



Bassett Creek Watershed Management Commission

Regular Meeting
Thursday July 20, 2017
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 – June 15, 2017 Commission Meeting
- B. Approval of July 2017 Financial Report
- C. Approval of Payment of Invoices
 - i. Keystone Waters, LLC – June Administrator Services
 - ii. Keystone Waters, LLC – June Meeting Materials Distribution Expenses
 - iii. Barr Engineering – June 2017 Engineering Services
 - iv. Triple D Espresso – July 2017 Meeting Refreshments
 - v. Wenck – June 2017 WOMP Monitoring
 - vi. Wenck – June Routine Lake Monitoring
 - vii. Lawn Chair Gardener – June 2017 Administrative and Education Services
 - viii. Kennedy & Graven – May Legal Services
 - ix. Shingle Creek WMC – Metro Blooms Raingarden Workshops
 - x. LMCIT – Insurance Payment
 - xi. Lawn Chair Gardener – Education Materials
- D. Set August 4th Technical Advisory Committee Meeting
- E. Set September 21st Public Hearing on 2018 CIP Project
- F. Approval of Project at 1820 Major Drive North, Golden Valley

5. BUSINESS

- A. Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project (CIP 2017CR-P)
 - i. 90% Design Plans and Tree Survey
 - ii. Commission Engineer Review Memo
 - iii. Landowner Comments
- B. Receive Update on Proposed Revisions to Lakeview Park Pond CIP Project
- C. Consider Adoption of Minor Plan Amendment to Update Capital Improvement Program
 - i. Hennepin County Comments
 - ii. Revised 10-year Capital Improvement Program
- D. Consider Recommendations from Aquatic Plant Management/Aquatic Invasive Species Committee
- E. Receive Information on 2018 Clean Water Fund Request for Proposals

6. COMMUNICATIONS

- A. Administrator's Report
 - i. Report on Invitation to Participate in Local Government Water Roundtable Workgroup
- B. Chair
- C. Commissioners
 - i. Report on Minneapolis Park and Rec Board Ecological Systems Plan Technical Advisory Committee
- D. TAC Members
 - i. Receive Update on City of Minnetonka Local Water Management Plan Development
- E. Committees
- F. Legal Counsel
- G. Engineer
 - i. Aquatic Plant Survey Data Request

7. INFORMATION ONLY (Information online only)

- A. CIP Project Updates: Available Online <http://www.bassettcreekwmo.org/projects>
- B. Grant Tracking Summary and Spreadsheet
- C. Comments from Commissioner Mueller on Application of MIDS in Linear Projects
- D. [Governor Dayton's 25% by 2025 Clean Water Initiative](#) – Town Hall Meetings
- E. WCA Notice of Application, Plymouth

8. ADJOURNMENT

Upcoming Meetings & Events

- BCWMC TAC Meeting: Friday August 4th, 10:00 a.m., Golden Valley City Hall
- BCWMC Regular Meeting: Thursday August 17th, 8:30 a.m., Golden Valley City Hall
- Golden Valley Arts and Music Festival: Saturday September 16th, 10:00 a.m. – 3:00 p.m., Golden Valley City Hall



Bassett Creek Watershed Management Commission

AGENDA MEMO

Date: July 12, 2016

To: BCWMC Commissioners

From: Laura Jester, Administrator

RE: **Background Information for 7/20/17 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 – June 15, 2017 Commission meeting- **ACTION ITEM with attachment**
 - B. Approval of July 2017 Financial Report - **ACTION ITEM with attachment**
 - C. Approval of Payment of Invoices - **ACTION ITEM with attachments (online) – I have reviewed the following invoices and recommend approval of payment.**
 - i. Keystone Waters, LLC – June Administrator Services
 - ii. Keystone Waters, LLC –June Meeting Materials Distribution Expenses
 - iii. Barr Engineering –June 2017 Engineering Services
 - iv. Triple D Espresso – July 2017 Meeting Refreshments
 - v. Wenck – June 2017 WOMP Monitoring
 - vi. Wenck – June Routine Lake Monitoring
 - vii. Lawn Chair Gardener – June 2017 Administrative and Education Services
 - viii. Kennedy & Graven – May Legal Services
 - ix. Shingle Creek WMC – Metro Blooms Raingarden Workshops
 - x. LMCIT – Insurance Payment
 - xi. Lawn Chair Gardener – Education Materials
 - D. Set August 4th Technical Advisory Committee Meeting – **ACTION ITEM no attachment – The TAC should meet to discuss a variety of topics including a presentation from the DNR on potential BCWMC participation in FEMA physical map revision process, proposed revisions to development review fee structure, chloride training recruitment ideas and other applications of chloride assessment results, and communication needs for XP-SWMM model/new floodplain levels.**
 - E. Set September Public Hearing on 2018 CIP Project – **ACTION ITEM no attachment – At its September meeting the Commission should hold a public hearing to receive comments and answer questions from member cities and the public on the 2018 CIP Project: Winnetka Pond Dredging Project.**
 - F. Approval of Project at 1820 Major Drive North, Golden Valley – **ACTION ITEM with attachment - The project is located on Sweeney Lake and includes removal of an existing timber wall, landscape rock, and plastic liner, installation of fieldstone boulders and native shoreline grass mix, and construction of a small beach. The proposed project results in 700 square feet of disturbance (grading) and does not create any new or fully reconstructed impervious surfaces. Staff recommends approval.**
5. **BUSINESS**
 - A. Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project (CIP 2017CR-P) – **ACTION with attachments – At the June 2017 meeting, the Commission approved the 60% design plans with Commission Engineer comments and Commissioner input at the meeting. Most of those comments were addressed by the city’s consultant, Wenck Associates, in the 90% plans presented here. Submittals include a tree survey (available online) and a breakdown of project costs strictly**

related to stream restoration vs. project costs for components needed to address impacts of the disc golf course.

Landowners adjacent to the project area downstream of Fernbrook Lane submitted comments and questions about the project, met with city staff, and corresponded with me regarding their concerns – particularly their desire to maintain the natural integrity of the wooded area. (See their comments in 5Aiii and a discussion of the conservation agreement between the landowner and the private developer in the Engineer’s memo in 5Aii). Staff recommends conditional approval of the 90% plans with comments included in the Commission Engineer’s memo.

