMC Watershed Plan.

Attorney Gilchrist recommended that the Commission review local plans only for their compliance with the BCWMC Watershed Plan and noted that there are other ways to ensure that city ordinances get updated including memorandums of understanding, holding back CIP funds, etc.

TAC member Derek Asche commented that there is confusion about the process and it is a challenge for city staff to work with varying schedules, timelines and requirements of different watershed organizations.

Commissioner Welch noted that the BCWMC exists as a cooperative organization and that all entities must agree and work towards implementing their respective pieces, even if there is difficulty in doing so. He agreed that plan approval should not be held up due to ordinances not being updated and commented that he didn't like the idea of having to withhold CIP funds.

TAC member Marta Roser noted that the Robbinsdale City Council voted down the shoreline buffer ordinance recommended by city staff. Commissioner Welch said that city councils should understand that disapproving necessary ordinances will undermine the watershed's ability to work together with the cities. He further added that Administrator Jester could give presentations to city councils, if needed.

Commissioner Carlson asked that the table outlining the requirements of cities be re-sent one more time to remind the cities to update their ordinances.

F. Review Comments on Minneapolis Local Water Management Plan

Commission Engineer Chandler reviewed the BCWMC comments on the Minneapolis Water Resources Management Plan including revisions required to be in compliance with the BCWMC Watershed Management Plan, and other recommended revisions. The city extended the review and approval period to September 20, 2018.

[Commissioner Harwell departs. Alt. Commissioner McDonald Black becomes Golden Valley voting member.]

Commission Engineer Chandler recommended that the city be allowed to add its hydrologic and hydraulic modeling results at a future date administratively (as an informational item to the Commission) rather than through an official plan amendment. There was consensus that this was acceptable. She also noted the BCWMC comments on the city plan could include a recommendation for the city to have an ordinance update schedule. The Commission agreed and directed staff to include in the comments a reminder that state law requires the city to update its ordinances within 180 days of BCWMC approval.

TAC member Liz Stout indicated the comments are relatively minor and shouldn't be difficult to address. Commissioner Welch asked when it was going to council and offered assistance with ordinance updates.

MOTION: Alt. Commissioner Byrnes moved to submit the cover letter and comments on Minneapolis Local Water Management Plan to the City of Minneapolis. Commissioner Welch seconded the motion. Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

G. Receive Update on Master Water Stewards Program

Administrator Jester stated that Hennepin County is sponsoring 5 residents in the Master Water Stewards program from watersheds, like BCWMC, that do not have funding to sponsor students. She noted the sponsorship includes paying the tuition, contributing $2,000 toward installation of a capstone project for each student, and providing technical and design assistance to each student. She noted one BCWMC resident has already applied and she asked if commissioners or TAC members know of people that might be interested to have them contact her.

7. COMMUNICATIONS

A. Administrator's Report

i. Update on Sweeney Lake Aeration Study Public Meeting – Administrator Jester reported the meeting will be held on the evening of August 1st and noted a facilitator will help with the meeting. She noted commissioners will receive the study results at an upcoming commission meeting.

Administrator Jester noted the Plymouth Kids Fest includes an environmental fair and could use one or two commissioners to volunteer to help kids learn about water resources.

B. Chair - Nothing to report

C. Commissioners

i. Alt. Commissioner McDonald Black reported that former Golden Valley Commissioner Dave Hanson passed away.
ii. Commissioner Welch updated the Commission that the cap requiring cities to get bids was raised to $175,000

D. TAC Members - Nothing to report

E. Committees - CIP Prioritization Committee will meet on July 31.

F. Legal Counsel - Nothing to report

G. Engineer

i. Zebra Mussels in Medicine Lake-working with MAISRC, DNR delayed scuba survey
ii. Schaper Pond Effectiveness Monitoring – 227 carp in pond (huge population). Carp biomass is 3.68 times the threshold for management. This population should be managed in the future.
iii. Routine Water Quality Monitoring going well at Parkers Lake, Westwood Lake and North Branch Bassett Creek.

8. INFORMATION ONLY (Information online only)

A. Administrative Calendar
B. CIP Project Updates Chart http://www.bassettcreekwmo.org/projects
C. Grant Tracking Summary and Spreadsheet
D. WCA Notice of Decision, Blue Line LRT
E. WCA Notice of Decision, Plymouth
F. WCA Notices of Application (3), Plymouth

MOTION: Commissioner Welch moved to adjourn. Alt. Commissioner Byrnes seconded the motion. Upon a vote, the motion carried 7-0. [Cities of Crystal and Robbinsdale absent from the vote.]

9. ADJOURNMENT

The meeting adjourned at 11:15 a.m.

_____

Signature/Title Date

DRAFT

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report **(UNAUDITED)**
Fiscal Year: February 1, 2018 through January 31, 2019
MEETING DATE: August 16, 2018

Item 4B.
BCWMC 8-16-18

BEGINNING BALANCE		**11-Jul-18**			**644,101.94**
ADD:					
	General Fund Revenue:				
	Interest less Bank Fees			74.41	
	Metropolitan Council		MT	3,155.95	
	Permits:				
	Minger Construction		BCWMC 2018-21	1,500.00	
	Reimbursed Construction Costs			2,801.56	
			Total Revenue and Transfers In		**7,531.92**
DEDUCT:					
	Checks:				
	3104	Barr Engineering	July Engieering	29,096.93	
	3105	Kennedy & Graven	June Legal	915.40	
	3106	Keystone Waters LLC	July Administrator	5,000.31	
	3107	Lawn Chair Gardener	July Admin Serv/Educ	1,030.89	
	3108	Metro Blooms	Harrison Neighborhood	1,540.53	
	3109	Triple D Espresso	August Meeting	111.75	
	3110	Wenck Associates	July WOMP/Municipal F	2,781.68	
			Total Checks/Deductions		**40,477.49**
ENDING BALANCE		**7-Aug-18**			**611,156.37**

Bassett Creek Watershed Management Commission General Account
General Fund (Administration) Financial Report **(UNAUDITED)**
Fiscal Year: February 1, 2018 through January 31, 2019
MEETING DATE: August 16, 2018

	2018 /2019 BUDGET	CURRENT MONTH	YTD 2018 /2019	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSEMENTS TO CITIES	515,000	0.00	515,050.00	(50.00)
PROJECT REVIEW FEES	55,000	1,500.00	34,000.00	21,000.00
WOMP REIMBURSEMENT	5,000	0.00	4,500.00	500.00
METROPOLITAN COUNCIL - LRT		3,155.95	4,896.45	
METRO BLOOOMS - MET COUNCIL GRANT		0.00	36,541.24	
TRANSFERS FROM LONG TERM FUND & CIP	75,000	0.00	0.00	75,000.00
REVENUE TOTAL	**650,000**	**4,655.95**	**594,987.69**	**96,450.00**
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	125,000	9,148.18	70,858.92	54,141.08
DEV/PROJECT REVIEWS	75,000	3,221.47	30,933.94	44,066.06
NON-FEE/PRELIM REVIEWS	10,000	1,435.00	14,151.95	(4,151.95)
COMMISSION AND TAC MEETINGS	12,000	665.00	5,435.79	6,564.21
SURVEYS & STUDIES	12,000	0.00	0.00	12,000.00
WATER QUALITY/MONITORING	80,700	6,168.72	54,137.62	26,562.38
WATER QUANTITY	6,300	0.00	2,949.92	3,350.08
WATERSHED INSPECTIONS -EROSION CONTROL	1,000	0.00	0.00	1,000.00
ANNUAL FLOOD CONTROL INSPECTIONS	48,000	0.00	2,321.50	45,678.50
REVIEW MUNICIPAL PLANS	8,000	6,582.20	9,202.20	(1,202.20)
WOMP	20,500	1,301.98	9,628.73	10,871.27
XP-SWMM MODEL UPDATES/REVIEWS	10,000	0.00	8,918.00	1,082.00
APM / AIS WORK	32,000	554.50	23,982.24	8,017.76
ENGINEERING & MONITORING TOTAL	**440,500**	**29,077.05**	**232,520.81**	**207,979.19**
ADMINISTRATION				
ADMINISTRATOR	67,200	4,760.00	33,845.00	33,355.00
LEGAL COSTS	17,000	915.40	5,572.00	11,428.00
AUDIT, INSURANCE & BONDING	15,500	0.00	17,648.00	(2,148.00)
FINANCIAL MANAGEMENT	3,200	0.00	0.00	3,200.00
MEETING EXPENSES	1,600	111.75	735.87	864.13
ADMINISTRATIVE SERVICES	15,000	1,019.20	7,023.45	7,976.55
ADMINISTRATION TOTAL	**119,500**	**6,806.35**	**64,824.32**	**54,675.68**
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	1,500	0.00	937.00	563.00
WEBSITE	4,200	0.00	0.00	4,200.00
PUBLIC COMMUNICATIONS	2,500	0.00	401.20	2,098.80
EDUCATION AND PUBLIC OUTREACH	22,000	1,792.53	13,439.04	8,560.96
WATERSHED EDUCATION PARTNERSHIPS	13,850	0.00	3,850.00	10,000.00
OUTREACH & EDUCATION TOTAL	**44,050**	**1,792.53**	**18,627.24**	**25,422.76**
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	4,668.00	5,332.00
TMDL WORK TOTAL	**10,000**	**0.00**	**4,668.00**	**5,332.00**
TOTAL EXPENSES	**664,050**	**37,675.93**	**320,640.37**	**343,409.63**

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Cash Balance 6/13/18				
Cash		627,251.52		
	Transfer to purchase investments			
		Total Cash	627,251.52	
Investments:				
	Minnesota Municipal Money Market (4M Fund)	2,500,000.00		
	Dividends-prior months	12,236.74		
	Dividends-Current	3,585.49		
		Total Investments	2,515,822.23	
		Total Cash & Investments		3,143,073.75
Add:				
	Interest Revenue (Bank Charges)	195.10		
		Total Revenue		195.10
Less:				
	CIP Projects Levied - Current Expenses - TABLE A	58,210.27		
	Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B	(350.00)		
		Total Current Expenses		57,860.27
		Total Cash & Investments On Hand **07/11/18**		**3,201,129.12**

Total Cash & Investments On Hand	3,201,129.12
CIP Projects Levied - Budget Remaining - **TABLE A**	(4,041,205.36)
Closed Projects Remaining Balance	**(840,076.24)**
2012 - 2016 Anticipated Tax Levy Revenue - **TABLE C**	4,537.93
2017 Anticipated Tax Levy Revenue - TABLE C	3,895.88
Anticipated Closed Project Balance	**(831,642.43)**
Proposed & Future CIP Project Amount to be Levied - **TABLE B**	0.00

TABLE A - CIP PROJECTS LEVIED

			Approved Budget	Current Expenses	2018 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	2,114.56	9,972.43	359,633.83	252,366.17	
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)			1,503,000	0.00	0.00	1,003,746.24	499,253.76	
2016								
Honeywell Pond Expansion (BC-4)[1]			810,930	(60,324.83)	725,298.17	750,605.17	60,324.83	
Northwood Lake Pond (NL-1)[2]		822,140						
Budget Amendment		611,600	1,433,740	0.00	2,000.00	1,447,143.38	(13,403.38)	670,000
2017								
Main Stem Cedar Lk Rd-Dupont (2017CR-M)	2017 Levy	400,000	1,064,472	0.00	0.00	126,376.39	938,095.61	
	2018 Levy	664,472						
Plymouth Creek Restoration (2017 CR-P)	2017 Levy	580,930	863,573	0.00	422,683.49	581,400.72	282,172.28	200,000
	2018 Levy	282,643						
2018								
Bassett Creek Park & Winnetka Ponds Dredging (BCP-2)			1,000,000	0.00	0.00	61,069.25	938,930.75	
			8,886,715	-58,210.27	1,159,954.09	4,845,509.64	4,041,205.36	

TABLE B - PROPOSED & FUTURE CIP PROJECTS TO BE LEVIED

	Approved Budget - To Be Levied	Current Expenses	2018 YTD Expenses	**INCEPTION** To Date Expenses	Remaining Budget
2019					
Bryn Mawr Meadows (BC-5)	0	0.00	43,713.74	74,956.06	(74,956.06)
Decola Ponds B&C Improvement(BC-2,BC-3,BC-8)	0	175.00	41,003.40	85,512.56	(85,512.56)
Westwood Lake Water Quality Improvement Project(Feasibility)	0	175.00	33,518.00	36,028.20	(36,028.20)
2019 Project Totals	0	350.00	118,235.14	196,496.82	(196,496.82)
Total Proposed & Future CIP Projects to be Levied	0	350.00	118,235.14	196,496.82	(196,496.82)

BCWMC Construction Account
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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
2018 Tax Levy	947,115.00		947,115.00	0.00	719,469.72	719,469.72	227,645.28	947,115.00
2017 Tax Levy	1,303,600.00	(10,691.48)	1,292,908.52	0.00	(2,124.76)	1,289,012.64	3,895.88	1,303,600.00
2016 Tax Levy	1,222,000.00	(9,526.79)	1,212,473.21	0.00	(1,622.13)	1,209,593.43	2,879.78	1,222,000.00
2015 Tax Levy	1,000,000.00	32.19	1,000,032.19	0.00	258.90	999,190.60	841.59	1,000,000.00
2014 Tax Levy	895,000.00	(8,533.75)	886,466.25	0.00	133.88	885,770.40	695.85	895,000.00
2013 Tax Levy	986,000.00	(10,510.52)	975,489.48	0.00	412.43	975,368.77	120.71	986,000.00
				0.00			**8,433.81**	

OTHER PROJECTS:

	Approved Budget	**Current Expenses / (Revenue)**	**2018 YTD Expenses / (Revenue)**	**INCEPTION To Date Expenses / (Revenue)**	**Remaining Budget**
TMDL Studies					
TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
TOTAL TMDL Studies	135,000.00	0.00	0.00	107,765.15	27,234.85
Flood Control Long-Term					
Flood Control Long-Term Maintenance	690,573.00	337.00	4,879.00	325,621.41	
Less: State of MN - DNR Grants		(4,542.00)	(4,542.00)	(97,542.00)	
	690,573.00	(4,205.00)	337.00	228,079.41	462,493.59
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	375,000.00	0.00	73,461.65	255,619.60	119,380.40
Metro Blooms Harrison Neighborhood CWF Grant Project	134,595.00	0.00	0.00	8,396.89	126,198.11
BWSR Grant				(67,298.00)	(67,298.00)
	134,595.00	0.00	0.00	(58,901.11)	
Total Other Projects	1,835,168.00	(4,205.00)	73,798.65	465,265.05	1,168,008.95

Bassett Creek Construction Project Details

8/8/2018

CIP Projects Levied

	Total CIP Projects Levied	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Twin Lake In-Lake Alum Treatment Project (TW-2)	2015 Main Stem - 10th Ave to Duluth (CR2015)	2016 Honeywell Pond Expansion (BC-4)	2016 Northwood Lake Pond (NL-1)	2017 Main Stem-Cedar Lk Rd to Dupont (CR-M)	2017 Plymouth Creek Restoration (CR-P)	2018 Bassett Cr Pk & Winnetka Ponds Dredging (BCP-2)
Original Budget	**8,275,115**	**196,000**	**990,000**	**612,000**	**250,000**	**163,000**	**1,503,000**	**810,930**	**822,140**	**1,064,472**	**863,573**	**1,000,000**
Added to Budget	**611,600**								611,600			
Expenditures:												
Feb 2004 - Jan 2014	**269,971.68**	11,589.50	101,635.49	89,594.90	19,598.09	23,793.65	11,179.35	7,461.95	5,118.75			
Feb 2015-Jan 2016	**313,510.98**		25,866.35			432.00	93,862.65	6,442.53	94,823.44	42,671.88	49,412.13	
Feb 2016-Jan 2017	**2,835,773.05**		14,350.00	213,668.55	230,401.91	66,812.17	841,405.15	11,402.52	1,338,331.79	71,889.91	16,192.00	31,319.05
Feb 2017-Jan 2018	**266,299.84**		21,055.50	46,397.95			57,299.09		6,869.40	11,814.60	93,113.10	29,750.20
Feb 2018-Jan 2019	**1,159,954.09**			9,972.43				725,298.17	2,000.00		422,683.49	
Total Expenditures:	**4,845,509.64**	**11,589.50**	**162,907.34**	**359,633.83**	**250,000.00**	**91,037.82**	**1,003,746.24**	**750,605.17**	**1,447,143.38**	**126,376.39**	**581,400.72**	**61,069.25**
Project Balance	**4,041,205.36**	**184,410.50**	**827,092.66**	**252,366.17**		**71,962.18**	**499,253.76**	**60,324.83**	**(13,403.38)**	**938,095.61**	**282,172.28**	**938,930.75**

	Total CIP Projects Levied	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Twin Lake In-Lake Alum Treatment Project (TW-2)	2015 Main Stem - 10th Ave to Duluth (CR2015)	2016 Honeywell Pond Expansion (BC-4)	2016 Northwood Lake Pond (NL-1)	2017 Main Stem-Cedar Lk Rd to Dupont (CR-M)	2017 Plymouth Creek Restoration (CR-P)	2018 Bassett Cr Pk & Winnetka Ponds Dredging (BCP-2)
Project Totals By Vendor												
Barr Engineering	**529,769.36**	6,338.95	64,076.04	131,621.88	13,089.74	15,712.00	15,825.00	13,157.98	17,966.00	111,939.39	78,973.13	61,069.25
Kennedy & Graven	**11,961.70**	1,200.55	2,471.95	993.40	1,038.35	1,058.65	2,223.75	796.00	1,701.45	318.40	159.20	
City of Golden Valley	**1,471,580.12**			213,668.55	230,401.91	66,812.17	960,697.49					
City of Minneapolis												
City of Plymouth	**570,027.74**		75,759.35								494,268.39	
City of New Hope	**1,413,267.55**								1,413,267.55			
City of Crystal												
MPCA	**2,500.00**									2,500.00		
Blue Water Science	**3,900.00**					3,900.00						
Misc												
2.5% Admin Transfer	**115,205.00**	4,050.00	20,600.00	13,350.00	5,470.00	3,555.00	25,000.00	11,353.02	12,208.38	11,618.60	8,000.00	
Transfer to General Fund												
Total Expenditures	**4,118,211.47**	**11,589.50**	**162,907.34**	**359,633.83**	**250,000.00**	**91,037.82**	**1,003,746.24**	**25,307.00**	**1,445,143.38**	**126,376.39**	**581,400.72**	**61,069.25**

	Total CIP Projects Levied	2013 Lakeview Park Pond (ML-8)	2013 Four Seasons Mall Area Water Quality Project (NL-2)	2014 Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	2014 Briarwood / Dawnview Water Quality Improve Proj (BC-7)	2014 Twin Lake In-Lake Alum Treatment Project (TW-2)	2015 Main Stem - 10th Ave to Duluth (CR2015)	2016 Honeywell Pond Expansion (BC-4)	2016 Northwood Lake Pond (NL-1)	2017 Main Stem-Cedar Lk Rd to Dupont (CR-M)	2017 Plymouth Creek Restoration (CR-P)	2018 Bassett Cr Pk & Winnetka Ponds Dredging (BCP-2)
Levy/Grant Details												
2010 -2014 Levies	**1,881,000**	162,000	824,000	534,000	218,800	142,200						
2014/2015 Levy	**1,000,000**						1,000,000					
2015-2016 Levy	**1,222,000**							810,930	411,070			
2016-2017 Levy	**1,303,600**								322,670	580,930	400,000	
2017-2018 Levy	**947,115**									282,643	664,472	
Construction Fund Balance	**703,000**	34,000	166,000				503,000					
BWSR Grant- BCWMO	**470,000**								470,000			
DNR Grants-LT Maint												
Total Levy/Grants	**7,526,715**	196,000	990,000	534,000	218,800	142,200	1,503,000	810,930	1,203,740	863,573	1,064,472	
BWSR Grants Received									670,000		200,000	
MPCA Grant-CWP (Total $300,000)									75,000.00			
									19,932.80			