- i. 90% Design Plans and Tree Survey – **full plan set and tree survey available online**
 - ii. Commission Engineer Review Memo – **attached**
 - iii. Landowner Comments – **attached**
- B. Receive Update on Proposed Revisions to Lakeview Park Pond CIP Project – **INFORMATION ITEM no attachment** – *From TAC member Jeff Oliver: Following the close of the legislative session, the DNR Flood Damage Reduction Program manager contacted the City of Golden Valley and asked if we were able to use \$200,000 in grant funds that became available. We accepted this offer and will be utilizing the funds to finance the budget shortfall for acquisition of the flood prone homes at the intersection of Olympia Street and Mendelssohn Avenue (adjacent to Lakeview Park). Therefore, the City is no longer requesting that the remaining funds for the Lakeview Park Pond capital improvement project be made available for acquisitions. At this time staff has not yet determined if nutrient and sediment removal above and beyond the MIDS requirements for the 2016 and 2017 Pavement Management Program projects can be obtained with the construction of a filtration basin on the properties discussed above. [If “above and beyond” treatment is possible, the Lakeview Park Pond CIP funds may be requested for partial construction of the basin.]*
- C. Consider Adoption of Minor Plan Amendment to Update Capital Improvement Program – *In April the Commission submitted a proposed minor plan amendment to review agencies and received [comment letters](#) from Met Council, DNR, MDA, and BWSR during the 30-day review period with no objections to the amendment. The Commission also held a public hearing on May 18th and received no comments during the hearing.*
- i. Hennepin County Comments – **INFORMATION ITEM with attachment** - *At the May 18th meeting, the Commission extended the comment period on the minor plan amendment to June 28, 2017 to accommodate the County’s review process. At their meeting on June 26th, the Hennepin County Board of Commissioners approved the minor plan amendment.*
 - ii. Revised 10-year Capital Improvement Program – **ACTION ITEM with attachment** - *Staff recommends approving the minor plan amendment to update the 10-year CIP (Table 5-3 in the Watershed Management Plan) as shown in the attachment. Given the information in 5B above, changes to Lakeview Park Pond Project (ML-8) are no longer needed in the amendment.*
- D. Consider Recommendations from Aquatic Plant Management/Aquatic Invasive Species Committee – **ACTION ITEM with attachment** - *The BCWMC APM/AIS Committee met on eight occasions from June 2016 to June 2017 to discuss and consider the Commission’s role in these issues. All committee meeting agendas, notes, presentations, and materials can be found at: <http://www.bassettcreekwmo.org/document/meeting-materials-minu>. Background information and 14 committee recommendations are included in the attached memo.*

- E. Receive Information on 2018 Clean Water Fund Request for Proposals – **INFORMATION ITEM with attachment online** – *A request for proposals (i.e., grant applications) for Clean Water Funds opened July 5th with grant applications due August 9th. “Accelerated Implementation” and “Community Partners” grants are not available this year. Staff does not recommend spending the time and effort applying for “Projects and Practices” Clean Water Funds for the 2018 Winnetka Pond Dredging Project as it is not likely to receive a high score within the competitive grant process. Unfortunately, there are no other Commission projects that will fit the grant timeline for 2018 funds.*

6. COMMUNICATIONS

- A. Administrator’s Report – **INFORMATION ITEM with attachment**
- i. Report on Invitation to Participate in Local Government Water Roundtable Workgroup – **DISCUSSION ITEM with attachment** – *I have tentatively accepted (with Chair de Lambert’s approval) BWSR’s invitation to be one of two administrators representing watershed management organizations on the local government water roundtable workgroup for a limited time. My attendance would be expected at no more than three day-long meetings to discuss the creation of a pilot program for performance based watershed implementation funding program. I am seeking consensus or action from the Commission on approving my participation on the workgroup.*
- B. Chair
- C. Commissioners
- i. Report on Minneapolis Park and Rec Board Ecological Systems Plan Technical Advisory Committee – **INFORMATION ITEM no attachment** – *Commissioner Welch recently attended an initial meeting of this group and will report and advise on whether continued Commission involvement is needed.*
- D. TAC Members
- i. Receive Update on City of Minnetonka Local Water Management Plan Development – **INFORMATION ITEM no attachment**
- E. Committees
- F. Legal Counsel
- G. Engineer
- i. Aquatic Plant Survey Data Request - **INFORMATION ITEM no attachment**

7. INFORMATION ONLY (Information online only)

- A. CIP Project Updates: Available Online <http://www.bassettcreekwmo.org/projects>
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- C. Comments from Commissioner Mueller on Application of MIDS in Linear Projects
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- Golden Valley Arts and Music Festival: Saturday September 16th, 10:00 a.m. – 3:00 p.m., Golden Valley City Hall



Item 4A.
BCWMC 7-20-17

Bassett Creek Watershed Management Commission

DRAFT Minutes of Regular Meeting
Thursday June 15, 2017
8:30 a.m.
Golden Valley City Hall, Golden Valley MN

Commissioners and city staff present:

City	Commissioner	Alternate Commissioner	Technical Advisory Committee Members (City Staff)
Crystal	Guy Mueller, Vice Chair	Tim Wodarski	Mark Ray
Golden Valley	Stacy Harwell, Treasurer	<i>Absent</i>	Jeff Oliver
Medicine Lake	Clint Carlson	<i>Absent</i>	<i>Absent</i>
Minneapolis	Michael Welch	NA	<i>Absent</i>
Minnetonka	Mike Fruen	<i>Absent</i>	<i>Absent</i>
New Hope	<i>Absent</i>	Pat Crough	<i>Absent</i>
Plymouth	Jim Prom (voting member during second half)	John Byrnes (voting member first half)	Derek Asche
Robbinsdale	Michael Scanlan, Secretary	<i>Absent</i>	Richard McCoy, Marta Roser
St. Louis Park	Jim de Lambert, Chair	<i>Absent</i>	Erick Francis

Staff and Others Present:

Administrator	Laura Jester, Keystone Waters
Engineer	Karen Chandler and Greg Wilson, Barr Engineering
Recorder	Dawn Pape, Lawn Chair Gardener
Legal Counsel	Troy Gilchrist, Kennedy & Graven
Presenters/ Guests/Public	Seth Bossert and Ed Matthiesen, Wenck Engineering

1. CALL TO ORDER AND ROLL CALL

On Thursday June 15, 2017 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.

2. CITIZEN FORUM ON NON-AGENDA ITEMS

None.

3. APPROVAL OF AGENDA

A request was made to put business agenda item 5B. before 5A.

MOTION: Commission Michael Welch moved to approve the agenda as amended. Commissioner Crough seconded the motion. Upon a vote, the motion carried 9-0.

4. CONSENT AGENDA

No discussion.

MOTION: Commissioner Carlson moved to approve the consent agenda and Commissioner Scanlan seconded the motion. Upon a vote, the motion carried 9-0.

The following items were approved as part of the consent agenda: the April 20, 2017 and May 18, 2017 Commission Meeting Minutes, the June 2017 Financial Report, the payment of invoices, approval of CSAH66 Culvert Replacement in Golden Valley, approval of Creekside Woods I & II in Plymouth.

The general and construction account balances reported in the June 2017 Financial Report are as follows:

Checking Account Balance	\$695,869.44
TOTAL GENERAL FUND BALANCE	\$695,869.44
TOTAL CASH & INVESTMENTS ON-HAND (6/7/17)	\$2,813,585.86
CIP Projects Levied – Budget Remaining	(\$4,486,222.64)
Closed Projects Remaining Balance	(\$1,672,636.78)
2012-2016 Anticipated Tax Levy Revenue	\$9,476.76
2017 Anticipated Tax Levy Revenue	\$1,303,600.00
Anticipated Closed Project Balance	(\$359,560.02)

5. BUSINESS

B. Receive Presentation with Results of Bassett Creek Watershed Chloride Source Assessment

Commission Engineer Chandler introduced engineer, Greg Wilson, from Barr Engineering who gave a presentation on results of a chloride assessment project for the Bassett Creek watershed. Engineer

Wilson gave an overview of what chloride is, how it affects creeks and lakes, the monitoring results and a recommended "salt diet" that would help achieve standards.

Although chloride does occur naturally in water from the dissolution of soil, rock and mineral formations, Engineer Wilson explained that most chloride pollution comes from deicers and water softeners containing sodium chloride, magnesium chloride, and calcium chloride. Some fertilizers, dust suppressants and industrial process waters also contain these chlorides. The big difference between chloride and other pollutants is that chlorides cannot be removed once it is in the water. Chlorides are a problem because high levels of chlorides are toxic to sensitive organisms like fish, invertebrates, plants, soil quality, and pets/wildlife. Chloride also disrupts natural lake mixing and can contaminate drinking water.

The usage of salt has increased considerably on roads because it is so inexpensive. There are increasing trends in surface and groundwater concentrations, especially in more developed portions of Twin Cities. Engineer Wilson also noted that contractors tend to over apply deicers to avoid "slip and fall" lawsuits. He reported about 74% of applied chloride is retained in the watershed and that the chronic standard for surface water is 230 mg/L (four-day average no more than one sample exceedance within 3-year period).

Engineer Wilson showed the chloride impairments of the Bassett Creek watershed's lakes and streams. He reported that Spring Lake (a very small lake near the intersection of Hwy 100 and Hwy 394) has the highest levels in the state. Bassett Creek has the highest chloride concentrations of the Twin Cities stream monitored by the Met Council. While the Commission is doing well with reducing total suspended solids and total phosphorus, chlorides are increasing.

Engineer Wilson reported that chloride samples for this assessment project were taken on February 20-21, 2017 because it rained and everything was flowing. Sample sites were generally located near high density development and levels ranged from 106 mg/L in the upper part of Plymouth Creek to 406 mg/L on the east side of Medicine Lake. Engineer Wilson explained that the monitoring results are a "snapshot in time" because 18 sites were sampled within a 24-hour period. He also noted that the Met Council stream monitoring results show chloride levels were two-thirds of the standard (230 mg/L) in the fall before the start of winter, indicating that there are already considerable chloride levels present in the groundwater from past years of high chloride use.

Commissioner Harwell pointed out that single-family homes are a problem too. Engineer Wilson agreed, but maintained that effort to control chlorides around higher density pavement will yield better returns on chloride reductions. The overall percentage of higher-density land use in Bassett Creek Watershed is 4.7 times the percentage in the Twin Cities metro area. Engineer Wilson has worked with Nine-Mile Creek Watershed District, which is similar in its land use to the Bassett Creek watershed, and expects that 40% of the chloride load is coming from private and commercial applicators. Often commercial applicators get paid by the pound of salt they apply.

Commissioner Fruen raised the topic of limited liability laws. There was a discussion regarding a bill in front of the legislature this session to remove liability for private practice, but it did not go anywhere. New Hampshire does have a law that removes liability. Attorney Troy Gilchrist commented that this potential new law isn't a silver bullet because companies, if sued, will still put the burden of proof on applicators to prove application was appropriate to remove ice and snow. He maintained that education is critical.

Administrator Jester reported that BCWMC is hosting a chloride education workshop on Friday, October 13, 2017 targeting private applicators. She noted it would be good to get help from TAC members to get

the right people in the room.

[Commissioner Prom arrives at 9:25 and becomes the Plymouth voting member.]

The question was raised about what would happen if chloride use could be “turned off” now? Engineer Wilson responded that chloride would continue to go up for a while because there are still high concentrations in the environment but it would eventually flush through the waters and levels would go down.

A. Consider Approval of 60% Design Plans for Plymouth Creek Restoration Project (CIP 2017CR-P)

Engineer Chandler reviewed the 60% design plans for the Plymouth Creek Restoration Project, prepared by Wenck Associates under contract with the City of Plymouth. She noted there are 21 sites identified for restoration with a recommended approach for each site laid out in the feasibility report. Engineer Chandler noted that a helpful table was prepared by Wenck showing how the feasibility report was followed and if there was deviation from the feasibility report, they explained how and why changes were made. The reach is 2,500 feet long and the recommendation is to use both soft (vegetative) and hard (rock) armoring. Engineer Chandler walked through the comments including questions/suggestions about plant selections, and needing to show in modeling that there is not an increase in flooding if there is floodplain filling. Engineer Chandler recommended approval of the 60% design plans.

[Mike Fruen departs at 9:34 a.m.]

Wenck Engineer, Ed Matthiesen, explained that he used the XP-SWMMM model in developing these plans and discussed the proposed plans to raise the bed of the stream in one section which would increase the flood level, but since the project is all on city property there shouldn't be a problematic flooding risk. He said the plans show this raising of the stream bed to avoid excavation in the wetland and the resulting permitting costs. He also talked about removing as few trees as possible and noted a shade-tolerant fescue will need to be planted to handle the shady growing conditions. Commissioner Prom wondered what kinds of trees will be kept and removed. Mr. Matthiesen replied that only the “leaners” (leaning into the creek that would eventually fall in and become an obstruction) and the “sweepers” that have branches over the water would be removed. Seth Bossert, from Wenck, said a complete tree survey was done beforehand. They looked at significant trees from a disc golf standpoint and channel maintenance standpoint. He reported that Plymouth city foresters are in favor of the plan and that their main concern is the damage frisbees are doing to trees. The Commission asked that the final plans include the tree survey. When asked about wetlands, Derek Asche reported that the wetland in the project area is of poor quality, filled with reed canary grass.