Bassett Creek Construction Project Details

	Proposed & Future CIP Projects (to be Levied)					Other Projects					
	Total Proposed & Future CIP Projects (to be Levied)	2019 Bryn Mawr Meadows (BC-5)	2019 DeCola Ponds B&C Improve (BC-2,BC-3,BC-8)	2019 Westwood Lake Water Quality - Feasibility		Total Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long-Term Maint	Channel Maint	Totals - All Projects
Original Budget						**1,278,373.00**	**105,000.00**	**500,000.00**	**748,373.00**	**175,000.00**	**9,553,488.00**
Added to Budget						**(250,000.00)**			(250,000.00)		**361,600.00**
					DNR Grant	**97,542.00**			97,542.00		97,542.00
					From GF	**422,200.00**	30,000.00		192,200.00	200,000.00	422,200.00
Expenditures:											
Feb 2004 - Jan 2014	**5,282.80**	5,282.80				**245,426.23**	107,765.15		43,195.48	94,465.60	520,680.71
Feb 2015-Jan 2016						**137,357.54**			110,580.19	26,777.35	450,868.52
Feb 2016-Jan 2017						**152,070.74**			152,070.74		2,987,843.79
Feb 2017-Jan 2018	**72,978.88**	25,959.52	44,509.16	2,510.20		**75,811.00**			14,896.00	60,915.00	415,089.72
Feb 2018-Jan 2019	**118,235.14**	43,713.74	41,003.40	33,518.00		**78,340.65**			4,879.00	73,461.65	1,356,529.88
Total Expenditures:	**196,496.82**	**74,956.06**	**85,512.56**	**36,028.20**		**689,006.16**	**107,765.15**		**325,621.41**	**255,619.60**	**5,731,012.62**
Project Balance	**(196,496.82)**	**(74,956.06)**	**(85,512.56)**	**(36,028.20)**		**1,109,108.84**	**27,234.85**	**500,000.00**	**462,493.59**	**119,380.40**	**4,953,817.38**

	Total Proposed & Future CIP Projects (to be Levied)	2019 Bryn Mawr Meadows (BC-5)	2019 DeCola Ponds B&C Improve (BC-2,BC-3,BC-8)	2019 Westwood Lake Water Quality - Feasibility	Total Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long-Term Maint	Channel Maint	Totals - All Projects
Project Totals By Vendor										
Barr Engineering	**196,496.82**	74,956.06	85,512.56	36,028.20	**392,818.50**	104,888.70		287,929.80		1,119,084.68
Kennedy & Graven					**2,648.25**	1,164.30		1,099.35	384.60	14,609.95
City of Golden Valley					**55,287.50**				55,287.50	1,526,867.62
City of Minneapolis					**38,823.35**				38,823.35	38,823.35
City of Plymouth					**100,209.15**				100,209.15	670,236.89
City of New Hope									29,240.00	1,413,267.55
City of Crystal										
MPCA										2,500.00
Blue Water Science										3,900.00
Misc					**5,704.41**	1,712.15		3,992.26		5,704.41
2.5% Admin Transfer										115,205.00
Transfer to General Fund					**32,600.00**			32,600.00		32,600.00
Total Expenditures	**196,496.82**	**74,956.06**	**85,512.56**	**36,028.20**	**657,331.16**	**107,765.15**		**325,621.41**	**223,944.60**	**4,942,799.45**

	Total Proposed & Future CIP Projects (to be Levied)	2019 Bryn Mawr Meadows (BC-5)	2019 DeCola Ponds B&C Improve (BC-2,BC-3,BC-8)	2019 Westwood Lake Water Quality - Feasibility		Total Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long-Term Maint	Channel Maint	Totals - All Projects
Levy/Grant Details											
2010 -2014 Levies					2010-2017		30,000		175,000	175,000	1,881,000
2014/2015 Levy					2017/18	**42,200.00**			17,200	25,000	1,042,200
2015-2016 Levy											
2016-2017 Levy											
2017-2018 Levy											
Construction Fund Balance											703,000
BWSR Grant- BCWMO											470,000
DNR Grants-LT Maint					DNR Grant	**93,000.00**			93,000		
Total Levy/Grants						**515,200.00**	30,000		285,200	200,000	4,096,200

Item 4D.
BCWMC 8-16-18

PROPOSED REVISIONS Table 5-3 BCWMC 2015-2025 CIP (Amended July 2017): Proposed additions and changes in yellow

BCWMC ID	Capital Project Description		Estimated Capital Cost[1]	Year										
				2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Watershed-wide														
WS-1	Remove sediment deltas in lakes downstream of intercommunity watersheds to reduce phosphorus and sediment loading, following evaluation of sediment sources and upstream source control (Policy 56)									TBD	TBD	TBD	TBD	TBD
	Implementation of water quality improvement projects resutling from Metro Chloride TMDL (pending) to address chloride loading (Policy 18)									TBD	TBD	TBD	TBD	TBD
	Implementation of water quality improvement projects resutling from the Upper Mississippi River Bacteria TMDL (Policy 7, generally)									TBD	TBD	TBD	TBD	TBD
	Implementation of water quality improvement projects resulting from future TMDLs (Policy 7, generally)									TBD	TBD	TBD	TBD	TBD
Medicine Lake														
ML-12	Projects address phosphorus load reduction requirements in-Medicine Lake TMDL	Medley Park Stormwater Treatment Facility, Golden Valley	$ 500,000								$200,000	$300,000		
ML-14[3]		Medicine Lake shoreland restoration	$ 100,000							After 2023				
ML-15		Wet pond (0.5 acre) at downstream end of each major subwatershed	$ 2,000,000							After 2023				
ML-16		Water quality retrofits to existing ponds upstream of Medicine Lake	$ 11,000,000							After 2023				
ML-17		In-lake alum treatment (Option 18 in Medicine Lake Plan)	$ 1,400,000							After 2023				
ML-19[4]		Chemical treatment of inflow to Medicine Lake from watershed	$ 1,000,000							After 2023				
ML-20		Mt. Olivet Stream Restoration Project	$ 400,000							$400,000				
ML-21		Medicine Lake to alleviate flooding/improve water quality	$ 500,000						$ 500,000					
MN-22		Ponderosa Woods Stream Restoration	$ 475,000										$475,000	
Plymouth Creek														
2017CR-P[5]	Plymouth Creek Restoration, from Annapolis Lane to 2,500 feet upstream (east) of Annapolis Lane to reduce phosphorus and sediment loading, and improve habitat		$ 863,573			$ 580,930	$ 282,643							
Sweeney Lake														
SL-3[6]	horus load reduction eney Lake TMDL	Schaper Pond Diversion Project	$ 612,000											
SL-4		Sweeney Lake shoreland restoration	$ 300,000							After 2023				
SL-5		Water quality retrofits to existing ponds upstream of Sweeney Lake	$ 800,000							After 2023				
SL-6		Dredging of Spring Pond and diversion of Sweeney Lake branch into Spring Pond.	$ 1,000,000							After 2023				
SL-7		Projects to reduce loading from untreated Hennepin County and MnDOT right-ot-way	$ 400,000							After 2023				

PROPOSED REVISIONS Table 5-3 BCWMC 2015-2025 CIP (Amended July 2017): Proposed additions and changes in yellow

BCWMC ID	Capital Project Description	Estimated Capital Cost[1]	Year										
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
SL-8	Projects to address phosp requirements in-Swee: In-lake alum treatment of Sweeney Lake	$ 275,000							After 2023				
SL-9[4]	~~Chemical treatment of inflow to Sweeney~~ Lake from Sweeney Lake Branch of Bassett Creek	$ 1,000,000							After 2023				
SL-10	Impervious area runoff retention and retrofits, including bioretention, rainwater gardens, and soil restoration (various locations)	$ 500,000							After 2023				
SL-11	Stormwater treatment system for dissolved phosphorus removal in Golden Valley	$ 400,000							After 2023				
Twin Lake													
TW-2[6]	In-lake alum treatment of Twin Lake to reduce internal phosphorus loading	$ 160,000											
Bassett Creek Park Pond													
BCP-2	Dredging of Bassett Creek Park Pond and upstream channel improvements for water quality treatment to reduce phosphorus loading					$1,000,000							
Northwood Lake													
NL-1[7]	Northwood Lake Water Quality Project to reduce phosphorus loading	$ 1,769,070		$ 676,000	$ 1,093,070								
NL-2[8]	Four Seasons Mall Area Water Quality Improvements to reduce phosphorus loading	$ 990,000											
	Implementation of water quality improvement projects recommended in future Northwood Lake TMDL study								TBD	TBD	TBD	TBD	TBD
Bassett Creek Main Stem													
2015CR-M[9]	Restore Main Stem channel, 10th Avenue to Duluth Street, Golden Valley to reduce phosphorus and sediment loading	$ 1,503,000	$ 1,503,000										
2017CR-M[10]	Main Stem Channel Restoration, Cedar Lake Road to Irving Ave to reduce phosphorus and sediment loading	$ 1,064,472			$ 400,000	$ 664,472							
2021CR-M	Main Stem Channel Restoration, Bassett Creek Drive to Golden Valley Road (in Golden Valley) to reduce phosphorus and sediment loading	$ 500,000							~~TBD~~	~~TBD~~	~~TBD~~	$ 300,000	$ 200,000
BC2,3,8, 10	Medicine Lake Road and Winnetka Avenue Long Term Flood Mitigation Plan Implementation	$ 2,900,000					$ 1,100,000	$ 500,000		$ 300,000	$ 1,000,000		
BC-4[12]	Honeywell Pond Expansion, Main Stem Watershed (Golden Valley) to reduce phosphorus loading and provide water quantity benefits	$ 1,202,000		$ 1,202,000									
BC-5[13]	Water Quality Improvements (phosphorus reduction) in Bryn Mawr Meadows, Main Stem Watershed (Minneapolis)	$ 500,000					~~$500,000~~	$ 100,000	$ 400,000				
BC-7	Dredging of accumulated sediment in Main Stem of Bassett Creek just north of Highway 55, Theodore Wirth Regional Park, to reduce phosphorus loading and improve habitat	$ 400,000							$ 400,000				

PROPOSED REVISIONS Table 5-3 BCWMC 2015-2025 CIP (Amended July 2017): Proposed additions and changes in yellow

BCWMC ID	Capital Project Description	Estimated Capital Cost[1]	Year										
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
BC-9	Restoration and stabilization of historic Bassett Creek channel, Main Stem Watershed (Minneapolis) to reduce phosphorus and sediment loading	$ 500,000								$ 500,000			
BC-11	Bassett Creek Park Water Quality Improvement Project	$ 500,000										$ 500,000	
Westwood Lake													
WST-2	Westwood Lake Water Quality Improvement Project in Westwood Hills Nature Center	$300,000					$ 300,000						
Parkers Lake													
PL-7	Parkers Lake Drainage Improvement Project to reduce erosion, suspended solids, and total phosphorus to Pakers Lake	$400,000							$ 100,000	$ 300,000			
Crane Lake													
CL-3 [14]	Retention of impervious area drainage at Ridgedale area (e.g., bioswales, tree trenches, rain gardens) to reduce phosphorus loading	$300,000						$ 300,000	~~TBD~~	~~TBD~~	~~TBD~~	~~TBD~~	~~TBD~~
	Total Annual Estimated Cost[2]	**$36,729,115**	**$1,503,000**	**$1,878,000**	**$2,074,000**	**$1,947,115**	**$1,400,000**	**$1,400,000**	**$1,300,000**	**$1,300,000**	**$1,300,000**	**$1,275,000**	

Notes:

TBD = To be determined, usually at the time the project is listed in the working (5-year) CIP.

1. Project costs presented in 2015 dollars.
2. Includes estimated costs for projects not yet assigned an implementation year. Annual Estimated Costs do not necessarily reflect actual Hennepin County levy amount due to grants, financial contributions from cities, and use of CIP fund
3. ML-14: Project may include lakeshore restoration projects administered by the BCWMC. The City of Plymouth has already performed lakeshore restoration on some properties adjacent to Medicine Lake.
4. Estimated cost of projects ML-19 and SL-9 do not include the annual cost of chemical precipitant and operation/maintenance of treatment facility.
5. 2017CR-P: Project is based on recommednations in the 2009 Plymouth Creek Restoration feasibility study.
6. SL-3 and TW-2: Projects already levied, to be constructed in 2015.
7. NL-1: Project based on Option 4 of the 1996 Northwood Lake Watershed and Lake Management Plan. Project includes construction of a pond upstream of Northwood Lake and installation of underground stormwater treatment and reuse system, and bioinfiltration cells.
8. NL-2: The Four Seasons Mall Area Water Quality Project could include construction of stormwater treatment ponds,-restoration of an eroding stream channel, alum treatment of stormwater, or other projects to address phosphorus loading. The projects stem from recommendations from the 1996 *Northwood Lake Watershed and Lake Management Plan* . The 2012 feasibility study for the Four Seasons Mall Area Water Quality Project is still being considered and refined. The BCWMC has already levied for the project defined as option 1 in the 2012 feasibility study.
9. 2015CR-M: Project is based on recommendations in the Feasibility Study for 2015 Bassett Creek Main Stem Restoration Project (2014). Project already levied: the BCWMC certified a levy to the county for 2015 ($1,000,000); remaining
10. 2017CR-M: Project is based on recommendations in the Feasibility Study for 2012 Bassett Creek Main Stem Restoration Project (2011).
12. BC-4: Project diverts currently untreated stormwater runoff to the pond.
13. BC-5: Project based on Option 7 in the Bassett Creek Main Stem Watershed Management Plan to treat currently untreated stormwater runoff to reduce phosphorus loading.
14. CL-3: Project is based on recommendations in the Crane Lake Watershed and Lake Management Plan (1995).

Item 5A.
BCWMC 8-16-18

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION

NOTICE OF PUBLIC HEARING

Proposed Improvement Contained in the

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

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

Thursday, August 16, 2018 at 8:30 a.m.

at Golden Valley City Hall, 7800 Golden Valley Rd, Golden Valley, MN

Interested persons are invited to attend. The purpose of the hearing is to hear testimony and comments from the public and cities regarding two capital improvements proposed for 2019:

1. Medicine Lake Rd and Winnetka Ave Long Term Flood Mitigation Plan Implementation: DeCola Ponds B & C Improvement Project: This project addresses a significant flooding issue in the City of Golden Valley by developing additional flood storage, lowering the 100-year flood elevation in the area, and eliminating a condominium building from being at-risk for flooding. The project also improves water quality in Bassett Creek and restores 2.7 acres of wetland and upland habitat.

This project has a total estimated cost of $3.8 million including the initial study, design, construction, and administration. Funding is proposed to come from multiple sources including city and county funds, State grants, and $1,531,500 of the BCWMC's Capital Improvement Program funds through 2019 and 2020 ad valorem property taxes by Hennepin County on property within the Bassett Creek Watershed.

2. Westwood Lake Water Quality Improvement Project: This project will provide water quality and educational benefits as part of the larger city project to reconstruct the Westwood Hills Nature Center in the City of St. Louis Park. The project will collect rainwater from the roof of the new building, routing it through a linear water feature and improving water quality before it enters Westwood Lake. The feature will include interactive education opportunities for the center's 36,000 annual visitors.

This project has a total estimated cost of $404,500 including the initial study, design, construction, and administration. Funding is proposed to come from the BCWMC's Capital Improvement Program funds through a 2019 ad valorem property tax by Hennepin County on property within the Bassett Creek Watershed.

More information is available at www.bassettcreekwmo.org/projects.

BASSETT CREEK WATERSHED MANAGEMENT COMMISSION
RESOLUTION NO. 18-05

A RESOLUTION ORDERING THE 2019 IMPROVEMENTS, DESIGNATING MEMBER CITIES RESPONSIBLE FOR CONSTRUCTION, MAKING FINDINGS PURSUANT TO MINNESOTA STATUTES, SECTION 103B.251, CERTIFYING COSTS TO HENNEPIN COUNTY, AND APPROVING AGREEMENTS FOR CONSTRUCTION OF THE IMPROVEMENTS

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

WHEREAS, the Plan includes a capital improvement program ("CIP") listing capital projects in Table 5-3 of the Plan;

WHEREAS, the CIP includes the following capital projects for the year 2019 (collectively, the "2019 Projects"):

a) Medicine Lake Rd and Winnetka Ave Long Term Flood Mitigation Plan Implementation: DeCola Ponds B & C Improvement Project (BC-2,3,8); and

b) Westwood Lake Water Quality Improvement Project (WST-2); and

WHEREAS, the Plan specifies a county tax levy under Minnesota Statutes, section 103B.251 as the source of funding for the 2019 Projects; and

WHEREAS, on August 16, 2018, following published and mailed notice in accordance with the Commission's Joint Power Agreement and Minnesota Statutes, section 103B.251, the Commission conducted a public hearing on the 2019 Projects; and

WHEREAS, the 2019 Projects will be conducive to the public health, promote the general welfare and is in compliance with Minnesota Statutes, sections 103B.205 to 103B.255 (the "Act") and with the Plan as adopted and amended in accordance with the Act.

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

1. The 2019 Projects are hereby ordered.

2. The estimated cost of the Medicine Lake Rd and Winnetka Ave Long Term Flood Mitigation Plan Implementation: DeCola Ponds B & C Improvement Project is Three Million Eight Hundred Thousand Dollars ($3,800,000). Of this amount, One Million Thirty One Thousand Five Hundred Dollars ($1,031,500) will be paid from funds received from a county tax levy pursuant to Minnesota Statutes, section 103B.251 levied in 2018 for collection in 2019. Additional funds of up to Five Hundred Thousand ($500,000) will be paid from funds received from a county tax levy pursuant to Minnesota Statutes, section 103B.251, levied in 2019 for collection in 2020. Additional funds of Sixty Eight Thousand Five Hundred Dollars ($68,500) will come from a State Grant to the Bassett Creek Watershed Management Commission. Remaining funds will come from State grants, local grants and city funds.

3. The estimated cost of the Westwood Lake Water Quality Improvement Project is Four Hundred Four Thousand Five Hundred Dollars ($404,500). Of this amount, Four Hundred Four Thousand Five Hundred Dollars ($404,500) will be paid from funds received from a county tax levy pursuant to Minnesota Statutes, section 103B.251 levied in 2018 for collection in 2019.

4. The total amount certified to Hennepin County for the 2019 Projects is One Million Four Hundred Thirty Six Thousand Dollars ($1,436,000) for payment by the County in accordance with Minnesota Statutes, section 103B.251, subdivision 6.

5. The Commission has received, accepted, and approved the feasibility reports for the 2019 Projects.

6. The costs of the 2019 Projects will be paid by the Commission up to the amount specified in paragraphs 2 and 3 above from proceeds received from Hennepin County pursuant to Minnesota Statutes, section 103B.251 and grant funding, if awarded. Additional costs may be paid by the city constructing the particular project, but no costs will be charged to other members of the Commission.

7. The City of Golden Valley is designated as the member responsible for contracting for the construction of the Medicine Lake Rd and Winnetka Ave Long Term Flood Mitigation Plan Implementation: DeCola Ponds B & C Improvement Project, and the engineer designated for preparation of plans and specifications is the Golden Valley City Engineer, or other engineers selected and retained by the City of Golden Valley. Contracts for construction shall be let in accordance with the requirements of law applicable to the City of Golden Valley. The Cooperative Agreement with the City of Golden Valley for the construction of the Medicine Lake Rd and Winnetka Ave Long Term Flood Mitigation Plan Implementation: DeCola Ponds B & C Improvement Project is approved, and the Chair and Secretary are authorized to execute the agreement on behalf of the Commission.