Wenck engineers noted that the disc golf course is a design challenge especially since the golfers have trampled vegetation to retrieve disks.

Engineer Chandler wondered if the tall cross vanes would be a concern for aquatic life passage and if the improvements will improve in-stream habitat. Mr. Matthiesen explained that in-channel vanes would improve in-stream habitat because they will channel the flow. This is particularly good for dry times. He noted that habitat for macroinvertebrates would improve, but not necessarily for fish. Mr. Matthiesen noted that he has installed these features before and they have worked.

Commissioner Clint Carlson asked whether Plymouth is happy with the design. Derek Asche responded that he is happy. There is more value than just reduced total phosphorus and total suspended solids loads, habitat is also being improved.

Derek replied that creative solutions would be needed to manage the traffic flow near the creek until the vegetation is established. Mr. Matthiesen added that trees are damaged by discs so protective poles by trees might be a good option.

Commissioner Mueller commended the plan, but asked what happens when the log vane deteriorates. Mr. Matthiesen added that it will start maintaining itself when some sedimentation occurs and volunteer vegetation grows.

Commissioner Welch asked if the plans show the same or better pollution reduction than the feasibility study estimated. Engineer Chandler responded that she did not review the plans for those specific numbers, but expected the numbers to be similar. Commissioner Welch added that those estimates need to be included for the 90% plans.

Commissioner Harwell questioned if the project costs should be shared with the disc golf course and how the vegetation will be protected. She further questioned if the Commission is spending more and going above and beyond due to the special situation of the disc golf course. Engineer Chandler responded that the feasibility study included considerations for working around the disc golf challenges. Commissioner Harwell requested that the disc golf-related improvements and costs be differentiated on the final plans and in the table of project costs. Commissioner Harwell also asked if educational signage in the park and golf course would be part of the project. Mr. Asche agreed that it is not the Commission's job to do park beautification. He mentioned that boy scouts or girl scouts could develop signage to help educate park users. Ms. Chandler added that \$4,000 for educational signage is already included in the project budget. Commissioner Welch supports and encourages Administrator Jester to be involved with educational signage, but noted that vegetation trampling will still occur.

Mr. Asche also noted that the Commission should consider requiring cost sharing from cities on all CIP projects.

Administrator Jester announced that the City and Commission are holding a public open house on Monday June 26 2017 from 4:00 – 6:00 p.m. at Plymouth City Hall.

[Commissioner Harwell departs at 10:11 a.m.]

MOTION: Commissioner Welch moved to approve the 60% plans with Commission Engineer comments and input from the Commission at this meeting; and to authorize the City to finalize the plans. Commissioner Prom seconded the motion. Upon a vote, the motion carried 8-0. [The City of Golden Valley Was absent from the vote.]

6. COMMUNICATIONS

A. Administrator's Report

- i. Administrator Jester reported that volunteers to represent the Commission will be needed on Sept. 16 at the Golden Valley Arts and Music Festival. Commissioners Scanlan, Welch and de Lambert stepped forward to volunteer.
- ii. Engineer Chandler, Mark Ray and Administrator Jester will attend a June 20 County Commission committee meeting on the proposed plan amendment and 2018 maximum levy.

B. Chair

- i. The Great River Greening June 3 restoration event at the Westwood Nature went well. Commissioner Welch mentioned there was applause for BCWMC efforts.

- C. Commissioners
 - i. Report on Westwood Nature Center Event
 - 1. (See above.)
 - ii. Commissioner Welch relayed good news about stormwater reuse’s exemption from DNR permitting. These projects will be easier to do in the future.
 - iii. Commissioner Carlson went on the Watershed Partners Mississippi River Boat Tour. He recommends that others take the opportunity to join future tours because it was enjoyable and educational. He learned about the 1982 Surface Water Management Act.
- D. TAC Members
 - i. No report
- E. Committees
 - i. APM/AIS Committee meeting will be on June 28, 2017 at 8:30 a.m. at the Golden Valley City Hall.
- F. Legal Counsel
 - i. Attorney Gilchrist announced that the BCWMC will be named in a registration action in Minneapolis because Bassett Creek runs beneath this block through a tunnel. The title examiner named BCMWC because of the name of the creek, but the land above is likely within the MWMO’s jurisdiction, not BCWMC’s.
- G. Engineer
 - i. Engineer Chandler reviewed a table showing MIDS in linear projects and the table indicates that a lower trigger of 0.5. acre would have resulted in no difference in the required treatment for the linear projects reviewed by the BCWMC to-date. Ms. Chandler’s recommendation is to wait a year, collect more data and reassess the situation. Commissioner Mueller stated that he finds it acceptable to wait a year, although he noted significant concerns with the Commission’s action in May. Commissioner Mueller distributed written remarks outlining his concerns. Commissioner Welch suggested that the Commission Engineer keep a special file/data on linear projects to update the table in June 2018. It was also noted that Commissioner Mueller’s comments would be included in the July meeting packet under “information only.”

7. INFORMATION ONLY (Information online only)

- A. CIP Project Updates: Now Available Online <http://www.bassettcreekwmo.org/projects>
- B. Grant Tracking Summary and Spreadsheet
- C. West Metro Water Alliance (WMWA) Spring Newsletter <https://content.govdelivery.com/accounts/MNHENNE/bulletins/19d00bc>
- D. Harrison Neighborhood Project Update January – April 2017
- E. Old Bassett Creek Tunnel in the News <https://www.mprnews.org/story/2017/05/30/engineers-consider-old-minneapolis-storm-tunnels-future>
- F. WCA Notice of Decision, Agora Project, Plymouth

7. ADJOURNMENT

The meeting was adjourned at 10:42 a.m.

Signature/Title Date

Signature/Title Date

**Bassett Creek Watershed Management Commission General Account
 General Fund (Administration) Financial Report
 Fiscal Year: February 1, 2017 through January 31, 2018
 MEETING DATE: July 20, 2017**

**Item 4B.
 BCWMC 7-20-17**

(UNAUDITED)

BEGINNING BALANCE	7-Jun-17		695,869.44
ADD:			
General Fund Revenue:			
Interest less Bank Fees		26.15	
Three Rivers Park District Reimbursement		3,289.50	
Permits:			
Wagner Spray Tech Corp BCWMC 2017-24		1,700.00	
Jennell Bilek BCWMC 2017-25		300.00	
St George Apts LLC BCWMC 2017-26		2,200.00	
Reimbursed Construction Costs		13,556.31	
		Total Revenue and Transfers In	21,071.96
DEDUCT:			
Checks:			
2982 Barr Engineering June Engineering		60,203.50	
2983 Kennedy & Graven May Legal		815.90	
2984 Keystone Waters LLC June Admin/Mtg Materia		4,188.17	
2985 Lawn Chair Gardener Minutes/newsletter/Soci		1,812.84	
2986 Triple D Espresso June Meeting		103.98	
2987 Wenck Associates Outlet Monitor/Lake Mor		9,583.20	
2988 LMCIT Insurance		6,954.00	
2989 Shingle Creek WMC Raingarden Workshops		2,294.25	
		Total Checks/Deductions	85,955.84
Outstanding from previous month:			
1 Lawn Chair Gardener Minutes/newsletter/Soci		782.47	
ENDING BALANCE	12-Jul-17		630,985.56

**Bassett Creek Watershed Management Commission General Account
 General Fund (Administration) Financial Report
 Fiscal Year: February 1, 2017 through January 31, 2018
 MEETING DATE: July 20, 2017**

(UNAUDITED)

	2017 / 2018 BUDGET	CURRENT MONTH	YTD 2017 / 2018	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSMENTS TO CITIES-PREPAID			0.00	
ASSESSMENTS TO CITIES	500,000	0.00	500,001.00	(1.00)
PROJECT REVIEW FEES	60,000	4,200.00	45,400.00	14,600.00
WOMP REIMBURSEMENT	5,000	0.00	4,500.00	500.00
MET COUNCIL REIMBURSEMENTS-LRT PROJECTS	7,000	0.00	6,933.59	66.41
MET COUNCIL - METRO BLOOMS	0	0.00	17,272.51	(17,272.51)
MISCELLANEOUS	0	3,289.50	3,289.50	(3,289.50)
TRANSFERS FROM LONG TERM FUND & CIP	38,072	0.00	0.00	38,072.00
REVENUE TOTAL	610,072	7,489.50	577,396.60	32,675.40
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	125,000	10,613.00	45,698.00	79,302.00
DEV/PROJECT REVIEWS	65,000	11,942.34	34,504.91	30,495.09
NON-FEE/PRELIM REVIEWS	15,000	2,433.55	7,556.63	7,443.37
COMMISSION AND TAC MEETINGS	14,000	864.70	5,180.00	8,820.00
SURVEYS & STUDIES	20,000	13,353.37	1,610.78	18,389.22
WATER QUALITY/MONITORING	74,300	12,412.38	23,363.75	50,936.25
WATER QUANTITY	11,500	1,240.08	2,593.16	8,906.84
WATERSHED INSPECTIONS -EROSION CONTROL	1,000	0.00	0.00	1,000.00
ANNUAL FLOOD CONTROL INSPECTIONS	12,000	0.00	0.00	12,000.00
REVIEW MUNICIPAL PLANS	8,000	0.00	1,179.00	6,821.00
WOMP	15,500	1,674.47	5,586.24	9,913.76
XP-SWMM MODEL UPDATES/REVIEWS	10,000	1,696.50	1,696.50	8,303.50
APM / AIS WORK	35,000	0.00	19,350.45	15,649.55
ENGINEERING & MONITORING TOTAL	406,300	56,230.39	148,319.42	257,980.58
ADMINISTRATION				
ADMINISTRATOR	67,200	3,815.00	21,690.00	45,510.00
LEGAL COSTS	18,500	815.90	6,270.78	12,229.22
AUDIT, INSURANCE & BONDING	15,500	6,954.00	10,350.00	5,150.00
FINANCIAL MANAGEMENT	3,200	0.00	40.76	3,159.24
MEETING EXPENSES	2,000	103.98	519.90	1,480.10
ADMINISTRATIVE SERVICES	18,000	1,075.64	2,803.03	15,196.97
ADMINISTRATION TOTAL	124,400	12,764.52	41,674.47	82,725.53
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	2,500	0.00	1,138.50	1,361.50
WEBSITE	4,400	0.00	525.99	3,874.01
PUBLIC COMMUNICATIONS	2,500	0.00	511.50	1,988.50
EDUCATION AND PUBLIC OUTREACH	20,000	1,110.37	33,502.08	(13,502.08)
WATERSHED EDUCATION PARTNERSHIPS	15,500	2,294.25	3,850.00	11,650.00
OUTREACH & EDUCATION TOTAL	44,900	3,404.62	39,528.07	5,371.93
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	20,000	0.00	542.50	19,457.50
TMDL WORK TOTAL	20,000	0.00	542.50	19,457.50
TOTAL EXPENSES	645,600	72,399.53	230,064.46	415,535.54

BCWMC Construction Account
Fiscal Year: February 1, 2017 through January 31, 2018
July 2017 Financial Report

(UNAUDITED)

Cash Balance 06/07/2017			
Cash		1,821,585.86	
	Total Cash		1,821,585.86
Ally Bk Midvale Utah C/D (9/25/2017 1.25%)		248,000.00	
Capital One Bk-McLean VA C/D (9/25/2017 1.15%)		248,000.00	
Capital One Bk-Glen Allen VA C/D (9/25/2017 1.15%)		248,000.00	
Key Bk Natl Assn Ohio C/D (10/02/2017 1.15%)		248,000.00	
	Total Investments		992,000.00
	Total Cash & Investments		2,813,585.86
Add:			
Hennepin County - 1st half tax settlement		659,841.47	
Interest Revenue (Bank Charges)		108.45	
	Total Revenue		659,949.92
Less:			
CIP Projects Levied - Current Expenses - TABLE A		(12,232.31)	
Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B		(510.00)	
	Total Current Expenses		(12,742.31)
	Total Cash & Investments On Hand	07/12/17	3,460,793.47
	Total Cash & Investments On Hand		3,460,793.47
	CIP Projects Levied - Budget Remaining - TABLE A		(4,473,990.33)
	Closed Projects Remaining Balance		(1,013,196.86)
	2012 - 2016 Anticipated Tax Levy Revenue - TABLE C		10,014.74
	2017 Anticipated Tax Levy Revenue - TABLE C		643,220.55
	Anticipated Closed Project Balance		(359,961.57)
	Proposed & Future CIP Project Amount to be Levied - TABLE B		0.00