8. The City of St. Louis Park is designated as the member responsible for contracting for the construction of the Westwood Lake Water Quality Improvement Project, and the engineer designated for preparation of plans and specifications is the St. Louis Park City Engineer, or other engineers selected and retained by the City of St. Louis Park. Contracts for construction shall be let in accordance with the requirements of law applicable to the City of St. Louis Park. The Cooperative Agreement with the City of St. Louis Park for the construction of the Westwood Lake Water Quality Improvement Project is approved, and the Chair and Secretary are authorized to execute the agreement on behalf of the Commission.

Adopted by the Board of Commission of the Bassett Creek Watershed Management Commission the 16th day of August, 2018.

_____
Chair

ATTEST: _____
Secretary

Item 6Aiii.
BCWMC 8-16-18

Bassett Creek Watershed Management Commission

MEMO

To: BCWMC Commissioners
From: Laura Jester, Administrator
Date: August 5, 2018

RE: Item 6Aiii Certifying Costs to Hennepin County:

Direct staff to certify for payment by Hennepin County in 2019 a total tax levy request of $1,436,000 as laid out in Resolution 18-05 and in the table below.

Background
At their meeting in May 2018, the Commission set a maximum 2019 levy of $1,436,000 for the projects below. I recommend certifying the same amount to the County for the final 2019 levy.

- 2019 portion of the DeCola Ponds B & C Improvement Project (BC- 2,3,8) (project split between 2019 & 2020 levies)
- Total costs of the Westwood Lake Water Quality Improvement Project (WST-2)

Item	Estimated costs DeCola Ponds	Estimated costs Westwood
Construction (includes project construction, construction observation, engineering and design, permitting, and contingency)	$3,800,000	$351,000
Feasibility study costs	$85,400	$40,500
BCWMC costs (engineering review)	$0	$7,000
Transfer to BCWMC Administrative Fund	$22,000	$6,000
TOTAL PROJECT EXPENSES	**$3,907,400**	**$404,500**
City Funding and Grants to City	-$2,307,400	-$0
Clean Water Fund Grant	-$68,500	-$0
2020 Levy	-$500,000	-$0
TOTAL 2019 COMMISSION EXPENSES	$1,031,500	$404,500
TOTAL FINAL 2019 LEVY:		**$1,436,000**

Item 6Div.
BCWMC 8-16-18

COOPERATIVE AGREEMENT

(Medicine Lake Rd and Winnetka Ave Long Term Flood Mitigation Plan Project, DeCola Ponds B & C Improvement Project, BC-2, 3, 8)

This Cooperative Agreement ("**Agreement**") is made as of this 16th day of August, 2018 by and between the Bassett Creek Watershed Management Commission, a joint powers watershed management organization ("**Commission**"), and the City of Golden Valley, a Minnesota municipal corporation ("**City**"). The Commission and the City may hereinafter be referred to individually as a "party" or collectively as the "parties."

RECITALS

A. The Commission adopted the Bassett Creek Watershed Management Commission Watershed Management Plan on September 17, 2015 ("**Plan**"), a watershed management plan within the meaning of Minnesota Statutes, section 103B.231.

B. The Plan includes a capital improvement program (CIP) that lists a number of capital improvements including the Medicine Lake Rd and Winnetka Ave Long Term Flood Mitigation Plan ("MLRWA Plan"), which includes the DeCola Ponds B & C Improvement Project ("**Project**").

C. The proposed Project is in the City of Golden Valley and will be designed and constructed as described in the feasibility report for the Project prepared by Barr Engineering Co. entitled DeCola Ponds B and C Improvement Project Feasibility Study dated May 2018 ("**Feasibility Report**"), which is attached hereto as Exhibit A. The Project will consist of the work identified as Concept 3 in the Feasibility Report, in addition to direction from the Commission that, within available funds, creation of additional flood storage should be explored as part of final design.

D. The estimated planning level point opinion of cost of the Project, including design and construction, is $3.8 million. The planning level cost estimate for the Project in the MLRWA Plan is $4.6 million.

E. The Plan specifies that the Project will be partially funded, up to $1.6 million, by the Commission.

F. On August 16, 2018, the Commission adopted a resolution ordering the Project and directing that it be constructed by the City.

G. The first portion of Project costs were certified to Hennepin County, which will levy taxes throughout the watershed for the Project costs in 2018 for collection and settlement in 2019, and the Commission intends to certify the remaining portion of Project costs to Hennepin County in 2019 for collection and settlement in 2020.

H. The City is willing to construct the Project in accordance with the terms and conditions hereinafter set forth.

AGREEMENT

In consideration of the mutual covenants and agreements hereinafter set forth, and intending to be legally bound, the parties hereby agree as follows:

1. Project. The Project will consist of the work identified as Concept 3 in Section 5.1.3 of the Feasibility Report, plus appendices, which includes installing a 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; constructing a sediment forebay in the existing Dover Hills area; lowering the normal water level (NWL) of DeCola Ponds A, B, and C to provide additional flood mitigation volume without requiring excavation; modifying the DeCola Pond C outlet structure and overflow; and restoring 1.0 acres of upland and 1.7 acres of wetland habitat.

2. Condition of Commission Funding. A condition precedent of the Commission's obligations under this Agreement is that the City receives funding from other sources as needed to fully fund the portion of the Project costs not being reimbursed by the Commission under this Agreement. The City shall provide such documentation to the Commission as may reasonably be needed to demonstrate that the additional funding has been secured before the Commission will take any actions in furtherance of this Agreement or make any reimbursement payments.

3. Design and Plans. The City will design the Project and prepare plans and specifications for construction of the Project. The 50% and 90% plans and specifications, and any changes to such plans and specifications, shall be submitted to the Commission for approval. Minor change orders that do not materially change either the effectiveness of the Project to meet its intended purposes or the environmental impacts of the Project may be approved by the City without requiring approvals by the Commission.

4. Contract Administration. The City will advertise for bids and award contracts in accordance with the requirements of applicable law. The City will award the contract and supervise and administer the construction of the Project to ensure that it is completed in accordance with the approved plans and specifications. The contract may only be let to a responsible contractor in accordance with Minnesota Statutes, section 16C.285 and the City will require the contractor to provide all payment and performance bonds required by law. The City will require the Contractor to name the Commission as additional insured on all liability policies required by the City of the contractor and the Commission shall be given the same notification of cancellation or non-renewal as is given to the City. The City will require the contractor to defend, indemnify, protect and hold harmless the Commission and the City, their agents, officers, and employees, from all claims or actions arising from negligent acts, errors or omissions of the contractor. The City will supervise the work of the contractor. However, the Commission may observe and review the work of the Project until it is completed. The City will display a sign at the construction site stating "Paid for by the Taxpayers of the Bassett Creek Watershed."

5. Contract Payments. The City will pay the contractor and all other expenses related to the construction of the Project and keep and maintain complete records of such costs incurred.

6. Commission Reimbursement. The Commission will use its best efforts to secure payment from the County in accordance with Minnesota Statutes, section 103B.251 in the amount of One Million Thirty One Thousand Five Hundred Dollars ($1,031,500) by tax levy in 2018 for collection in 2019 and Five Hundred Thousand ($500,000) by tax levy in 2019 for collection in 2020. An additional Sixty Eight Thousand Five Hundred Dollars ($68,500) is anticipated to come from a state grant to the Commission. The total reimbursement paid by the Commission to the City for the Project will not exceed One Million Six Hundred Thousand Dollars ($1,600,000), less Commission expenses. Out-of-pocket costs incurred and paid by the Commission related to the Project including, but not limited to, feasibility studies, publication of notices, securing County tax levy, preparation of contracts, review of engineering designs, review of proposed contract documents, grant application development, grant administration, administration of this contract, and up to a 2.5% administrative charge, not to exceed actual expenses, shall be repaid from the amount specified above from funds received in the tax settlement from Hennepin County. All such levied funds in excess of such expenses plus the full $68,500 in grant funds, to the extent such funds are actually received, shall be available for reimbursement to the City for costs incurred by the City in the design and construction of the Project. Reimbursement to the City will be made as soon as funds are available, provided a request for payment has been received from the City that contains such detailed information as may be requested by the Commission to substantiate costs and expenses. The City shall complete and submit with its final reimbursement request to the Commission a final report on the Project using the Commission's final reporting form and providing such other information as may be requested by the Commission.

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

8. Audit. All City books, records, documents, and accounting procedures related to the Project are subject to examination by the Commission and either the State Auditor or the Legislative Auditor for at least six years after completion of the Project.

9. Environmental Review. The City will perform all necessary investigations of site contamination and secure all necessary local, state, or federal permits required for the construction of the Project and will not proceed with the Project until any required environmental review and remediation of site contamination is completed or a plan for remediation is approved by appropriate regulatory agencies.

10. Ongoing Maintenance. Upon completion of the Project, the City shall be responsible for its ongoing maintenance. The City agrees to perform, at its cost, such maintenance as may be required to sustain the proper functioning of the improvements constructed as part of the Project for their useful life.

11. Data Practices. The City shall retain and make available data related to the letting of contracts and construction of the Project in accordance with the Minnesota Government Data Practices Act.

12. Term. This Agreement shall be in effect as of the date first written above and shall terminate once the Project is completed and the Commission has completed its reimbursement payments to the City as provided herein.

13. Entire Agreement. The above recitals and the exhibits attached hereto are incorporated in and made part of this Agreement. This Agreement contains the entire understanding between the parties regarding this matter and no amendments or other modifications of its terms are valid unless reduced to writing and signed by both parties.

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

BASSETT CREEK WATERSHED
MANAGEMENT COMMISSION

By:_____
Its Chair

And by:_____
Its Secretary

Date:_____

CITY OF GOLDEN VALLEY

By: _____
Its Mayor

And by: _____
Its City Manager

Date:_____

EXHIBIT A
Feasibility Report

[attached hereto]

Item 6Av.
BCWMC 8-16-18

COOPERATIVE AGREEMENT
(Westwood Lake Improvement Project WST-2)

This Cooperative Agreement ("**Agreement**") is made as of this 16th day of August, 2018 by and between the Bassett Creek Watershed Management Commission, a joint powers watershed management organization ("**Commission**"), and the City of St. Louis Park, a Minnesota municipal corporation ("**City**"). The Commission and the City may hereinafter be referred to individually as a "party" or collectively as the "parties."

RECITALS

A. The Commission adopted the Bassett Creek Watershed Management Commission Watershed Management Plan on September 17, 2015 ("**Plan**"), a watershed management plan within the meaning of Minnesota Statutes, section 103B.231.

B. The Plan includes a capital improvement program ("**CIP**") that lists a number of water quality project capital improvements.

C. The Commission adopted an amendment to the Plan on July 20, 2017 to include in its CIP the Westwood Lake Improvement Project ("**Project**").

D. The proposed Project in the City of St. Louis Park, will be designed and constructed in conjunction with a larger City project to reconstruct the Westwood Hills Nature Center ("**City Reconstruction**") and as more fully described in the feasibility report for the Project prepared by Barr Engineering Co. entitled Feasibility Report for the Westwood Lake Improvement Project dated May 2018 ("**Feasibility Report**"), which is attached hereto as Exhibit A.

E. The cost estimate for the Project, including feasibility study, design, construction and Commission costs directly related to the Project, is $404,500.

F. The Plan specifies that the Project will be funded by a County tax levy under Minnesota Statutes, section 103B.251.

G. On August 16, 2018, the Commission adopted a resolution ordering the Project and directing that it be constructed by the City.

H. Project costs were certified to Hennepin County, which will levy taxes throughout the watershed for the Project costs in 2018 for collection and settlement in 2019.

I. The City is willing to construct the Project in accordance with the terms and conditions hereinafter set forth.

AGREEMENT

In consideration of the mutual covenants and agreements hereinafter set forth, and intending to be legally bound, the parties hereby agree as follows:

1. Project. The Project will consist of the work identified as Concept 3 in Section 4.3 of the Feasibility Report, which involves construction of a linear water feature that will capture and recirculate roof water for water quality improvements and educational purposes, and as is further described in the Feasibility Report. Stormwater-management or nutrient-reduction capacity created by the Project, if any, may be utilized by the City in accounting for compliance with federal and/or state regulatory obligations, but may not be utilized to comply with regulatory requirements imposed by or on behalf of the Commission. The City will determine, at its cost, available credit from the Project. The Commission makes no representation or warranty as to credit that will be available from, or results that will be achieved by, the Project.

2. Design and Plans. The City will design the Project and prepare plans and specifications for construction of the Project. The 50% and 90% plans and specifications, and any changes to such plans and specifications, shall be submitted to the Commission for approval. Minor change orders that do not materially change either the effectiveness of the Project to meet its intended purposes or the environmental impacts of the Project may be approved by the City without requiring approvals by the Commission.

3. Contract Administration. The City will advertise for bids and award contracts in accordance with the requirements of law. The City will award the contract and supervise and administer the construction of the Project to ensure that it is completed in accordance with the approved plans and specifications. The contract may only be let to a responsible contractor in accordance with Minnesota Statutes, section 16C.285 and the City will require the contractor to provide all payment and performance bonds required by law. The City will require the Contractor to name the Commission as additional insured on all liability policies required by the City of the contractor and the Commission shall be given the same notification of cancellation or non-renewal as is given to the City. The City will require the contractor to defend, indemnify, protect and hold harmless the Commission and the City, their agents, officers, and employees, from all claims or actions arising from negligent acts, errors or omissions of the contractor. The City will supervise the work of the contractor. However, the Commission may observe and review the work of the Project until it is completed. The City will display a sign at the construction site stating "Paid for by the Taxpayers of the Bassett Creek Watershed".

4. Contract Payments. The City will pay the contractor and all other expenses related to the construction of the Project and keep and maintain complete records of such costs incurred, including a clear indication of costs directly related to this Project versus the costs attributable to the larger nature center reconstruction project.

5. Commission Reimbursement. The Commission will use its best efforts to secure payment from the County in accordance with Minnesota Statutes, section 103B.251 in the amount of Four

Hundred Four Thousand Five Hundred Dollars ($404,500) by tax levy in 2018 for collection in 2019. The total reimbursement paid by the Commission to the City for the Project will not exceed Four Hundred Four Thousand Five Hundred Dollars ($404,500), less Commission expenses. Out-of-pocket costs incurred and paid by the Commission related to the Project including, but not limited to, feasibility studies, publication of notices, securing County tax levy, preparation of contracts, review of engineering designs, review of proposed contract documents, grant application development, grant administration, administration of this contract, and up to a 2.5% administrative charge are expected to be approximately $53,500 and shall be repaid from the amount specified above from funds received in the tax settlement from Hennepin County. All such levied funds in excess of such expenses are available for reimbursement to the City for costs incurred by the City in the design and construction of the Project. Reimbursement to the City will be made as soon as funds are available, provided a request for payment has been received from the City that contains such detailed information as may be requested by the Commission to substantiate costs and expenses. The City shall complete and submit with its final reimbursement request to the Commission a final report on the Project using the Commission's final reporting form and providing such other information as may be requested by the Commission.

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

7. Audit. All City books, records, documents, and accounting procedures related to the Project are subject to examination by the Commission and either the State Auditor or the Legislative Auditor for at least six years after completion of the Project.

8. Environmental Review. The City will perform all necessary investigations of site contamination and secure all necessary local, state, or federal permits required for the construction of the Project and will not proceed with the Project until any required environmental review and remediation of site contamination is completed or a plan for remediation is approved by appropriate regulatory agencies.

9. Ongoing Maintenance. Upon completion of the Project, the City shall be responsible for its ongoing maintenance. The City agrees to perform, at its cost, such maintenance as may be required to sustain the proper functioning of the improvements constructed as part of the Project for their useful life.

10. Data Practices. The City shall retain and make available data related to the letting of contracts and construction of the Project in accordance with the Minnesota Government Data Practices Act.

11. Term. This Agreement shall be in effect as of the date first written above and shall terminate once the Project is completed and the Commission has completed its reimbursement payments to the City as provided herein.

12. Entire Agreement. The above recitals and the exhibits attached hereto are incorporated in and made part of this Agreement. This Agreement contains the entire understanding between the parties regarding this matter and no amendments or other modifications of its terms are valid unless reduced to writing and signed by both parties.

13. Conditions Precedent. It shall be a condition precedent to the performance of either party's obligations hereunder, except the Commission's obligation to request funding, that the Commission receives approval from Hennepin County that it will levy taxes for the Project in the amount of Four Hundred Four Thousand Five Hundred Dollars ($404,500). It shall be a condition precedent to the performance of either party's obligations hereunder that the City receives a bid and rewards a contract for the City Reconstruction which does not exceed Twelve Million Dollars ($12,000,000).

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

BASSETT CREEK WATERSHED
MANAGEMENT COMMISSION

By:_____
Its Chair

And by:_____
Its Secretary

Date:_____

CITY OF ST. LOUIS PARK

By: _____
Its Mayor

And by:_____
Its City Manager

Date:_____

EXHIBIT A
Feasibility Report

[attached hereto]

St. Louis Park
MINNESOTA
Experience LIFE in the Park

Item 6B.
BCWMC 8-16-18

August 8, 2018

Laura Jester
Administrator
Bassett Creek Watershed Management Commission
16145 Hillcrest Lane
Eden Prairie, MN 55436

RE: 90% Design plans – Westwood Hills Nature Center Water Quality Project

Dear Ms. Jester,

Please find attached the 90% design plans and the engineering letter presenting information about the feasibility study, the design features of the project, and the approval/permitting needs for the Westwood Hills Nature Center Water Quality project.

This project will be constructed by the city per the future cooperative agreement between the City of St. Louis Park and the BCWMC, with the plans and specifications being subject to the approval by the Commission. I am requesting that this project be included with the Commission packet for the August 2018 regular meeting. City staff and the project design engineer will be at the meeting to present the project and answer any questions.

If you have any questions or need any additional information, please contact me at 952.924.2554 or jwest@stlouispark.org.

Sincerely,

Jason T. West
Recreation Superintendent

Enclosure

resourceful. naturally.
engineering and environmental consultants

BARR

August 8, 2018

Ms. Cindy Walsh
Operations & Recreation Director
City of St. Louis Park
3700 Monterey Drive
St. Louis Park, MN 55416

Re: 90% Design Plans – Westwood Hills Nature Center Linear Stormwater Feature Project
City of St. Louis Park

Dear Ms. Walsh:

Attached please find the 90% design plans for the Westwood Hills Nature Center (WHNC) Linear Stormwater Feature Project. The Bassett Creek Watershed Management Commission (BCWMC) is funding the WHNC Linear Stormwater Feature Project (BCWMC CIP project WST-2: Westwood Lake Water Quality Improvement Project) through a 2019 ad valorem levy (via Hennepin County). Per the future cooperative agreement between the City of St. Louis Park and the BCWMC, the city is to construct the project, with plans and specifications subject to approval by the Commission. Also, per the future cooperative 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 August 16th 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 BCWMC completed the *Feasibility Report for Westwood Lake Water Quality Improvement Project (May 2018)* to evaluate options improving water quality at the WHNC project site. The BCWMC selected completing concept 3 which is a linear stormwater feature on the north side of the building. The selected project will provide water quality improvement by (1) providing additional stormwater runoff storage, and (2) reducing runoff volume, and sediments and nutrients in the water, through infiltration, evaporation, or evapotranspiration. The project will also include educational benefits through signage, pedestrian bridges, and interactive pumps. WHNC receives over 40,000 visitors per year, many of whom are part of a programmed group. The City expects the number of visitors to rise, with the new facility being nearly five times the size of the existing facility. WHNC staff will develop educational curriculum based on the bog and the hydrologic cycle represented through the linear stormwater feature.