TABLE A - CIP PROJECTS LEVIED

	Approved Budget	Current Expenses	2017 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	7,184.00	14,670.50	156,522.34	833,477.66	
2014						
Schaper Pond Enhance Feasibility/Project (SL-1)(SL-3)	612,000	2,115.31	5,653.81	308,917.26	303,082.74	
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	946,447.15	556,552.85	
2016						
Honeywell Pond Expansion (BC-4) ¹	810,930	0.00	0.00	25,307.00	785,623.00	
Northwood Lake Pond (NL-1) ²	822,140					
Budget Amendment	611,600	1,433,740	0.00	416.00	1,438,689.98	(4,949.98)
2017						
Main Stem Cedar Lk Rd-Dupont (2017CR-M)	2017 Levy 400,000	1,064,472	0.00	196.00	114,757.79	949,714.21
	2018 Levy 664,472					
Plymouth Creek Restoration (CR-P)	2017 Levy 580,930	863,573	2,933.00	3,851.70	69,455.83	794,117.17
	2018 Levy 282,643					267,298
		7,886,715	12,232.31	24,788.01	3,412,724.67	4,473,990.33

TABLE B - PROPOSED & FUTURE CIP PROJECTS TO BE LEVIED

	Approved Budget - To Be Levied	Current Expenses	2017 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget
2018					
Bassett Creek Park & Winnetka Ponds Dredging (BCP-2)		510.00	29,441.20	60,760.25	(60,760.25)
2018 Project Totals	0	510.00	29,441.20	60,760.25	(60,760.25)
2019					
Bryn Mawr Meadows (BC-5)	0	0.00	0.00	5,282.80	(5,282.80)
2019 Project Totals	0	0.00	0.00	5,282.80	(5,282.80)
Total Proposed & Future CIP Projects to be Levied	0	510.00	29,441.20	66,043.05	(66,043.05)

BCWMC Construction Account

Fiscal Year: February 1, 2017 through January 31, 2018

(UNAUDITED)

July 2017 Financial Report

TABLE C - TAX LEVY REVENUES

	County Levy	Abatements / Adjustments	Adjusted Levy	Current Received	Year to Date Received	Inception to Date Received	Balance to be Collected	BCWMO Levy
2017 Tax Levy	1,303,600.00		1,303,600.00	660,379.45	660,379.45	660,379.45	643,220.55	1,303,600.00
2016 Tax Levy	1,222,000.00	(6,075.91)	1,215,924.09	1,033.29	1,033.29	1,211,989.75	3,934.34	1,222,000.00
2015 Tax Levy	1,000,000.00	1,935.37	1,001,935.37	(1,236.47)	(1,236.47)	998,801.29	3,134.08	1,000,000.00
2014 Tax Levy	895,000.00	(7,436.49)	887,563.51	(732.05)	(732.05)	885,449.96	2,113.55	895,000.00
2013 Tax Levy	986,000.00	(10,440.29)	975,559.71	170.62	170.62	974,888.42	671.29	986,000.00
2012 Tax Levy	762,010.00	(7,488.24)	754,521.76	226.63	226.63	754,360.28	161.48	762,010.00
				<u>659,841.47</u>			<u>653,235.29</u>	

OTHER PROJECTS:

	Approved Budget	Current Expenses / (Revenue)	2017 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	673,373.00	814.00	16,608.50	322,438.91	
Less: State of MN - DNR Grants			(9,300.00)	(93,000.00)	
	673,373.00	814.00	7,308.50	229,438.91	443,934.09
Annual Flood Control Projects:					
Flood Control Emergency Maintenance	500,000.00	0.00	0.00	0.00	500,000.00
Annual Water Quality					
Channel Maintenance Fund	350,000.00	0.00	35,915.00	157,157.95	192,842.05
Total Other Projects	1,658,373.00	814.00	43,223.50	494,362.01	1,164,010.99

Cash Balance 06/07/2017 **1,064,020.44**

Add:

Transfer from GF 0.00

Less:

Current (Expenses)/Revenue (814.00)

Ending Cash Balance 07/12/17 1,063,206.44

Additional Capital Needed (100,805)

Bassett Creek Construction Project Details

7/12/2017

CIP Projects Levied											
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Plymouth Creek Restoration (2017 CR-P)	Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)
Original Budget	7,275,115	196,000	990,000	612,000	250,000	163,000	1,503,000	810,930	822,140	863,573	1,064,472
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	2,804,454.00		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
Feb 2017-Jan 2018	24,788.01		14,670.50	5,653.81					416.00	196.00	3,851.70
Total Expenditures:	3,412,724.67	11,589.50	156,522.34	308,917.26	250,000.00	91,037.82	946,447.15	25,307.00	1,438,689.98	114,757.79	69,455.83
Project Balance	4,473,990.33	184,410.50	833,477.66	303,082.74		71,962.18	556,552.85	785,623.00	(4,949.98)	748,815.21	995,016.17
CIP Projects Levied											
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)	Plymouth Creek Restoration (2017 CR-P)
Project Totals By Vendor											
Barr Engineering	401,922.04	6,338.95	57,691.04	80,905.31	13,089.74	15,712.00	15,825.00	13,157.98	17,966.00	111,939.39	69,296.63
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	1,414,281.03			213,668.55	230,401.91	66,812.17	903,398.40				
City of Minneapolis											
City of Plymouth	75,759.35		75,759.35								
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	83,378.02	4,050.00	20,600.00	13,350.00	5,470.00	3,555.00	25,000.00	11,353.02			
Transfer to General Fun											
Total Expenditures	3,406,969.69	11,589.50	156,522.34	308,917.26	250,000.00	91,037.82	946,447.15	25,307.00	1,432,935.00	114,757.79	69,455.83
CIP Projects Levied											
	Total	2013	2013	2014	2014	2014	2015	2016	2016	2017	2017
	CIP Projects Levied	Lakeview Park Pond (ML-8)	Four Seasons Mall Area Water Quality Project (NL-2)	Schaper Pond Enhancement Feasibility / Project (SL-1) (SL-3)	Briarwood / Dawnview Water Quality Improve Proj (BC-7)	Twin Lake In-Lake Alum Treatment Project (TW-2)	Main Stem - 10th Ave to Duluth (CR2015)	Honeywell Pond Expansion (BC-4)	Northwood Lake Pond (NL-1)	Main Stem-Cedar Lk Rd to Dupont (2017 CR-M)	Plymouth Creek Restoration (2017 CR-P)
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											
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	6,579,600	196,000	990,000	534,000	218,800	142,200	1,503,000	810,930	1,203,740	580,930	400,000
BWSR Grants Received									670,000		267,298
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					Totals - All Projects
	Total Proposed & Future CIP Projects (to be Levied)	2018 Bassett Cr Pk & Winnetka Ponds Dredging (2018 BCP-2)	2019 Bryn Mawr Meadows	Total Other Projects	TMDL Studies	Flood Control Emergency Maint	Flood Control Long- Term Maint	Channel Maint	
Original Budget Added to Budget				1,278,373.00 (250,000.00) 93,000.00 380,000.00	105,000.00	500,000.00	748,373.00 (250,000.00) 93,000.00 175,000.00	175,000.00	8,553,488.00 361,600.00 93,000.00 380,000.00
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	31,319.05	31,319.05		152,070.74			152,070.74		2,987,843.79
Feb 2017-Jan 2018	29,441.20	29,441.20		50,811.00			14,896.00	35,915.00	105,040.21
Total Expenditures:	66,043.05	60,760.25	5,282.80	585,665.51	107,765.15		320,742.41	157,157.95	4,064,433.23
Project Balance	(66,043.05)	(60,760.25)	(5,282.80)	1,165,707.49	27,234.85	500,000.00	445,630.59	192,842.05	5,573,654.77
Project Totals By Vendor									
Barr Engineering	66,043.05	60,760.25	5,282.80	387,939.50	104,888.70		283,050.80		855,904.59
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	1,469,568.53
City of Minneapolis				38,823.35				38,823.35	38,823.35
City of Plymouth				26,747.50				26,747.50	102,506.85
City of New Hope									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									83,378.02
Transfer to General Fund				32,600.00			32,600.00		32,600.00
Total Expenditures	66,043.05	60,760.25	5,282.80	549,750.51	107,765.15		320,742.41	121,242.95	4,022,763.25
Levy/Grant Details									
2010 -2014 Levies					30,000		100,000	100,000	1,881,000
2014/2015 Levy				50,000.00			25,000	25,000	1,050,000
2015-2016 Levy									
2016-2017 Levy									
2017-2018 Levy									
Construction Fund Balance				50,000.00			25,000	25,000	753,000
BWSR Grant- BCWMO				50,000.00			25,000	25,000	520,000
DNR Grants-LT Maint				93,000.00			93,000		
Total Levy/Grants				473,000.00	30,000		268,000	175,000	4,204,000



Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4F – 1820 Major Drive North Landscaping – Golden Valley, MN
BCWMC July 20, 2017 Meeting Agenda
Date: July 10, 2017
Project: 23270051 2017 2132

4F 1820 Major Drive North Landscaping – Golden Valley, MN BCWMC 2017-25

Summary:

Proposed Work: Shoreline restoration

Basis for Commission Review: Work in the floodplain

Impervious Surface Area: No change

Recommendation: Approval

General Background & Comments

The project is located on Sweeney Lake at 1820 Major Drive North in Golden Valley, MN. The proposed project includes removal of an existing timber wall, landscape rock, and plastic liner, installation of fieldstone boulders and native shoreline grass mix, and construction of a small beach. The proposed project results in 700 square feet of disturbance (grading) and does not create any new or fully reconstructed impervious surfaces.

Floodplain

The proposed project includes work in the floodplain of Sweeney Lake. The September 2015 BCWMC Requirements for Improvements and Development Proposals (Requirements) document requires that projects within the floodplain maintain no net loss in floodplain storage and no increase in flood level at any point along the trunk system (managed to at least a precision of 0.00 feet). At its May 18, 2017 meeting, the BCWMC approved the XP-SWMM Phase II (Atlas 14) model and adopted the revised (Atlas 14) floodplain elevations for the Bassett Creek Trunk System. Based on this approval and adoption, the floodplain elevation of Sweeney Lake at the project site is 831.9 feet NAVD88.

Based on the plans and information provided by the applicant, proposed shoreline improvements will be installed to match the existing grades for the site, therefore there will be no permanent net fill placed within the Bassett Creek floodplain. Temporary stockpiles may be placed in the floodplain during excavation.

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 4F – 1820 Major Drive North Landscaping – Golden Valley, MN
Date: July 10, 2017
Page: 2

Wetlands

The project appears to involve work adjacent to wetlands. The City of Golden Valley is the LGU for administering the Minnesota Wetland Conservation Act of 1991.

Stormwater Management

The proposed project does not create any new or fully reconstructed impervious areas and therefore does not trigger stormwater management review. Drainage patterns under existing and proposed conditions will remain the same and the proposed project will not result in changes to land use or topography.

Water Quality Management

The proposed project does not create any new or fully reconstructed impervious areas and therefore does not trigger water quality review.