Design features – 90% plans

The primary design features of the proposed work, as shown on the attached 90% plans, include:

1. Pumps, storm sewer, and structures. The storm sewer and structures will store stormwater runoff from a majority of the building roof and the surrounding areas on the north side of the building. Solar- and hand-powered pumps will be used to pump the water from the underground storage

to the upstream end of the constructed intermittent stream. Solar- and hand-powered pumps will be located in one area on the site, on a concrete patio. The pump patio will also include a large sign describing the hydrologic cycle and how the system mimics that cycle. A draft version of that sign attached. A rain gauge and manhole will be installed near the pump patio. There will be a float in the manhole that will rise out of the manhole, indicating how much water is in the underground storage. Staff will be able to measure, or have children measure, the amount of rainfall in the rain gauge on a daily basis, and equate that to how full the storage pipes are. Staff can also create curriculum about the hydrologic cycle, and illustrate concepts like infiltration and evaporation with the system. The solar pump will operated only when the sun is shining. This is another opportunity to educate children, and adults, about solar power and the pump and solar power operates. The building will also have solar panels on the roof, which allow for further conversations and teaching opportunities. In some weather, the system will be dry. This provides further ways to educate visitors regarding droughts and extreme weather conditions.

2. Intermittent stream and small lined ponds. The runoff and pumped water will flow through a series of lined ponds, stream sections, and trench drains at three locations. At the upstream end, the water will flow from the pump outlets into a V-shaped trough; the water will then drop from the trough into the upper pond. The pond will 12 inches deep and the bottom will be lined. When the pond is full, water will overflow from the pond, flow over a grade control structure, into a steep stream section which transitions into a shallow slope stream section. At the end of the streawm, water will flow through a trench drain and drop from the trench drain into the lower pond. Water will flow over the lower pond grade control structure. The stream channel downstream of the lower pond is similar to the stream channel upstream of the lower pond. There is a second sidewalk crossing at the downstream end of the channel. The water will flow through the trench drain, into a catch basin structure, and be returned to the underground storage.

3. Bog. A bog will be created near the building, adjacent to the lower pool. The bog is a modification from the feasibility study, but it furthers the BCWMC goals of increasing water quality treatment and providing educational opportunities, as well as unique habitat. The water source for the bog will be the solar pump that will pump water from the underground storage to the bog. Education signage will be included at the east end of the bog. The signage will be around three feet wide by two feet tall, and the content will define a bog, how it forms, and plant and animal species native to bogs. A draft of the sign is attached. In addition to the bog sign, the nature center staff plan to build a curriculum around bogs to teach children more about the habitat.

4. Access points. The stream will have several access points for people to explore. Access will be achieved through stone steps leading from sidewalks to the bottom of the stream.

5. System overflow. When the underground storage and above ground sand filter area are full, water will overflow into a biofiltration basin to the west. If the biofiltration basin is full, water will overtop the trail to the west and flow into Turtle Pond or down to Westwood Lake. The building

floor elevation is 896.0. The overflow into the biofiltration basin is 893.0, and the overflow over the trail is 893.4.

Opinion of cost

The table below summarizes our opinion of costs, based on the 90% design plans:

Table 1 Opinion of Cost Summary

Item Description	Cost
Project costs eligible for BCWMC reimbursement:	
Mobilization and Erosion Control	$14,500
Earthwork	$10,900
Upper and Lower Ponds	$ 7,850
Sidewalk Crossings with Drop Structures	$10,000
Storm Sewer (underground storage)	$19,250
Storm Structures	$18,500
Channel Rock and Access Points	$76,200
Bog Soil, Plants, Liner, and Railing	$36,200
Trees, Shrubs, Herbaceous Plants, and VRSS	$24,600
Pumps, Solar Panels, Structure, Concrete Pad	$20,100
Signage	$ 6,000
Total estimated construction costs	**$244,100**
Contingency (+10%)	**$24,400**
Engineering, Design, Construction Observation costs	$ 81,000
Total construction and engineering costs	**$349,500**[i]

[i] This opinion of cost (Class 1, 90% design completion per ASTM E 2516-06) is based on partially complete designs, alignments, quantities and unit prices. Costs will change with further design. Time value-of-money escalation costs are not included. Contingency is an allowance for the net sum of costs that will be in the Final Total Project Cost at the time of the completion of design, but are not included at this level of project definition. The estimated accuracy range for the Total Project Cost as the project is defined is -10% to +10%. The accuracy range is based on professional judgement considering the level of design completed, the complexity of the project and the uncertainties in the project as scoped. The contingency and the accuracy range are not intended to include costs for future scope changes that are not part of the project as currently scoped or costs for risk contingency. Operation and Maintenance costs are not included.

Per the future cooperative agreement between the city and the BCWMC, the BCWMC's total reimbursement for this project may not exceed $404,500, less Commission expenses. Commission expenses are expected to be around $53,500, leaving $351,000 for engineering design and construction expenses. The total estimated construction and engineering costs are within the reimbursable costs allowed for this project.

Approvals/permit requirements

In addition to BCWMC approval of the plans, other permits/approvals will be required for this project.

The project will not include any work below the Westwood Lake ordinary high water level (OHWL), so a MDNR Public Waters Work Permit is not required.

A USACE joint permit is not required.

A Minnesota Pollution Control Agency (MPCA) Construction Stormwater General Permit is required as part of the larger project and will be obtained by the general contractor after the city awards the project. In addition, a stormwater pollution prevention plan (SWPPP) will be included in the construction drawings.

Recommendations

We recommend that the city request 1) BCWMC approval of the 90% drawings, and 2) BCWMC authorization for the city to proceed with 100% plans and contract documents.

If you have any questions, please contact me at 952-832-2724 or mkimble@barr.com.

Sincerely,

Michelle Kimble, P.E.
Sr. Civil Engineer

TURTLE POND OUTLET= 889.3

CONCRETE PAD WITH
1 SOLAR PUMP AND 4 HAND
POWERED PUMPS
SOLAR PANEL ABOVE PUMPS

CONSTRUCTION LIMITS

MH105
(30" I.D.)
RIM=898.0

UPPER POND
BOTTOM=896.3

UPPER POND
OVERFLOW
STRUCTURE
ELEV=897.3

TRENCH
DRAIN NO. 1
SEE
2 RW-04

TRENCH
DRAIN NO. 2
SEE
2 RW-04

STONE ACCESS
STEPS (TYPICAL)

SEE PROFILE
2 RW-02

SEE PROFILE
2 RW-05

SEE PROFILE
1 RW-02

LOWER POOL
BOTTOM=893.0

LOWER POOL
OVERFLOW STRUCTURE
ELEV=894.0

CB102 OVERFLOW
(24" I.D.)
RIM=892.5

CB101 OVERFLOW
(48" CONE)
RIM=893.0 (DITCH STOOL)

SEE PROFILE
2 RW-02

STONE ACCESS
STEPS (TYPICAL)

MH104
(30" I.D.)
RIM=895.6

END CAP

MH103
(72" I.D.)
RIM=895.0

CABLE RAILING
SURROUNDING BOG,
SEE
3 RW-03

BOG MAINTENANCE AND WATER CHANNEL

3' FLAT MAINTENANCE STRIP

MH101
(24" I.D.)
RIM=894.0

SEE PROFILE
1 RW-02

EX. LOW POINT=
892.4
PROP. =893.4

MH102
(30" I.D.)
RIM=894.0

8" ROOF DRAIN INV=892.0

FFE=896.00
WESTWOOD HILLS NATURE CENTER

UGE 2"WATER

BITUMINOUS

1 PLAN: LINEAR STORMWATER FEATURE
AS SHOWN

0 10 20
SCALE IN FEET

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

CADD USER: Michelle Kimble FILE: M:\DESIGN\2327\1658.00\2327165800_RW01_SITE PLAN.DWG PLOT SCALE: 1:1.0028 PLOT DATE: 8/8/2018 11:44 PM

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	KJN3	MAK	KAL	8/08/18	FOR BCWMC 90% REVIEW MEETING
B	JPP	MAK	KAL	7/23/18	FOR CLIENT 50% REVIEW MEETING
A	JPP	MAK	KAL	7/11/18	FOR CLIENT AND BCWMC 50% REVIEW

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 _____

SIGNATURE _____

DATE _____ LICENSE # _____

RELEASED TO/FOR	A	B	C	0	1	2	3
CLIENT	7/11	7/23	8/08				
BID							
CONSTRUCTION							
DATE RELEASED							

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

Project Office:
BARR ENGINEERING CO.
4300 MARKETPOINTE DRIVE
Suite 200
MINNEAPOLIS, MN 55435
Ph: 1-800-632-2277
Fax: (952) 832-2601
www.barr.com

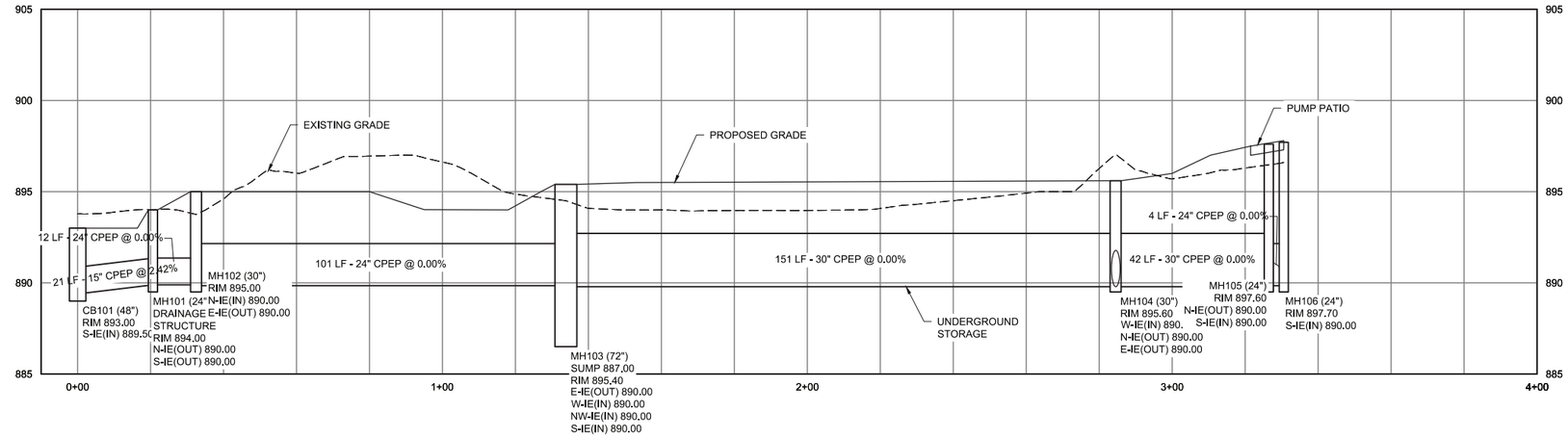
Scale	AS SHOWN
Date	8/08/2018
Drawn	KJN3
Checked	MAK
Designed	MAK
Approved	KAL

CITY OF ST. LOUIS PARK

WESTWOOD HILLS NATURE CENTER
NORTH RAIN WATER FEATURE

PLAN
LINEAR STORMWATER FEATURE

BARR PROJECT No. 23/27-1658
CLIENT PROJECT No.
DWG. No. RW-01
REV. No. C



1 RW-01 PROFILE: STORM SEWER STORAGE
AS SHOWN

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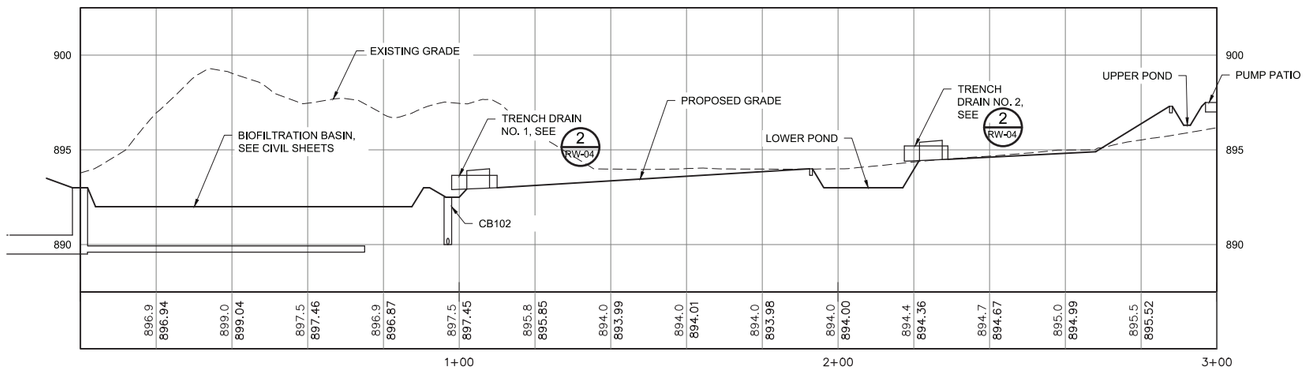
0 2 4 6 8 VERT. SCALE IN FEET



2 - PROFILE: STREAM CENTERLINE
AS SHOWN

0 20 40 HORZ. SCALE IN FEET
0 2 4 6 8 VERT. SCALE IN FEET

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	KJN3	MAK	KAL	8/08/18	FOR BCWMC 90% REVIEW MEETING
B	PEB	MAK	KAL	7/23/18	FOR CLIENT 50% REVIEW MEETING
A	PEB	MAK	KAL	7/11/18	FOR CLIENT AND BCWMC 50% REVIEW

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DATE _____ LICENSE # _____

CLIENT	7/11	7/23	8/08					
BID								
CONSTRUCTION								
RELEASED TO/FOR	A	B	C	0	1	2	3	
	DATE RELEASED							

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Scale	AS SHOWN
Date	08/08/2018
Drawn	KJN3
Checked	MAK
Designed	MAK
Approved	KAL

CITY OF ST. LOUIS PARK

WESTWOOD HILLS NATURE CENTER
NORTH RAIN WATER FEATURE

PROFILES AND SECTIONS

BARR PROJECT No.	23/27-1658
CLIENT PROJECT No.	
DWG. No.	RW-02
REV. No.	C

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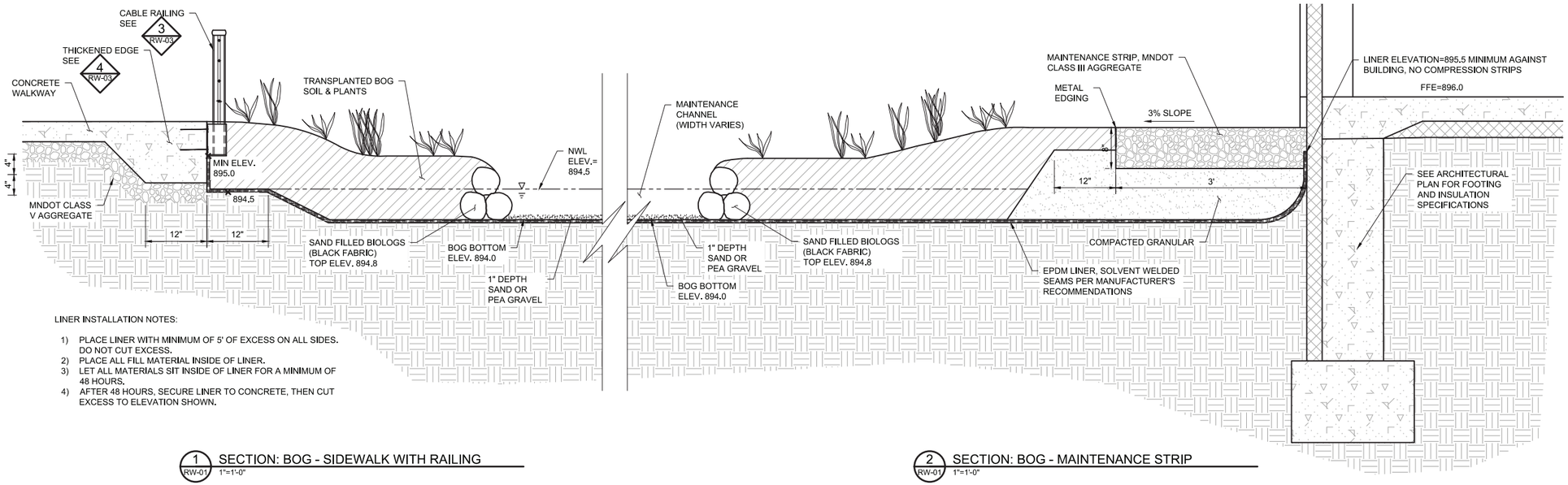
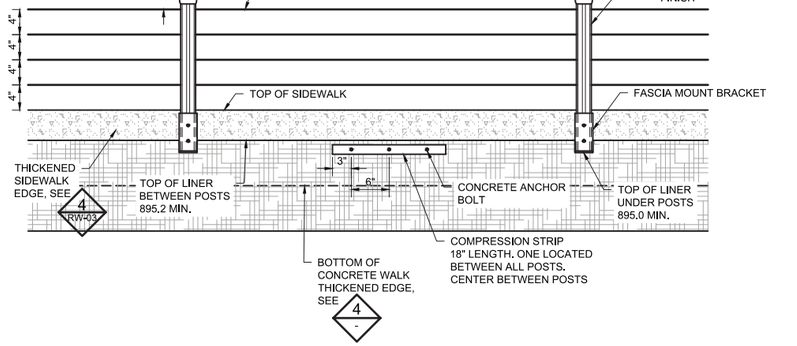


LINER INSTALLATION NOTES:

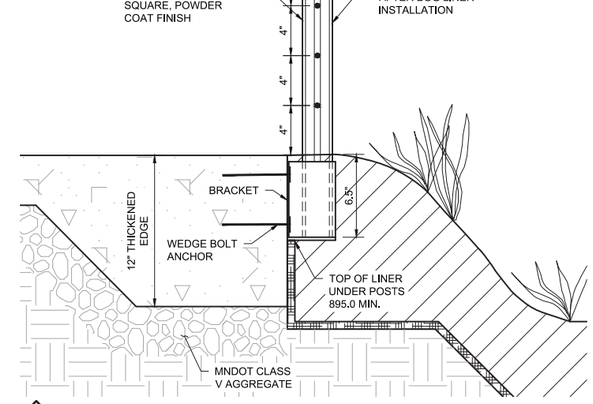
1) PLACE LINER WITH MINIMUM OF 5' OF EXCESS ON ALL SIDES. DO NOT CUT EXCESS.
2) PLACE ALL FILL MATERIAL INSIDE OF LINER.
3) LET ALL MATERIALS SIT INSIDE OF LINER FOR A MINIMUM OF 48 HOURS.
4) AFTER 48 HOURS, SECURE LINER TO CONCRETE, THEN CUT EXCESS TO ELEVATION SHOWN.

1 RW-01 SECTION: BOG - SIDEWALK WITH RAILING
1"=1'-0"

2 RW-01 SECTION: BOG - MAINTENANCE STRIP
1"=1'-0"



3 - DETAIL: BOG CABLE RAILING
AS SHOWN



4 - DETAIL: THICKEN CONCRETE EDGE CONNECTION DETAIL
AS SHOWN

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NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
C	KJN2	MAK	KAL	8/08/18	FOR BCWMC 90% REVIEW MEETING
B	JPP	MAK	KAL	7/23/18	FOR CLIENT 50% REVIEW MEETING
A	JPP	MAK	KAL	7/11/18	FOR CLIENT AND BCWMC 50% REVIEW

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PRINTED NAME _____
SIGNATURE _____
DATE _____ LICENSE # _____

CLIENT	7/11	7/23	8/08				
BID							
CONSTRUCTION							
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

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Scale	AS SHOWN
Date	08/08/2018
Drawn	KJN2
Checked	MAK
Designed	MAK
Approved	

CITY OF ST. LOUIS PARK

WESTWOOD HILLS NATURE CENTER
NORTH RAIN WATER FEATURE

BOG SECTIONS AND DETAILS

BARR PROJECT No.	
23/27-1568	
CLIENT PROJECT No.	
DWG. No. RW-03	REV. No. C

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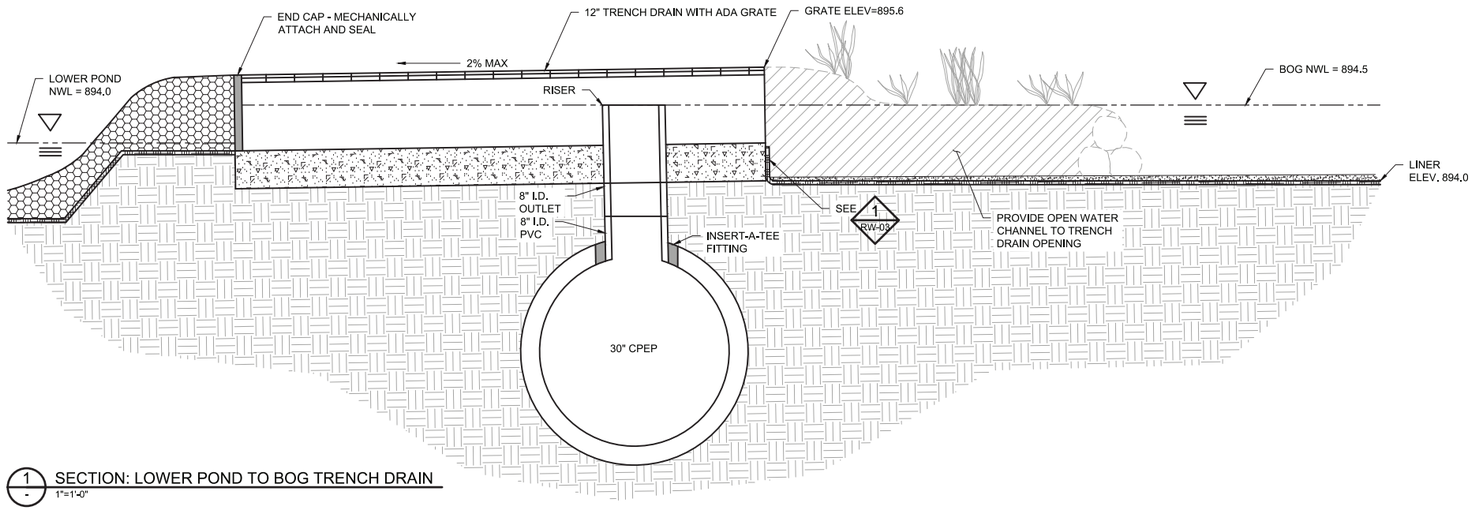
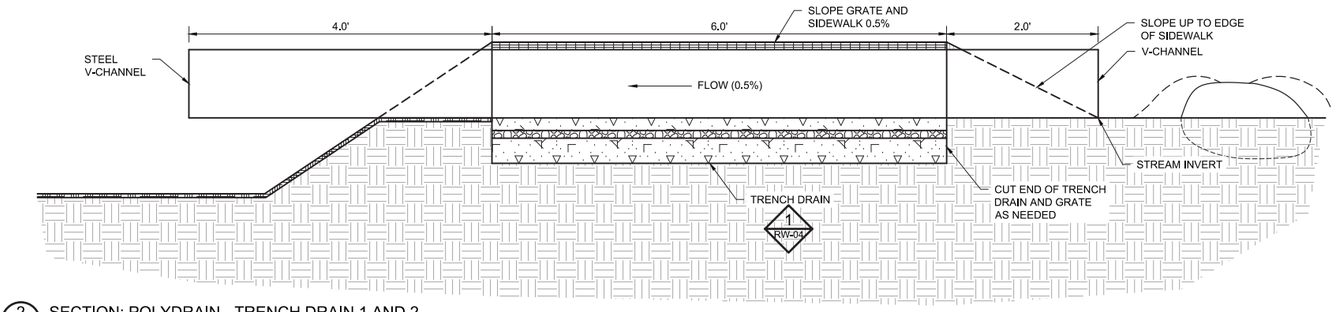
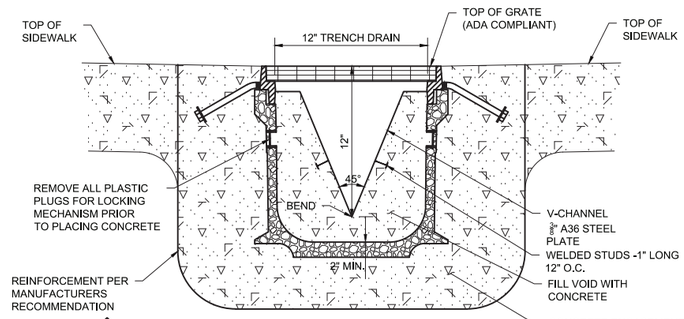


1 - SECTION: LOWER POND TO BOG TRENCH DRAIN
1"=1'-0"



2 - SECTION: POLYDRAIN - TRENCH DRAIN 1 AND 2
1"=1'-0"



3 - DETAIL: POLYDRAIN TRENCH DRAIN 1 AND 2
AS SHOWN

ISSUED FOR REVIEW
NOT CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
A	KJN2	MAK	KAL	8/0818	FOR BCWMC 90% REVIEW MEETING

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PRINTED NAME _____

SIGNATURE _____

DATE _____ - _____ LICENSE # _____ - _____

CLIENT	8/08								
BID									
CONSTRUCTION									
RELEASED TO/FOR	A	B	C	0	1	2	3		
	DATE RELEASED								

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Scale	AS SHOWN
Date	08/08/2018
Drawn	KJN2
Checked	MAK2
Designed	MAK2
Approved	KAL

CITY OF ST. LOUIS PARK

WESTWOOD HILLS NATURE CENTER
NORTH RAIN WATER FEATURE

POND AND TRENCH DRAIN
SECTIONS AND DETAILS

BARR PROJECT No.	23/27-1658.00
CLIENT PROJECT No.	
DWG. No.	RW-04
REV. No.	A

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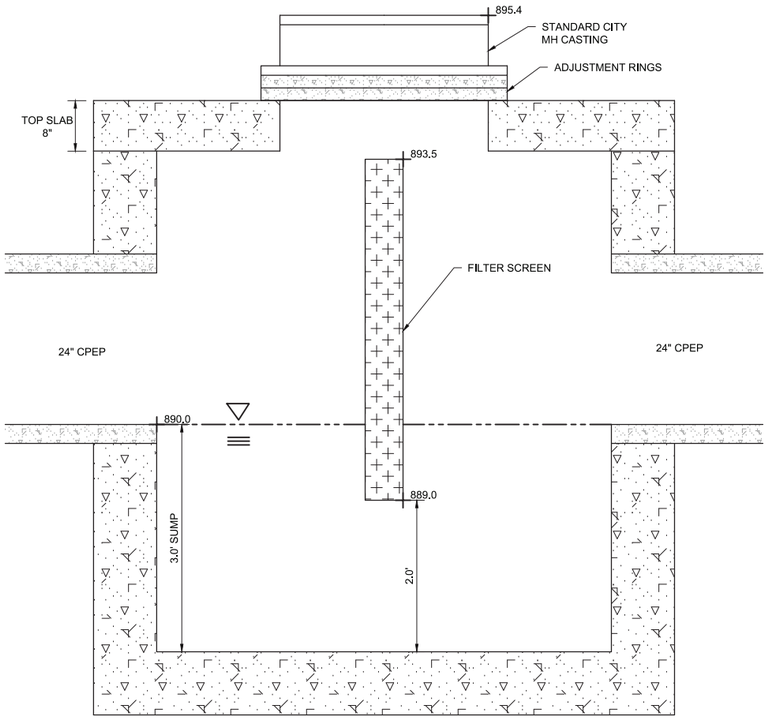
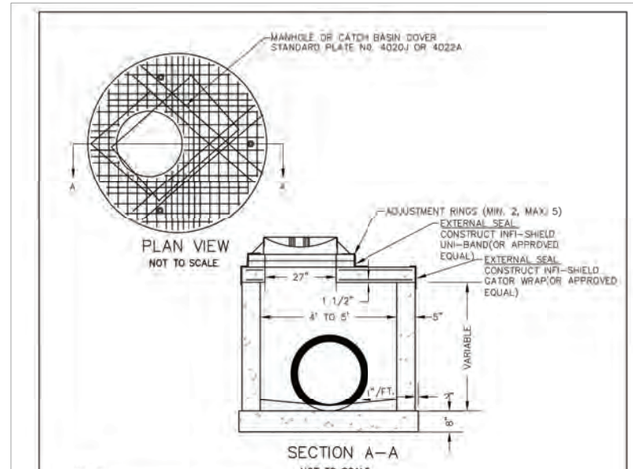


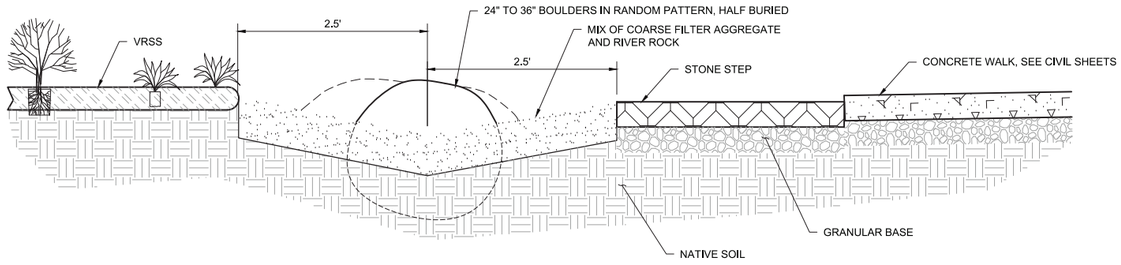
1 - DETAIL: MH103 - 72" MANHOLE STRUCTURE
1"=1'-0"



NOTES:

1. HDPE ADJUSTING RINGS ARE REQUIRED.
2. LADTECH GLUE (PER INSTRUCTIONS) SHALL BE APPLIED BETWEEN EACH HDPE ADJUSTING RING. CONSTRUCT ½"CONCRETE GROUT BETWEEN CONCRETE CONE AND HDPE RINGS. IF THE OPENING IS OFFSET FROM THE STRUCTURE CONCRETE RINGS MAY BE REQUIRED BY THE ENGINEER. MINIMUM ½" MORTAR BETWEEN CASTING, CONCRETE ADJUSTING RINGS, AND STRUCTURE. (NON-SHRINKING GROUT REQ.) EXTERNAL SEAL SHALL BE INSTALLED IN CONJUNCTION WITH ADJUSTING RINGS AND CASTING ASSEMBLY.
3. USE NEENAH CASTING NO. R-1733 WITH A SELF SEALING (O-RING GASKET) ONE HOLE LID NO. R-1733 LID SHALL READ: STORM SEWER, SEE SS-1.
4. FRAME, GRATE AND CURB BOX TO BE NEENAH FOUNDRY NO. R-3067. USE TYPE V GRATE FOR HIGH FLOW AREAS AND TYPE VB IN LOW POINTS. *DRIVEWAY INLETS USE NEENAH R-3290-A OR APPROVED EQUAL.
5. STRUCTURE MUST BE PRECAST.
6. DOGHOUSES TO BE GROUTED OUTSIDE AND INSIDE.
7. TOP OF BARREL SECTION UNDER TOP SLAB TO HAVE FLAT TOP EDGE SEALED WITH 2 BEADS OF RAM-NEK OR APPROVED EQUAL.

St. Louis Park MINNESOTA	TYPE C MANHOLE/ CATCH BASIN	PUBLISH DATE 1/8/18	PLATE NO. SS-3



2 - SECTION: STREAM CHANNEL
1"=1'-0"

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
A	KJN2	MAK	KAL	8/08/18	FOR BCWMC 90% REVIEW MEETING

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PRINTED NAME _____

SIGNATURE _____

DATE _____ LICENSE # _____

	8/08						
CLIENT							
BID							
CONSTRUCTION							
RELEASED TO/FOR	A	B	C	0	1	2	3
	DATE RELEASED						

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www.barr.com

Scale	AS SHOWN
Date	08/08/2018
Drawn	KJN2
Checked	MAK
Designed	MAK
Approved	KAL

CITY OF ST. LOUIS PARK

WESTWOOD HILLS NATURE CENTER
NORTH RAIN WATER FEATURE

UPPER POND SECTIONS AND DETAILS

BARR PROJECT No.	
23/27-1658.00	
CLIENT PROJECT No.	
DWG. No. RW-05	REV. No. A

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BUR OAK
WHITE OAK
REDTWIG DOGWOOD
WINTERBERRY 'JIM DANDY'
WINTERBERRY 'RED SPRITE'
REDTWIG DOGWOOD
PLANT LIST B
PLANT LIST C
IRONWOOD
PLANT LIST A
BLACK SPRUCE
TAMARACK
PLANT LIST D
BOG BIRCH
WINTERBERRY 'JIM DANDY'
WINTERBERRY 'RED SPRITE'
REDTWIG DOGWOOD
PLANT LIST C
PLANT LIST D
IRONWOOD
PLANT LIST B
PLANT LIST A
TAMARACK
UGE
2"WATER
BITUMINOUS
904
903
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892

PLANTING LEGEND

- PLANT LIST A
- PLANT LIST B
- PLANT LIST C
- PLANT LIST D

1 - PLAN: PLANTING PLAN
AS SHOWN

0 10 20
SCALE IN FEET

N

PRELIMINARY DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
A	KJN3	MAK	KAL	8/08/2018	FOR BCWMC 90% REVIEW MEETING

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.

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SIGNATURE _____
DATE _____ LICENSE # _____

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DATE RELEASED: A B C 0 1 2 3

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Scale	AS SHOWN
Date	08/08/2018
Drawn	KJN2
Checked	MAK
Designed	FJR
Approved	KAL

CITY OF ST. LOUIS PARK

WESTWOOD HILLS NATURE CENTER
NORTH RAINWATER FEATURE

PLANTING PLAN

BARR PROJECT No. 23/27-1658.00
CLIENT PROJECT No.
DWG. No. L1
REV. No. A

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PLANT SCHEDULE: RAIN GARDEN 1

Zone A Plants

COMMOM NAME	SCIENTIFIC NAME	QUANTITY	SPACING	SIZE
Meadow garlic	*Allium canadense*			
Large-leaved aster	*Aster macrophyllus*			
Harebell	*Campanula rotundifolia*			
Bebb's sedge	*Carex bebbii*			
Plains oval sedge	*Carex brevior*			
Palm sedge	*Carex muskingumensis*			
Fox sedge	*Carex vulpinoidea*			
Narrow-leaved cotton grass	*Eriophorum angustifolium*			
Bottle gentian	*Gentiana andrewsii*			
Alum root	*Heuchera richardsonii*			
Dotted blazing star	*Liatris punctata*			
Great blue lobelia	*Lobelia syphilitica*			
Gray goldenrod	*Solidago nemoralis*			

Zone B Plants

COMMOM NAME	SCIENTIFIC NAME	QUANTITY	SPACING	SIZE
Sweet flag	*Acorus americanus*			
Marsh marigold	*Caltha palustris*			
Fringed sedge	*Carex crinita*			
Tussock sedge	*Carex stricta*			
Rattlesnake manna grass	*Glyceria canadensis*			
Blue flag iris	*Iris versicolor*			
Cardinal flower	*Lobelia cardinalis*			
Green bulrush	*Scirpus atrovirens*			

Zone C Plants

COMMOM NAME	SCIENTIFIC NAME	QUANTITY	SPACING	SIZE
Columbine	*Aquilegia canadensis*			
Swamp milkweed	*Asclepias incarnata*			
Butterfly weed	*Asclepias tuberosa*			
Whorled milkweed	*Asclepias verticillata*			
Large-leaved aster	*Aster macrophyllus*			
Sideoats grama	*Bouteloua curtipendula*			
Plains oval sedge	*Carex brevior*			
Turtlehead	*Chelone glabra*			
Flat-topped aster	*Doellingeria umbellata*			
Narrow-leaved coneflower	*Echinacea angustifolia*			
Flowering spurge	*Euphorbia corollata*			
Large-leaved aster	*Eurybia macrophylla*			
Joe-pye weed	*Eutrochium maculatum*			
Wild strawberry	*Fragaria virginiana*			
Wild geranium	*Geranium maculatum*			
Sneezeweed	*Helenium autumnale*			
Hispid sunflower	*Helianthus hirsutus*			
Common ox-eye	*Heliopsis helianthoides*			
Rough blazing star	*Liatris aspera*			
Meadow blazing star	*Liatris ligulistylis*			
Tall blazing star	*Liatris pycnostachya*			
Turk's cap lily	*Lilium michiganense*			
Great blue lobelia	*Lobelia siphilitica*			
False solomon's seal	*Maianthemum racemosum*			
Starry solomon's seal	*Maianthemum stellatum*			
Golden ragwort	*Packera aurea*			
Woodland phlox	*Phlox divaricata*			
Obedient plant	*Physostegia virginiana*			
Mountain mint	*Pycnanthemum virginianum*			
Zig zag goldenrod	*Solidago flexicaulis*			
Stiff goldenrod	*Solidago rigida*			
Smooth aster	*Symphyotrichum laeve*			
Azure aster	*Symphyotrichum oolentangiense*			
Arrow-leaved aster	*Symphyotrichum urophyllum*			
Tall meadow rue	*Thalictrum dasycarpum*			
Hoary vervain	*Verbena stricta*			
Culver's root	*Veronicastrum virginicum*			
Heart-leaved Alexander	*Zizia aptera*			

Zone D Plants

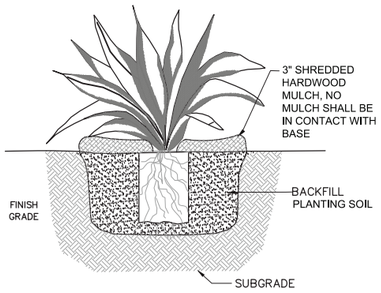
COMMOM NAME	SCIENTIFIC NAME	QUANTITY	SPACING	SIZE
Pickerelweed	*Pontederia cordata*			
Arrowhead	*Sagittaria latifolia*			
Giant bur-reed	*Sparganium eurycarpum*			
Northern Water Plantain	*Alisma triviale*			

Trees

COMMOM NAME	SCIENTIFIC NAME	QUANTITY	SPACING	SIZE
Ironwood	*Carpinus caroliniana*		as shown	#5 pot
Tamarack	*Larix laricina*		as shown	#10 pot
Black Spruce	*Picea mariana*		as shown	#5 pot
Bog Birch	*Betula glandulosa*		as shown	#2 pot
White Oak	*Quercus alba*		as shown	#7 pot
Bur Oak	*Quercus macrocarpa*		as shown	#7 pot

Shrubs

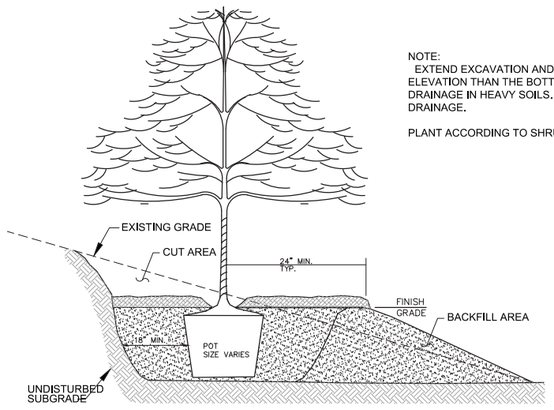
COMMOM NAME	SCIENTIFIC NAME	QUANTITY	SPACING	SIZE
Redtwig Dogwood	*Cornus sericea*		6' O.C.	#2 pot
Winterberry 'Jim Dandy'	*Ilex verticillata 'Jim Dandy'*		5' O.C.	#2 pot
Winterberry 'Red Sprite'	*Ilex verticillata 'Red Sprite'*		5' O.C.	#2 pot



1 L2 DETAIL: PERENNIAL PLANTING
NOT TO SCALE

HERBACEOUS PLUG AND POT PLANTING NOTES:

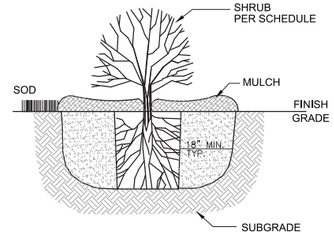
1. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
2. EXCAVATE HOLE 3 TIMES WIDTH OF ROOTBALL.
3. BREAK BOTTOM OF ROOTBALL TO LOOSEN ROOTS.
4. PLANT THROUGH MULCH ALIGNING ROOTBALL TOP EVEN WITH SOIL - DO NOT PLANT TOO DEEP OR TOO SHALLOW. FIRM SOIL TO ENSURE GOOD CONTACT WITH ROOTS.
5. BACK FILL WITH PLANTING SOIL FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
6. APPLY 3" DEPTH SHREDDED HARDWOOD MULCH TO ENTIRE PLANTING AREA (SOIL PREPARED AS PER SPECIFICATIONS).
7. NO MULCH TO BE IN CONTACT WITH PLANT.
8. CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
9. WATER THOROUGHLY AFTER PLANTING.
10. ALL PERENNIAL PLANTS PROVIDED BY THE CONTRACTOR SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF OWNER ACCEPTANCE. AT THE END OF THE ONE-YEAR GUARANTEE PERIOD ALL PERENNIALS SHALL BE IN SATISFACTORY CONDITION, EXCLUDING INSTANCES OF VANDALISM, AS DETERMINED BY OWNER.
    - 10.1. REPLACEMENTS: AT THE END OF THE ONE YEAR WARRANTY PERIOD ALL PLANTS SHALL FULFILL ALL THE REQUIREMENTS OF THESE SPECIFICATIONS AND REFERENCES WITH REGARD TO QUALITY AND CONDITION; FURTHER, THEY SHALL BE FREE OF DEAD BRANCHES AND TWIGS AND SHALL BEAR A MINIMUM OF 50% OF THE FOLIAGE PRESENT WHEN PLANTED HAVING NORMAL DENSITY, SIZE, SHAPE AND COLOR AS DETERMINED BY THE ENGINEER. ANY PLANTS FAILING TO SATISFY ALL THESE CONDITIONS SHALL BE REPLACED AS PER THE PRELIMINARY AND FINAL ACCEPTANCE PROCESS, PLANTS MAY BE REPLACED PRIOR TO THE END OF THEIR WARRANTY PERIOD IF SUCH AN AGREEMENT EXISTS BETWEEN THE CONTRACTOR AND THE OWNER. REPLACEMENT STOCK SHALL BE SUBJECT TO ALL REQUIREMENTS AS TO SELECTION, INSPECTIONS, PREPARATION, PLANTING AND MAINTENANCE OPERATIONS. REPLACEMENTS SHALL MATCH CALIPER AND/OR HEIGHT ATTAINED BY OTHER STOCK OF THE ORIGINAL PLANTING.
11. CONTRACTOR SHALL NOTIFY OWNER FOR A FINAL INSPECTION AFTER THE END OF THE GUARANTEE PERIOD, AND AGAIN AFTER ANY AND ALL REPLACEMENTS ARE PLANTED.



2 L2 DETAIL: PLANTING ON A SLOPE
NOT TO SCALE

NOTE:
EXTEND EXCAVATION AND BACKFILL SOIL TO A POINT DOWNSLOPE EQUAL TO OR LOWER IN ELEVATION THAN THE BOTTOM OF THE HOLE DIRECTLY BENEATH THE PLANT TO INSURE ADEQUATE DRAINAGE IN HEAVY SOILS. GRANULAR SOIL MUST BE ADDED AS BACKFILL IN AREAS OF POOR DRAINAGE.

PLANT ACCORDING TO SHRUB AND TREE PLANTING DETAILS ON THIS SHEET.



3 L2 DETAIL: SHRUB PLANTING
NOT TO SCALE

NOTES:
SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING.

REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF THE SHRUB.

HAND LOOSEN ROOTS OF CONTAINERIZED MATERIAL. IF NECESSARY, SCORE OUTSIDE OF SOIL MASS TO REDIRECT CIRCLING FIBROUS ROOTS.

SET SHRUB ON UNDISTURBED NATIVE SOIL OR ON THROUGHLY COMPACTED BACKFILL SOIL, AT THE SAME DEPTH AS IT WAS GROWN IN THE NURSERY.

BACK FILL WITH PLANTING SOIL - SEE SPEC. DISH TOP OF BACKFILL BY 3" TO ACT AS WATERING BASIN

PLACE 4" DEPTH SHREDDED HARDWOOD MULCH.

DIG PLANT HOLES 18" MIN. LARGER THAN CONTAINER SIZE, ALL SIDES.

REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. IN CASE OF ANY DISCREPANCIES BETWEEN THIS DETAIL, PLANS OR SPECIFICATIONS, THE SPECIFICATION SHALL GOVERN.

PLANTING NOTES:

1. POTHOLE ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS BEFORE EARTHWORK BEGINS.
2. INFORM THE LANDSCAPE ARCHITECT OF PLANTING TWO DAYS PRIOR TO PLANT DELIVERY.
3. CONTRACTOR SHALL COORDINATE LAYOUT OF ALL PLANTS WITH DIRECTION OF LANDSCAPE ARCHITECT IN THE FIELD.
4. PLACE SHREDDED HARDWOOD MULCH (MN/DOT SPEC 3882.2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A DEPTH OF 3" WITHIN ALL PLANTING AREAS ONCE PLANT INSTALLATION IS COMPLETE.
5. INSTALL THE STEEL LANDSCAPE EDGING PER MANUFACTURER RECOMMENDATION INCLUDING STAKING SPACING AND QUANTITY.
6. CONTRACTOR WILL BE RESPONSIBLE FOR WATERING PLANTS (REGARDLESS OF NOTIFICATION) DURING ENTIRE WARRANTY PERIOD. WATERING WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
7. ALL EXISTING CONCRETE, ASPHALT, TREES TO BE KEPT AND TREE ROOTS SHALL BE PROTECTED. ANY DAMAGE TO EXISTING SITE FEATURES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE AND TO THE OWNER'S SATISFACTION.
8. DAMAGE TO EXISTING STRUCTURES OR NEWLY CONSTRUCTED ITEMS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
9. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. IN THE CASE OF ANY DISCREPANCIES BETWEEN THIS DETAIL, PLANS, OR SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN.

PRELIMINARY DRAFT

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION
A	KJN3	MAK	KAL	8/08/2018	FOR BCWMC 90% REVIEW MEETING

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 _____

SIGNATURE _____

DATE _____ LICENSE # _____

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Scale	AS SHOWN
Date	08/08/2018
Drawn	KJN2
Checked	MAK
Designed	FJR
Approved	KAL

CITY OF ST. LOUIS PARK

WESTWOOD HILLS NATURE CENTER
NORTH RAIN WATER FEATURE

PLANTING DETAILS

BARR PROJECT No. 23/27-1658.00
CLIENT PROJECT No.
DWG. No. L2
REV. No. A

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DRAFT

WHAT IS A PEAT BOG?

You can find a bog not too far from here at Wirth Park and _____.

Bogs are a special type of wetland found on saturated, acid peat soils. They support a unique collection of trees, low shrubs and herbs, growing on a mat of sphagnum moss. In Minnesota, most bogs are found north of the twin cities.

HOW IS A BOG CREATED?

BOG FORMATION DIAGRAM GOES HERE

Bogs originate on a floating mat of sedges usually at the edge of a lake that becomes colonized by sphagnum mosses. As the mat gradually thickens and becomes more stable, it is populated by evergreen shrubs of the heath family (Ericaceae). Eventually, tamarack and black spruce can be supported by the mat. Peat accumulates when plant material does not fully decay because of cold, acidic and low-oxygen conditions.

In peat bogs the annual rate of biomass production is greater than the rate of decomposition. This makes bogs very efficient at absorbing carbon dioxide.

HOME TO THESE SPECIES

SPHAGNUM MOSS
Sphagnum mosses are the characteristic species of bogs. They play an important role in keeping the bog environment acidic by their production of organic acids. Sphagnum mosses are commonly known as peat moss. Approximately 20 species of Sphagnum are found in our area.

PITCHER PLANTS
Pitcher plants are extremely well-adapted to this wet, highly acidic environment. Peat bogs are low in nutrients. To compensate, pitcher plants are carnivorous – they "eat" insects that get trapped in the bowl of water they hold (actually, they dissolve them) to get the nutrients they need.

TAMARACK TREES
Tamaracks are hardy, cold-tolerant deciduous conifers. The needles turn golden in autumn and drop annually. Both tamaracks and black spruce trees are found in fully developed peat bogs. (more info to be added)

WOODLAND CARIBOU
Woodland Caribou are a threatened subspecies of reindeer that primarily live in bogs, marshes, lakes and river regions. (more info to be added)

DRAFT

UNDERSTANDING THE HYDROLOGIC CYCLE

This water feature mimics a natural hydrologic cycle. The water drop symbol indicates engineered elements used throughout the system.

The hydrologic cycle is the movement of water from the surface of oceans and lakes into the atmosphere, over land, and back to the earth's surface. During this process, water changes from liquid to solid (ice) to gas and back to liquid.

Item 6C.
BCWMC 8-16-18

Sweeney Lake aeration study

Located in Golden Valley, Sweeney Lake is beloved by nearby homeowners and members of the community who benefit from recreational use. In 2004, however, the 67-acre lake was designated as an "impaired water" by the Minnesota Pollution Control Agency (MPCA). The problem? Too many nutrients (phosphorus).

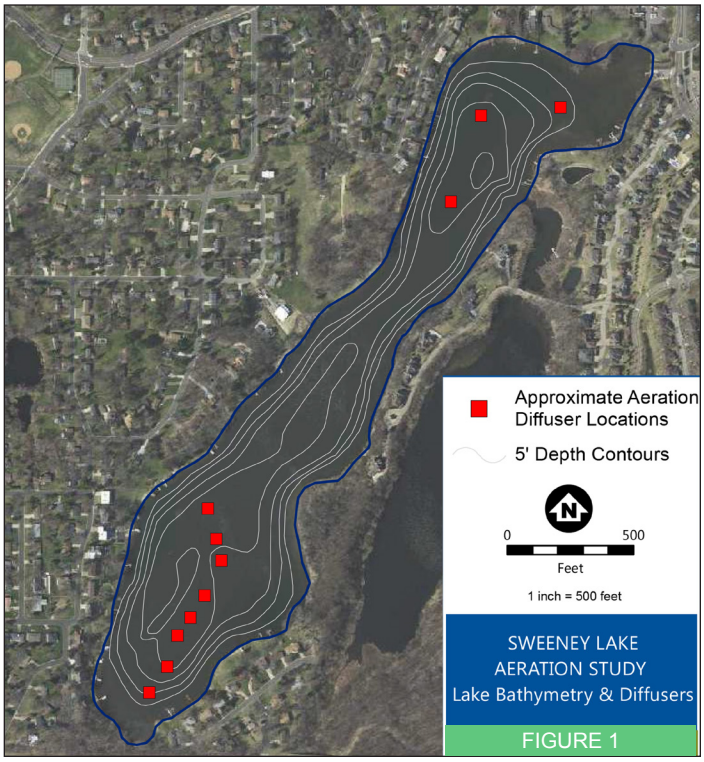
Sweeney Lake homeowners have long been concerned about the lake's water quality. In fact, for the past 40 years they have operated an aeration system year-round to oxygenate the water—hoping to improve conditions for native fish and reduce the buildup of phosphorus, the nutrient that contributes to algae growth. The system consists of 11 diffusers and nine compressors (Figure 1 at right).

The Bassett Creek Watershed Management Commission (BCWMC) has also been concerned about Sweeney Lake. The Commission monitors the lake each year, measuring summer averages of phosphorus, chlorophyll-*a* (an indicator of algae), and water clarity to see if they meet state standards (see table at right). In 2011, the BCWMC also completed a total maximum daily load (TMDL) study for Sweeney Lake. The TMDL creates a plan for restoring the lake by identifying the maximum amount of pollutants it can receive while still meeting water quality standards. While the TMDL establishes a specific path toward better water quality, there is still a question about whether the lake's aeration system is part of the problem or the solution. To answer that question, the BCWMC began a study of the aeration system in 2017. The potential effects of an alum treatment for the lake were also examined (see page 4).

This factsheet provides study results, as well as some background on lake systems.

About Sweeney Lake

Location (city)	Golden Valley
BCWMC classification	Priority 1 deep lake
Watershed area	2,397 acres
Lake size	67 acres
Average depth	12 feet
Maximum depth	25 feet
Ordinary high water level	827.7 feet
MPCA impairments	Nutrients, chloride
Aquatic invasive species	Curly-leaf pondweed
Lake access	Private boat launch and public carry-in canoe launch
Minnesota Pollution Control Agency/BCWMC Water Quality Standards for Sweeney Lake	
Total phosphorus	≤ 40 micrograms/liter
Chlorophyll-*a*	≤ 14 micrograms/liter
Secchi disc transparency (clarity)	≥ 1.4 meters (4.6 feet)



Lake stratification and aeration

To understand the situation in Sweeney Lake, it's helpful to know a little about lake stratification. In lakes without aeration, stratification occurs each summer when lake water separates or stratifies into three distinct layers. Because of the temperature differences, the layers (described below) usually have stable boundaries and don't mix during the summer.

The upper layer: epilimnion

Water in this layer is warmer and has more oxygen and light. These characteristics promote algal growth and support zooplankton and fish. However, if nutrient levels become too high, algal blooms may occur (see photo at top of page 3).

The middle layer: metalimnion

This is the "transitional" middle layer, which effectively divides the lake in two. It is cooler than the epilimnion.

The lowest layer: hypolimnion

This layer contains dense, cooler, and relatively "quiet" water. The decomposition of plants and other organisms in this layer steals oxygen from the water, often leaving this layer anoxic (without oxygen). Anoxic conditions promote the release of phosphorus from bottom sediments.

In spring and fall, when there is less variation in the temperature of the layers, wind "mixes" the layers. This is known as "lake mixing" or "turnover."

The aerators in Sweeney Lake disrupt the normal stratification of the lake. Figure 2 shows how Sweeney Lake would stratify during the summer without aeration; Figure 3 is a representation of the lake's aeration system. In this system a diffuser is placed on the bottom of the lake that circulates air from a compressor through the hypolimnion, up through the epilimnion layer, and back down. One effect of aeration is that it prevents lake stratification and stirs up the bottom layer, distributing phosphorus throughout the water column. This could be particularly problematic in Sweeney Lake where a significant portion of the lake's phosphorus is coming from internal sources, like sediments.

Figure 2 Thermal stratification

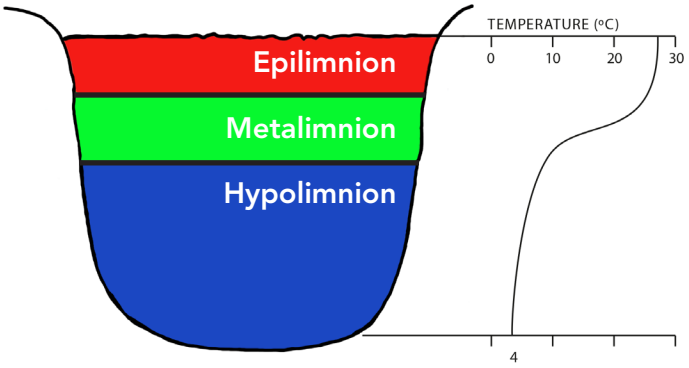
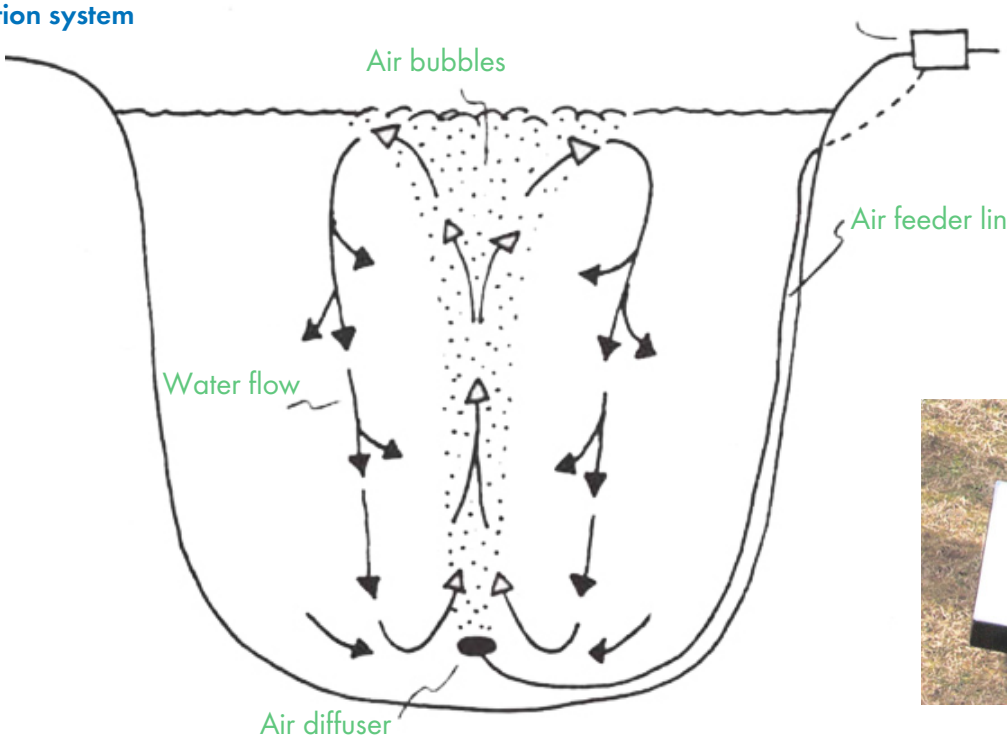


Figure 3 Aeration system



Air diffuser

Blue-green algae at the Sweeney Lake Boat Launch

Phosphorus is key

When it comes to the water quality of Sweeney Lake, phosphorous is the key. While some phosphorus is necessary for plant and algae growth in healthy lake ecosystems, excessive levels of phosphorus lead to excessive algae growth (including toxic blue-green algae at times) and decreased water clarity. These are the conditions that concern the BCWMC, MPCA, and the Sweeney Lake community.

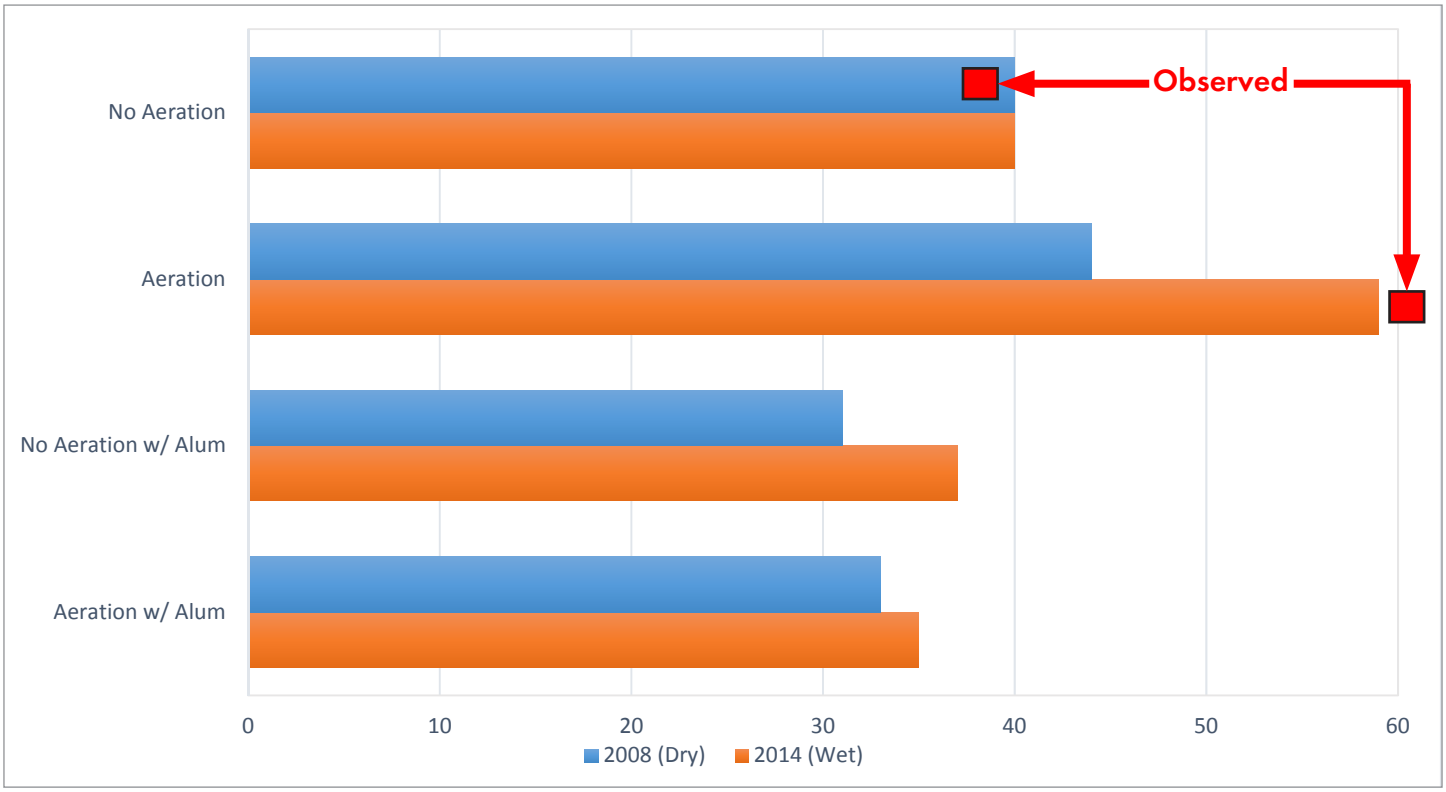
Three-dimensional water quality modeling

To answer the question of whether aeration is helping or hindering lake water quality (specifically, phosphorus levels), a three-dimensional lake-water-quality computer model was used to compare the individual effects of climate, aeration, and alum treatment (see page 4) on lake water quality. As seen in Figure 4, below, the combined approach of ceasing aeration and applying an alum treatment produces the best result in terms of limiting phosphorus.

Key findings

- Modeling shows that whether the lake is aerated or not, phosphorus within the lake (internal loading) is the single largest source of phosphorus in the summer.
- Aeration exacerbates summer water quality problems in Sweeney Lake—surface water phosphorus concentrations were 10–30% higher with aeration.
- An alum treatment will greatly improve water quality and ensure that MPCA/BCWMC goals will be met for Sweeney Lake.
- Depending on sources of phosphorus coming from outside the lake and lake mixing, aeration after an alum treatment may not provide significant benefits.

Figure 4 **Predicted summer average total phosphorus concentration (µg/liter)**



About alum treatments

While studying the effects of aeration on Sweeney Lake, the potential use of aluminum sulfate (alum) to improve water quality was also examined. As indicated on page 3 of this handout, modeling showed that the use of alum would decrease phosphorus levels in the lake. (Twin Lake received alum in 2015 to help maintain excellent water quality.) Alum treatments are costly, however, so planning for a treatment will take time and coordination of resources. The paragraphs below provide answers to some frequently asked questions about alum.

What does alum do and how does it work?

Alum (aluminum sulfate) is derived from aluminum. It has been used in water purification and wastewater treatment for centuries and in lake restoration for decades. The chemical reduces the growth of algae by trapping phosphorus in the lake sediments. To treat a lake, alum is injected several feet below the water's surface. Upon contact with the water it becomes aluminum hydroxide, taking the form of a fluffy substance called floc. This floc works to improve water quality in two ways:

1. As it settles to the bottom of the lake, the floc interacts with phosphorus to form aluminum phosphate, an insoluble compound. In this state the phosphorus can no longer be used by algae for food. Other suspended particles are also collected by the floc, leaving the water noticeably clearer.
2. On the bottom of the lake, the floc forms a layer which binds with phosphorus as it is released from the sediment. This produces a "blanket" over the sediment, reducing internal loading.

How long does it take to complete alum treatment and how quickly are results seen?

Alum treatments are generally made either in the late fall or early spring over a period of 7–10 days. Lake transparency will increase dramatically, even within a few hours. Reductions in algae should be noticeable within one year.

How long will the alum treatment last?

Because Sweeney Lake receives a significant amount of its phosphorus from internal loading, the treatment could maintain water-quality improvements for as long as 15 to 20 years.

Is alum safe?

Yes. There is no evidence to suggest that aluminum ingested in water poses a health threat. Water treatment plants throughout the United States use hundreds of thousands of tons of alum annually and many municipalities use it for wastewater treatment. Upon settling to the bottom of the lake the floc is harmless to aquatic plants and animals. The Food and Drug Administration, the U.S. Environmental Protection Agency, and leading medical experts all concur that aluminum is not a risk factor for any diseases or health conditions.

Photos of Spring Lake before (left) and after alum treatment (right) by the Prior Lake-Spring Lake Watershed District

Item 6D.
BCWMC
8-16-18

Bassett Creek Watershed Management Commission

MEMO

To: BCWMC Commissioners
From: Laura Jester, Administrator
Date: August 8, 2018

RE: Status of 2018 Operating Budget and Recommendation

BACKGROUND:
At their meeting in August 2017, the BCWMC adopted the FY2018 Operating Budget. In a memo reviewed at their meeting in February 2018, the Commission was informed that the "second half" of the Sweeney Lake Aeration Study (2018 costs of $24,204) was inadvertently left out of the 2018 budget. The memo also noted that review of local plans in 2018 would not be covered by the $8,000 budgeted in 2018 due to all 9 local plans being submitted in 2018. At the February meeting, the Commission approved a request to allow a "carryover" of $3,444 from the 2017 Water Quality Monitoring budget line and $6,165 from the 2017 Municipal Plan Review budget line to those items in 2018.

CURRENT STATUS:
While most areas of the BCWMC 2018 Operating Budget are on track to remain within budget for the year, there are some areas where there has been or there is likely to be significant expenses over the budgeted amount.

Sweeney Lake Aeration Study – In addition to the $20,760 ($24,204 - $3,444) initial 2018 budget deficit for this project, there have been significant and unexpected expenses related to this project amounting to $28,200 (including some activities not yet billed). Below is a detailed explanation of why the project is over budget. The Commission Engineer identified work totaling $4,700 that will be covered by Barr, including time to learn the new model and some other expenses. Additionally, the City of Golden Valley has offered to cover some of the costs related the expanded citizen engagement activities, totaling $5,000.

That brings the total 2018 budget deficit for this project to $39,260.

Initial Budget Deficit	$20,760
Activities Over Budget	+ $28,200
Barr Engineering Costs	- $4,7000
Golden Valley Contribution	- $5,000
TOTAL BUDGET DEFICIT	**$39,260**

The Commission Engineer is requesting an additional $18,500 to cover the costs of the activities over budget. (This amount accounts for Barr costs and the Golden Valley contribution).
The Commission Engineer provided the following information regarding the Sweeney Lake Aeration Study:

The modeling effort took longer than originally anticipated:

- 3D models previously available and used by Barr Engineering (DYRESM, and ELCOM-CAEDYM) are no longer supported and available. These models had aeration modules but since the models are no longer available and supported it would be difficult to obtain them and there was risk that they would not run on modern operating systems. As a result, a different model was needed.
- We next looked into using CE QUAL W2, which has an aeration module, but it is not publicly available. The author of the module at Virginia Tech was not publicly providing the module at the time that this current study was conducted. In addition, CE QUAL W2 is a two-dimensional model so we didn't think it would adequately account for what is a three-dimensional problem.
- The only models that could be used for the Sweeney Lake study included AEM3D (the model used) and DELFT3D. DELFT3D is an extremely complex model and takes a significant effort to set up and run. We chose to use AEM3D because we had professional contact with the model developer.
- The AEM3D model took time to learn and troubleshoot—this model has just recently been developed and there were some code errors in the model that Barr identified and the model developer had to fix. The project paid $560 to the model developer to ensure that changes were made in a timely manner.
- The AEM3D model took longer to run since it had to have very fine bathymetric grid to accommodate the complex aeration system at Sweeney Lake. The fine bathymetric grid extended the run time of the model to 36 hours. To expedite the calibration and modeling, we had to run the model on multiple machines, which required significantly more time for pre- and post-processing.

The citizen engagement part of the work took more effort than anticipated:

- The "planning" meeting with Golden Valley and MDNR staff, Golden Valley commissioners and the Sweeney Lake association president was a bigger meeting that took more effort than expected.
- The fact sheet expanded from the expected two pages to four pages.
- The re-review of previously-reviewed aeration studies and review of not-previously-reviewed aeration studies was not part of the anticipated work scope.
- In general, there was more coordination with, and questions from, the residents. (In the end, this is a good thing!)

Non-Fee/Preliminary Reviews – This was a new budget item in 2015 and is used to cover reviews for which either we do not receive an application fee or it's too early in the process for us to have received an application fee (such as the Blue Line LRT, SWLRT, MnDOT projects, etc.). Through agreements with Met Council, some of these costs are recovered each year.

This budget line is currently $2,100 over budget (after accounting for $2,000 still owed to the Commission for worked related to Blue Line LRT).

If trends continue, this budget item may end up being **$12,000 over budget**.

Review Municipal Plans – This item is used to review the local water management plans that will be submitted by each city this year. This has been a budget line for the past few years as staff believed some local plans would be submitted following Watershed Plan approval in 2015. However, no cities submitted local plans until this year. As noted above, $6,165 was approved to be carried over from 2017 to 2018 for this budget item, however that "carry over" still comes from this year's budget. So far, only three local plans have been reviewed (2 during an official review period and 1 through pre-official review). This item will be well over budget by the end of the year – **by as much as $19,000**.

There are budget lines that are expected to be under budget for the year where work is already complete or no costs are expected (see table below).

SUMMARY OF OVER BUDGET ITEMS	
Sweeney Lake Aeration Study	$39,260
Non-Fee/Prelim Reviews	$12,000
Review Local Plans	$19,000
SUB-TOTAL OVER BUDGET	**$70,260**
UNDER BUDGET ITEMS	
Surveys and Studies	$12,000
Watershed Inspections	$1,000
XP-SWMM Updates	$1,082
TMDL Implementation	$5,332
Publications/Annual Report	$563
Public Communications	$1,500
SUB-TOTAL UNDER BUDGET	**$21,477**
TOTAL LIKELY BUDGET DEFICIT	**$48,783**

RECOMMENDATION:

1. Approve additional Commission Engineer expenses of $18,500 for the Sweeney Lake Aeration Study.

2. Acknowledge the budget situation and monitor future activities and expenditures closely. At this time, I do not recommend a budget amendment. The over budget costs will result in a lower fund balance. Fiscal policies recommend the fund balance stay approximately 50% of annual operating costs. An over budget amount of $48,783 would lower the fund balance to approximately $323,662 at the end of the fiscal year. This is approximately 47% of annual operating costs.

Alternatively, the Budget Committee consider a budget amendment and/or other ways in which to address this situation.

Item 6E.
BCWMC 8-16-18

2019 Proposed Operating Budget
Bassett Creek Watershed Management Commission

Item	2014 Budget	2014 Actual	2015 Budget	2015 Actual	2016 Budget	2016 Actual	2017 Budget	2017 Actual	2018 Budget	2019 Proposed Budget	See Notes
ENGINEERING & MONITORING											
Technical Services	120,000	109,391	120,000	116,972	120,000	112,502	125,000	140,702	125,000	130,000	(ZZ)
Development/Project Reviews	65,000	52,643	65,000	51,622	65,000	94,619	65,000	71,791	75,000	80,000	(A)
Non-fee and Preliminary Reviews			15,000	53,686	15,000	35,253	15,000	20,906	10,000	15,000	(B)
Commission and TAC Meetings	16,000	15,984	14,500	11,525	13,000	11,808	14,000	11,753	12,000	12,000	(C)
Surveys and Studies	20,000	7,446	20,000	22,109	25,000	24,444	20,000	16,347	12,000	20,000	(D)
Water Quality / Monitoring	45,000	74,090	63,000	77,429	76,000	75,892	74,300	70,855	80,700	78,000	(E)
Shoreland Habitat Monitoring					6,000	2,468	-				
Water Quantity	11,000	12,100	11,500	9,115	11,500	8,731	11,500	8,570	6,300	10,000	(F)
Assistance on Erosion Control Inspections	1,000	225	1,000		1,000	-	1,000	-	1,000	-	(G)
Annual Flood Control Project Inspections	20,000	17,031	10,000	9,996	10,000	8,867	12,000	7,678	48,000	48,000	(H)
Municipal Plan Review	2,000	764	2,000		2,000	2,491	8,000	1,835	8,000	4,000	(I)
Watershed Outlet Monitoring Program	17,000	13,917	17,000	15,786	17,000	17,002	15,500	19,994	20,500	20,500	(J)
Annual XP-SWMM Model Updates/Reviews							10,000	5,650	10,000	-	(K)
APM/AIS Work							35,000	34,920	32,000	32,000	(L)
Subtotal Engineering & Monitoring	**$317,000**	**$303,591**	**$339,000**	**$368,240**	**$361,500**	**$394,077**	**$406,300**	**$411,001**	**$440,500**	**$449,500**	
PLANNING											
Next Generation Plan Development	40,000	55,198	30,000	28,277	-	-	-			12,000	(LL)
Subtotal Planning	**$40,000**	**$55,198**	**$30,000**	**$28,277**	**$0**	**$0**	**$0**		**$0**	**$12,000**	
ADMINISTRATION											
Administrator	60,000	53,917	62,000	59,395	62,000	59,033	67,200	60,559	67,200	69,200	(M)
Legal	18,500	22,269	18,500	12,969	18,500	15,470	18,500	16,249	17,000	17,000	(N)
Financial Management	3,045	3,045	3,200	3,200	3,200	3,277	3,200	3,200	3,200	3,500	(O)

	A	B	C	D	E	F	G	H	I	J	K	L
1	**2019 Proposed Operating Budget**											
2	**Bassett Creek Watershed Management Commission**											
3	**Item**	**2014 Budget**	**2014 Actual**	**2015 Budget**	**2015 Actual**	**2016 Budget**	**2016 Actual**	**2017 Budget**	**2017 Actual**	**2018 Budget**	**2019 Proposed Budget**	**See Notes**
27	Audit, Insurance & Bond	15,500	12,476	15,500	13,181	15,500	14,606	15,500	17,304	15,500	18,000	(P)
28	Digitize Historic Paper Files			2,500	-	5,000	2,167	-	-			
29	Meeting Catering Expenses	3,000	1,836	2,500	1,564	2,200	1,572	2,000	1,198	1,600	1,500	
30	Administrative Services	35,800	22,763	32,000	29,843	25,000	11,583	18,000	13,346	15,000	15,000	(Q)
31	**Subtotal Administration**	**$135,845**	**$116,306**	**$136,200**	**$120,152**	**$131,400**	**$107,708**	**$124,400**	**$111,856**	**$119,500**	**$124,200**	
32	**OUTREACH & EDUCATION**											
33	Publications / Annual Report	2,000	2,272	4,000	1,430	2,500	1,246	2,500	1,138	1,500	1,300	(QQ)
34	Website	2,000	0	12,000	11,802	3,500	2,275	4,400	1,228	4,200	3,000	(R)
35	Watershed Education Partnerships	15,500	11,100	15,500	10,700	15,500	9,550	15,500	12,354	13,850	15,850	(S)
36	Education and Public Outreach	15,000	20,292	17,000	12,830	22,500	25,710	20,000	19,302	22,000	25,000	(T)
37	Public Communications	3,000	1,198	3,000	2,270	2,500	1,128	2,500	732	2,500	1,000	
38	**Subtotal Outreach & Education**	**$37,500**	**$34,862**	**$51,500**	**$39,032**	**$46,500**	**$39,909**	**$44,900**	**$34,754**	**$44,050**	**$46,150**	
39	**MAINTENANCE FUNDS**											
40	Channel Maintenance Fund	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	(U)
41	Flood Control Project Long-Term Maint.	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	(V)
42	**Subtotal Maintenance Funds**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	
43	**TMDL WORK**											
44	TMDL Implementation Reporting	20,000	20,000	20,000	15,881	20,000	18,950	20,000	19,209	10,000	10,000	(W)
45	**Subtotal TMDL Work**	**$20,000**	**$20,000**	**$20,000**	**$15,881**	**$20,000**	**$20,000**	**$20,000**	**$19,209**	**$10,000**	**$10,000**	
46	**GRAND TOTAL**	**$600,345**	**$579,957**	**$626,700**	**$621,582**	**$609,400**	**$611,694**	**$645,600**	**$626,820**	**$664,050**	**$691,850**	

NOTES

(ZZ) New and more complicated issues continue to arise requiring engineer review, analyses, input.

(A) Partially funded by application fees; with the creation of the preliminary and non-fee budget category, most of the review costs will be covered by application fees. 2019 budget assumes 40 submittals at average cost of $2,000 - $2,500 per review, which is based on 2014 -2017 trend of increasing number of submittals and increased number of complex reviews (including MIDS)

(B) Assumes increase in non-fee reviews in 2019 based on actual spent in 2017 ($20,906) and reviews for light rail projects may still be needed as these projects have been delayed. This was a new line item in 2015 used to cover reviews for which either we do not receive an application fee or it's too early in the process for us to have received an application fee (such as the Blue Line LRT, SWLRT, MnDOT projects, etc.). Through agreements with Met Council, some of these costs were recovered in 2015, 2016, 2017 and expected in 2018.

(C) Includes attendance at BCWMC meetings, TAC meetings and Next Generation Plan Steering Committee meetings (through 2015). 2010- 2013 estimates based on 18 meetings. 2014 estimate based on 30 meetings. 2015 estimate based on 24 meetings. 2016 and 2017 estimates based on 18 meetings (12 BCWMC meetings & 6 TAC meetings). 2017 budget increased to allow for additional BCWMC Engineer staff to attend Commission/TAC meetings (total of 3 assumed). 2018 budget was reduced from 2017. 2019 budget assumed same as 2018.

(D) For Commission-directed surveys and studies not identified in other categories - e.g., past work has included watershed tours, Medicine Lake outlet work, Flood Control Project Maintenance and Responsibilites, Sweeney Lake sediment monitoring, stream monitoring equipment purchase. 2018 budget was reduced from previous years for overall budget savings. 2019 proposed budget is more in line with previous years and gives Commission flexibility to investigate or tackle unforeseen issues that arise. Could include funding for iron filings study in Northwood Lake or elsewhere.

(E) Routine lake and stream monitoring. See details on next page.

(F) Water Quatity (lake level) monitoring. 2018 budget lowered for budget savings and will result in fewer data points. 2019 budget recommended for setting/checking benchmarks and flooding elevations; NAVD 88 benchmarks

(G) After recommendations from the TAC and Budget Committee,the Commission’s ended the erosion and sediment control inspection program (Watershed Inspection) in 2014 due to duplication with activities required by the member cities. Some budget remained here to provide, as requested by the Commission, some oversight of city inspection activities (reports of inspections are available from each city). However, little or no expenses have been incurred since 2014. Recommended to remove from budget. If inspections are needed they can be charged to general technical services.

(H) 2019 budget includes double box culvert inspection, following NASSCO protocol ($36,000), and based on BCMWC's new Flood Control Project policies approved in 2016; 2019 budget also includes the annual FCP inspection ($12,000). 2018 budget includes 2nd Street (deep) tunnel inspection, following NASSCO protocol, and based on BCMWC's new Flood Control Project policies approved in 2016, which call for more-frequent inspection of the deep tunnel ($36,000, with approximately $10,000 for subcontractors - crane rental and Rescue Resources); the 3rd Ave tunnel will also be inspected at the same time as the 2nd Street tunnel (they are connected), rather than in 2019 (as called for in schedule); 2018 budget also includes the annual inspection ($12,000). 2017, 2016 and 2015 budgets include usual inspection. 2017 budget increased to allow for more follow-up with cities, stemming from Flood Control Project Maintenance and Responsibilities-related effort. 2014 budget included inspection of double box culvert (performed once every 5 years).

(I) Although the bulk of the reviews will be completed under the 2018 budget, the 2019 budget assumes a couple reviews/approvals may extend into 2019. This task has also included review of adjacent WMO plan amendments, and review of city ordinances.

(J) Monitoring at the Watershed Outlet Monitoring Program site in Minneapolis through an agreement with Met Council. Commission is reimbursed $5,000 from Met Council. Met Council pays for equipment, maintenance, power, cell service, and lab analyses. Monitoring protocol changed in 2017 with collection of bi-monthly samples (up from once-per-month sampling). $20,500 includes $16,000 for Wenck or similar contractor + $4,500 for Barr's data management and analyses

(K) This item is used to make updates to the XP-SWMM model, coordinate with P8 model updates, and assist cities with model use. However, no XP-SWMM updates are expected in 2019 and 2020 due to work on the grant funded FEMA modeling project. This line item will return in the 2021 operating budget

(L) Funds to implement recommendations of Aquatic Plant Management/Aquatic Invasive Species Committee likely including curly-leaf pondweed control in Medicine Lake and small grant program for launch inspectors, education/outreach, etc. by other organizations including TRPD, AMLAC, others

(LL) Funding that will be set aside and accrued over next 5 years to pay for 2025 Watershed Plan development which will start in 2023.

(M) Includes 3% increase in Administrator hourly rate as recommended by Budget Committee. $72/hour for average of 80 hours per month.

(N) For Commission attorney. No change in budget over 2018 levels.

(O) Funding for City of GV staff's monthly accounting activities and coordination of annual audit. Slight increase recommended as amount has not changed in many years.

(P) Insurance and audit costs have risen considerably in the last two years.

(Q) Recording Secretary $42/hr rate * 21 hrs/mo (6.5 hrs for minutes, 14.5 for social media, writing articles, coordinating with city communication staff) + $370 annual mileage + $250/mo meeting packet printing/mailing + $546 contingency

(QQ) Budget decrease to be more in line with actual expenses in last few years. Costs associated with Commission Engineer assistance with annual report

(R) Based on 2017-2019 agreement with HDR for website hosting and maintenance activities and closer to actual funds spent in 2017.

(S) Includes CAMP ($7,000), River Watch ($2,000), Metro Watershed Partners ($3,500), Metro Blooms ($3,000), Children’s Water Festival ($350). Does not allow for additional partnerships or increases in contributions. CAMP costs set by Met Council will increase significantly in 2019 (after 16 years w/o increases)

(T) Includes funding for West Metro Water Alliance at $13,000 plus $12,000 for 50th Anniversary events, document production, etc. and some funding for other educational supplies and materials including educational signage, display materials, Commissioner training, etc.

(U) Will be transferred to Channel Maintenance Fund

(V) Will be transferred to Long-Term Maintenance Fund

(W) Budget reduced in 2018 for overall budget savings.Task includes reporting on TMDL implementation and updating P8 model to include new BMPs.

Budget item	Item description	Estimated cost
Cavanaugh Lake (Plymouth) and Northwood Lake (New Hope) detailed lake monitoring	Detailed lake monitoring includes monitoring one location each at Cavanaugh Lake and Northwood Lake on six occasions for selected parameters (total phosphorus, soluble reactive phosphorus, total nitrogen, chlorophyll a, chloride, temperature, pH, DO, specific conductance, and oxidation reduction potential), plus parameters associated with AIS vulnerability (calcium, alkalinity, hardness, sodium, magnesium, potassium, dissolved inorganic carbon, and dissolved organic carbon), sample analysis, phytoplankton and zooplankton collection and analysis, an aquatic plant survey (two occasions), preparation of a presentation and preparation of a final report (following template of 2016 & 2017 reports). Assessment of vulnerability to AIS infestations ($1,000/lake)	$43,000 (Note: estimated cost will be lower for Cavanaugh Lake if TRPD completes the monitoring, aquatic plant monitoring, and lab analyses.) $2,000
Second year of two-year stream water quality/ quantity monitoring effort (automatic sampling) on North Branch	The stream water quality monitoring program is designed to approximate the Metropolitan Council's Watershed Outlet Monitoring Program (WOMP) design for one location—North Branch (two additional locations would be monitored in years 3-4, and in years 5-6). The costs include 24 grab samples (approximately 1.5 per month for the open water period) and 16 storm samples. This approximates a recent change to the WOMP sampling protocols from monthly to bi-monthly samples (some WOMP stations do not collect grab samples in the winter). Parameters to be monitored include: • Total Phosphorus • Dissolved Phosphorus • Nitrate/Nitrite • Ortho Phosphorus • TKN • Ammonia N • Chloride • TSS • VSS • E. Coli • Chl-a • Alkalinity • Hardness • Metals • TOC • Sulfate	$23,000
General Water Quality Task	Potential items/issues include: • Inventorying chloride sources and/or improvement measures • Preparing for TMDL studies on Northwood Lake and the Bassett Creek fish impairments, including coordination with the MPCA • Internal load assessments and/or investigation(s) of alternative chemical treatments for Medicine Lake, Lost Lake, Sweeney, etc. • Evaluating carp population dynamics in the Sweeney branch (down to Schaper Pond) • Addressing new AIS species (in 2017, the Medicine Lake zebra mussels effort was charged to the Technical Services budget) If any of these become larger efforts, they could be charged to the Surveys & Studies budget.	$10,000
Total Estimated Budget		**$78,000**

2018 Financial Information

Fund Balance as of January 31, 2018 (audited)		$	368,445
Income from assessments in 2018	+	$	515,050
Expected interest income in 2018	+	$	-
Expected income from project review fees	+	$	55,000
Expected income from CIP Administrative Funds	+	$	27,000
Expected transfer from Long-term Maint Fund for Flood Control Project	+	$	48,000
Expected income from WOMP reimbursement	+	$	5,000
Expected income from reimbursements from 2018 work[1]	+	$	18,000
Estimated funds available for fiscal year 2018		$	1,036,495
Estimated expenitures for fiscal year 2018	-	$	664,050
Estimated fund balance as of January 31, 2019		$	372,445

[1] Through new agreements for SWLRT & Blue Line LRT. Agreements total $22,000 but not likely to use and be reimbursed for total amt in 2018

2019 Revenues

Expected Income

Proposed Assessments to cities	+	$	529,850
Use of fund balance	+	$	21,000
CIP Administrative Funds (2.0% of est. requested levy of $1.4M)	+	$	28,000
Project review fees	+	$	60,000
Transfer from Long-term Maint Fund for Flood Control Proj Inspections[2]	+	$	48,000
WOMP reimbursement	+	$	5,000
Expected reimbursement for Blue Line LRT work	+	$	-
Interest income in 2019	+	$	-
		$	691,850

Expected Expenses

Total operating budget		$	691,850

Fund Balance Details

Est. Beginning Fund Balance (Jan 31, 2019)		$	372,445
Use of Fund Balance (see income above)	-	$	21,000
Est. Remaining Fund Balance (Jan 31, 2020)		$	351,445

[2] Requires reducing Long Term Flood Control Project Amount by $23,000.

Community	For Taxes Payable in 2018 Net Tax Capacity	2018 Percent of Valuation	Current Area Watershed in Acres	Percent of Area	Average Percent	Assessments						Proposed 2019 Assessment (2.9% increase from 2018)
						2013	2014	2015	2016	2017	2018	
						$515,016	$490,345	$490,345	$490,345	$500,000	$515,050	$529,850
Crystal	$8,354,192	5.43	1,264	5.09	5.26	$27,424	$25,504	$25,868	$25,771	$25,704	$26,904	$27,877
Golden Valley	$39,462,902	25.67	6,615	26.63	26.15	$129,126	$123,033	$121,964	$127,675	$131,270	$134,649	$138,553
Medicine Lake	$1,000,557	0.65	199	0.80	0.73	$3,909	$3,479	$3,543	$3,600	$3,561	$3,783	$3,846
Minneapolis	$10,318,599	6.71	1,690	6.80	6.76	$35,236	$32,953	$33,235	$32,885	$33,609	$34,763	$35,805
Minnetonka	$9,964,851	6.48	1,108	4.46	5.47	$28,464	$27,402	$28,121	$27,536	$28,199	$28,053	$28,989
New Hope	$8,492,344	5.52	1,252	5.04	5.28	$27,648	$26,479	$25,681	$25,627	$25,917	$26,740	$27,987
Plymouth	$66,201,330	43.07	11,618	46.77	44.92	$235,310	$224,959	$225,159	$220,974	$224,531	$231,682	$237,986
Robbinsdale	$2,810,841	1.83	345	1.39	1.61	$8,479	$7,743	$7,587	$7,843	$7,747	$8,189	$8,523
St. Louis Park	$7,116,412	4.63	752	3.03	3.83	$19,420	$18,792	$19,184	$18,433	$19,463	$20,287	$20,284
TOTAL	**$153,722,028**	**100.00**	**24,843**	**100.00**	**100.00**	**$515,045**	**$490,345**	**$490,345**	**$490,345**	**$500,000**	**$515,050**	**$529,850**

Item 7A.
BCWMC 8-16-18

Bassett Creek Watershed Management Commission

MEMO

Date: July 9, 2018
From: Laura Jester, Administrator
To: BCWMC Commissioners
RE: Administrator's Report

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

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

2019 Medicine Lake Road and Winnetka Avenue Area Long Term Flood Mitigation Plan Implementation Phase I: DeCola Ponds B & C Improvement Project (BC-2, BC-3 & BC-8), Golden Valley (See Item 5A): At their meetings in September and October, the Commission approved a proposal and additional proposed actions (respectively) from the Commission Engineer to complete a feasibility study for this project. Feasibility study field work began in late September. A project kick-off meeting was held October 6th, a public open house was held November 9th, a meeting with permitting agencies was held December 8th and a meeting with Met Council regarding the existing sanitary sewer line was held in late December. Work on various aspects of the feasibility study continued over the winter including establishment of ordinary high-water levels, test trench investigations, use of the XP-SWMM model, and development of 3 concepts for city staff, administrator review and presentation to residents at a public open house on April 11th. At its May meeting, the Commission approved Concept 3 and set a maximum 2019 levy. In May, 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. A BCWMC public hearing on this project will be held 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 July) At their meeting in September, the Commission approved a proposal from the Commission Engineer to complete a feasibility study for this project. A project kick-off meeting was held on October 23rd. A wetland delineation is complete and submitted for approval. Preliminary concepts were developed and discussed with designers for Minneapolis Park and Rec Board. A meeting with permitting agencies was held on January 19th and another meeting with MPRB designers was held February 13th to review possible concepts. Soil borings were recently completed and a public open house on the MPRB's Bryn Mawr Meadows Park improvement project was held March 8th and had about 50 participants. A 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 will be presented at the September 2018 Commission meeting. Project website: http://www.bassettcreekwmo.org/projects/all-projects/bryn-mawr-meadows-water-quality-improvement-project

2019 Westwood Lake Water Quality Improvement Project (WST-2), St. Louis Park (See Items 5A & 6B): At their meeting in September, 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. A kick-off meeting was held November 21st. A wetland delineation was completed and approved. The Commission Engineer has received the architect's survey and building location and soil boring data. Project concepts were recently discussed with the city's architect and city staff and two public open houses were held in February for the Westwood Hills Nature Center reconstruction project. At their meeting in May, the Commission approved Concept 3 (linear water feature) and set a maximum 2019 levy. 50% designs for this project were presented

and approved at the July meeting. 90% design plans will be presented at this meeting. The Hennepin County Board approved a maximum 2019 levy request at their meeting in July. A BCWMC public hearing on this project will be held at this meeting. 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): (No change since July) 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. The city will begin developing bidding documents. Construction is expected this winter.

2017 Plymouth Creek Restoration Project, Annapolis Lane to 2,500 feet Upstream (2017CR-P): 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 2018 and construction got underway on December 11, 2018. 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 will work on submitting a grant request to the State, if appropriate given expenditures.

2017 Main Stem Bassett Creek Streambank Erosion Repair Project (2017CR-M) (No change since June)**:** The feasibility study for this project was approved at the April Commission meeting and the final document is available on the project page at: http://www.bassettcreekwmo.org/index.php?cID=281. A Response Action Plan to address contaminated soils in the project area was completed by Barr Engineering with funding from Hennepin County and was reviewed and approved by the MPCA. The Commission was awarded an Environmental Response Fund grant from Hennepin County for $150,300 and a grant agreement is in the process of being signed by the county. A subgrant agreement with the City will be developed. The City hired Barr Engineering to design and construct the project. Fifty-percent and 90% designs were approved at the August and October Commission meetings, respectively. In September, design plans were presented by Commission and city staff to the Harrison Neighborhood Association's Glenwood Revitalization Team committee and through a public open house on the project. Bidding for construction is complete and a pre-construction meeting was recently held. Construction was to begin this summer but will be delayed until winter/spring 2019 due to the unanticipated need for a field based cultural and historical survey of the project area required by the Army Corps of Engineers and the preference for Pioneer Paper (a significant landowner and access grantor) for a spring/summer construction window.

2016 Northwood Lake Improvement Project, New Hope (NL-1) (See Item 8D): Northwood Lake Improvement Project is nearing completion with all major work complete. The storm water tank was fully operational in June and irrigated the fields all summer. Since it began operating the tank has captured and reused 904,000 gallons of storm water. All raingardens are planted and working well. A grand opening of the park was held last spring. Friends of Northwood Lake disseminated water quality educational materials, including BCWMC materials. A semi-annual grant report was submitted to the MPCA in January. The final piece of the project – an educational sign was designed, fabricated, and recently installed (see photo). A final grant report was submitted to the MN Pollution Control Agency. A final project report will be presented by the City of New Hope in September or October.

2015 Main Stem Restoration Project 10th Avenue to Duluth Street, Golden Valley (2015CR) (No change since October): The restoration project is being constructed in two phases, each under separate contract. Phase one included stream bank shaping, placement of field stone rock and 12-inch bio-logs, and repair of storm sewer outlets. The first phase of the project began in November 2015 and was finished in June 2016. Turf establishment and minor restoration repairs in Phase 1 were accepted in late October 2016. Repairs to some areas where flooding impacted rocks or biologs were completed and accepted in mid-December 2016. Phase 1 of the construction project has entered the warranty period.

Phase 2 of the project includes the establishment of native vegetation along the stream, including grasses, wildflowers, shrubs, live stakes and fascines, and cordgrass plugs. The project has been seeded and stabilized and maintenance mowing and spot treatments have been completed. Applied Ecological Services (AES) installed live stakes and fascines this spring and completed the tree and shrub planting along the restoration project. AES will continue to monitor and maintain the native vegetation through 2018. It is anticipated that the total contract amount for both Phase one and Phase two will be within the Watershed's overall project budget.

2014 Schaper Pond Diversion Project, Golden Valley (SL-3): 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.

2014 Twin Lake In-lake Alum Treatment, Golden Valley (TW-2): (No change since July) 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 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)**:** 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. I will be writing letters to the RHM and the City of Plymouth to officially cancel the agreements. 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

- Revised draft cooperative agreements with Golden Valley and St. Louis Park for 2019 Projects per direction at July meeting
- Developed draft resolution to order 2019 projects for legal counsel review
- Developed and submitted final grant report and invoice for Northwood Lake Improvement Project Clean Water Partnership Grant

Administration and Education

- Prepared for Sweeney Lake Aeration Study public meeting including drafting agenda with professional facilitator, and reviewing fact sheet and presentation
- Developed and submitted interim report and invoice for Met Council Stormwater Grant for Harrison Neighborhood Project
- Developed draft resolution for local water management plan approvals for legal counsel review
- Updated administrative calendar and CIP project status table
- Edited several WMWA WaterLinks newsletter articles and write one article
- Filed presenter form for Water Resources Conference presentation

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Become a Master Water Steward

Are you concerned about clean water? Consider becoming a Master Water Steward! The application period is now open for the 2018-2019 training year.

Learn more at an upcoming information session:

Tuesday, August 21
5:30-6:30 p.m.
Brookdale Library
6125 Shingle Creek Pkwy.
Brooklyn Center, MN 55430

Tuesday, August 28
5:30-6:30 p.m.
Golden Valley Library
830 Winnetka Ave. N.
Golden Valley, MN 55427

Master Water Stewards participate in a 13-session course from October to April that is taught by industry professionals. Then stewards put their new knowledge into practice with a hands-on capstone project and community engagement effort. Stewards become community leaders who work with their neighborhoods and networks to create real change in water quality, stormwater practices, and policy.

A limited number of scholarships are available for a Hennepin County steward cohort to enroll in the Master Water Steward program, which covers course fees and field trips.

Hennepin County is accepting 5 candidates from the following watersheds. To find out which watershed you live in, visit **mwmo.org/learn/find-your-watershed/**.

- Bassett Creek Watershed Commission
- Elm Creek Watershed Commission
- Lower Minnesota River Watershed District
- Pioneer-Sarah Creek Watershed Management Commission
- Richfield-Bloomington Watershed Management Organization

Note: All other watersheds in Hennepin County sponsor cohorts of Master Water Stewards too! Residents of Mississippi WMO, Minnehaha Creek WD, Nine Mile Creek WD, and Riley-Purgatory Bluff Creek WD should apply to participate with those watershed districts.

To be considered for the program, Master Water Stewards must

- Live in a participating watershed district
- Attend an information session
- Apply and interview

Applications are due Sept, 14, 2018. Apply at **masterwaterstewards.org**.

For more information about the Master Water Steward program and to apply, go to **masterwaterstewards.org**

For more information about the Hennepin County MWS cohort, contact Christina Schmitt, **christina.schmitt@hennepin.us**.

Hennepin County
Environment and Energy
environment@hennepin.us

Hennepin

34-504-03-18

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BCWMC 8-16-18

Attend a **FREE TRAINING** to
EARN INDUSTRY RECOGNIZED CERTIFICATION

MPCA SMART SALTING CERTIFICATION TRAINING:

LEVEL 1 WINTER MAINTENANCE FOR ROADS

Road salt applicators can learn best practices to significantly reduce salt use while maintaining road safety.

REGISTER TODAY!
bassettcreekwmo.org
SPACE IS LIMITED.

This training will:

- **SAVE YOU MONEY**
- **PROTECT OUR WATER**
- **GET YOU CERTIFIED**

This Smart Salting Level 1 training class is geared for high/low speed snowplow drivers and is based on the Minnesota Snow and Ice Control Field Handbook for Snowplow Operators. It is focused on improving efficiency and reducing environmental impacts of winter road maintenance.

WHO SHOULD PARTICIPATE?

- City, state, and county road maintenance staff
- Contractors
- Property managers writing contracts, distributors of anti-icing/de-icing products
- Other snowplow drivers

For more information, please contact Laura Jester at laura.jester@keystonewaters.com or 952-270-1990

WED. SEPTEMBER 26, 2018
8:30 am – 1:30 pm

CRYSTAL COMMUNITY CENTER
Activity Room
4800 Douglas Dr N,
Crystal, MN 55429

The training is FREE, but registration is required.

It includes a light breakfast and box lunch.

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