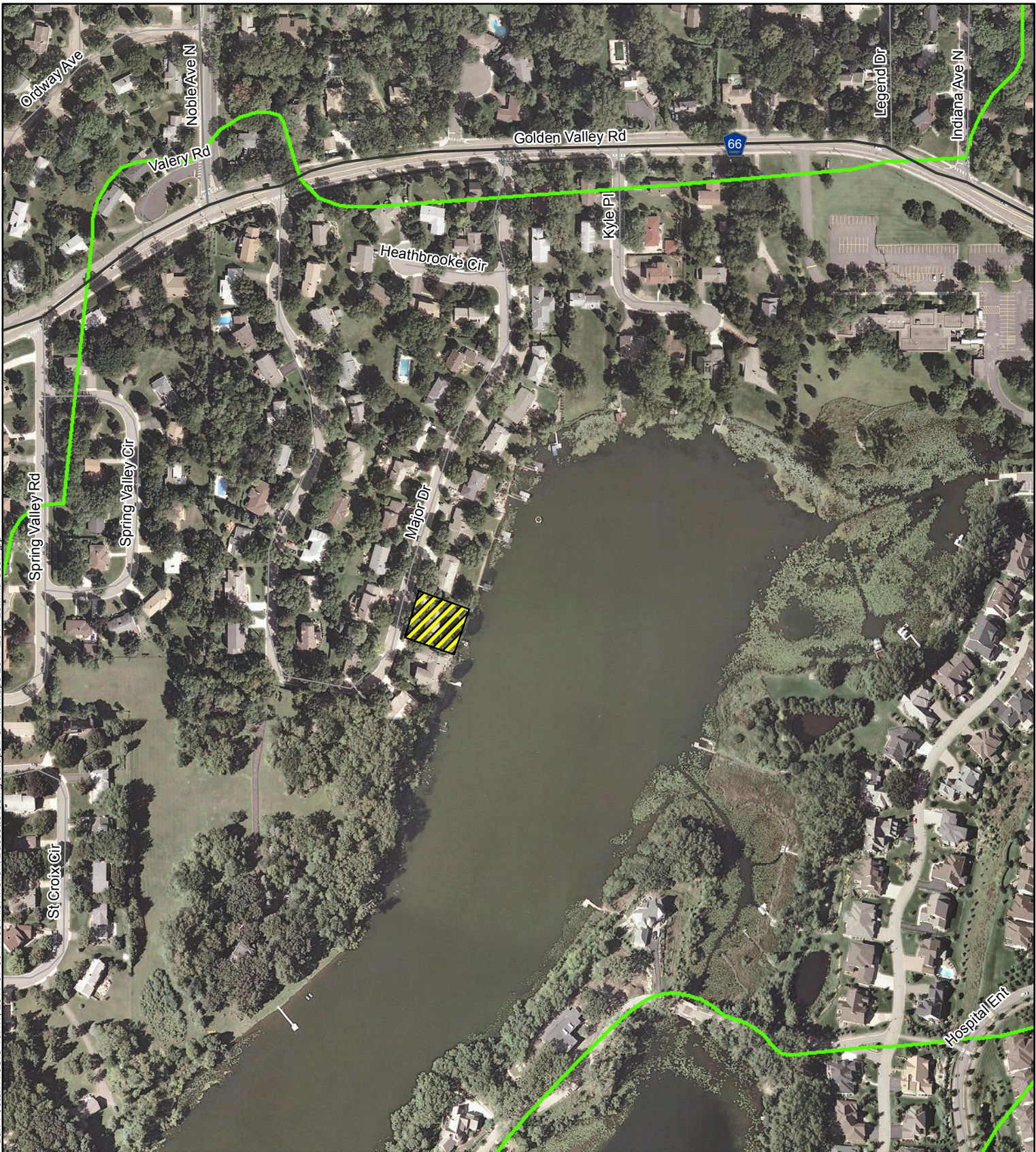
Erosion and Sediment Control

Although single family home sites are exempt from BCWMC erosion and sediment control requirements, proposed temporary BMPs include floating silt curtain and erosion control blanket. Permanent erosion and sediment control features include stabilization with native plantings.







Recommendation

Approval

Barr Footer: ArcGIS 10.4.1, 2017-07-06 11:35 File: I:\Client\BassettCreek\gis\maps\Permits\Maps 2017\2017-25.mxd User: jpp

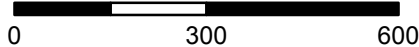


Imagery Source: Aerial Express (2009)

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



Feet



LOCATION MAP
APPLICATION 2017-25
1820 Major Drive North Landscaping
Golden Valley, MN

Item 5Ai.
 BCWMC 7-20-17
 Full plan set and list of trees for
 removal (tree survey) online

Plot Date & Time: 30 June 2017 8:47 AM



LEGEND

	DECIDUOUS TREE/REMOVAL		WATER EDGE
	ACCESS ROUTE BOUNDARY		RETAINING WALL
	EXISTING FENCE		PROPOSED CHANNEL CENTERLINE
	PROPERTY LINE		PROJECT AREA LIMITS
	ROADWAY WITH STONE TOE		ROADWAY WITH LOG TOE
			VEGETATED RIPRAP TOE



REV	REVISION DESCRIPTION	DWN	APP	REV DATE
1	90% DESIGN	SUB	EAM	06/30/17
0	60% DESIGN	SUB	EAM	04/20/17

NOT FOR
 CONSTRUCTION

PRIME CONSULTANT

Responsive partner. Exceptional outcomes.

PROJECT TITLE		EXISTING CONDITIONS AND REMOVALS	
PLYMOUTH CREEK CHANNEL RECONSTRUCTION		27+18 TO 18+00	
CITY OF PLYMOUTH		MAR 2017	
3400 PLYMOUTH BOULEVARD PLYMOUTH, MN 55447		AS SHOWN	

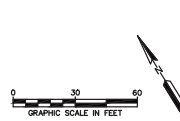
DWN BY	CHK'D	APP'D	DWG DATE	MAR 2017	
SJB	LNJ	EAM	SCALE	AS SHOWN	
PROJECT NO.	SHEET NO.		REV NO.		
1756-10	C-101		1		

\\PLT\ENR\100\000\000\C-101.dwg



LEGEND

	WATER EDGE
	RETAINING WALL
	PROPOSED CHANNEL CENTERLINE
	PROJECT AREA LIMITS
	ROOTROAD WITH LOG TOE
	VEGETATED RIPRAP TOE



REV	REVISION DESCRIPTION	DWN	APP	REV DATE
1	90% DESIGN	SUB	EAM	06/30/17
0	60% DESIGN	SUB	EAM	04/20/17

SEAL

NOT FOR
CONSTRUCTION

PRIME CONSULTANT

Responsive partner. Exceptional outcomes.

PROJECT TITLE	
PLYMOUTH CREEK CHANNEL RECONSTRUCTION	
CITY OF PLYMOUTH	
3400 PLYMOUTH BOULEVARD PLYMOUTH, MN 55447	

SHEET TITLE			
EXISTING CONDITIONS AND REMOVALS 18+00 TO 9+00			
DWN BY	CHK'D	APP'D	DWG DATE
SUB	LNJ	EAM	MAR 2017
PROJECT NO.		SCALE	
1756-10		AS SHOWN	
SHEET NO.		REV NO.	
C-102		1	



LEGEND

	DECIDUOUS TREE/REMOVAL		WATER EDGE
	ACCESS ROUTE BOUNDARY		RETAINING WALL
	EXISTING FENCE		PROPOSED CHANNEL CENTERLINE
	PROPERTY LINE		PROJECT AREA LIMITS
	ROOTWAD WITH STONE TOE		ROOTWAD WITH LOG TOE
	RIPRAP TOE		VEGETATED RIPRAP TOE

	WATER EDGE
	RETAINING WALL
	PROPOSED CHANNEL CENTERLINE
	PROJECT AREA LIMITS
	ROOTWAD WITH LOG TOE
	VEGETATED RIPRAP TOE



REV	REVISION DESCRIPTION	DWN	APP	REV DATE
1	90% DESIGN	SUB	EAM	06/30/17
0	60% DESIGN	SUB	EAM	04/20/17

NOT FOR
CONSTRUCTION

PRIME CONSULTANT

Responsive partner. Exceptional outcomes.

PROJECT TITLE
**PLYMOUTH CREEK
CHANNEL RECONSTRUCTION**

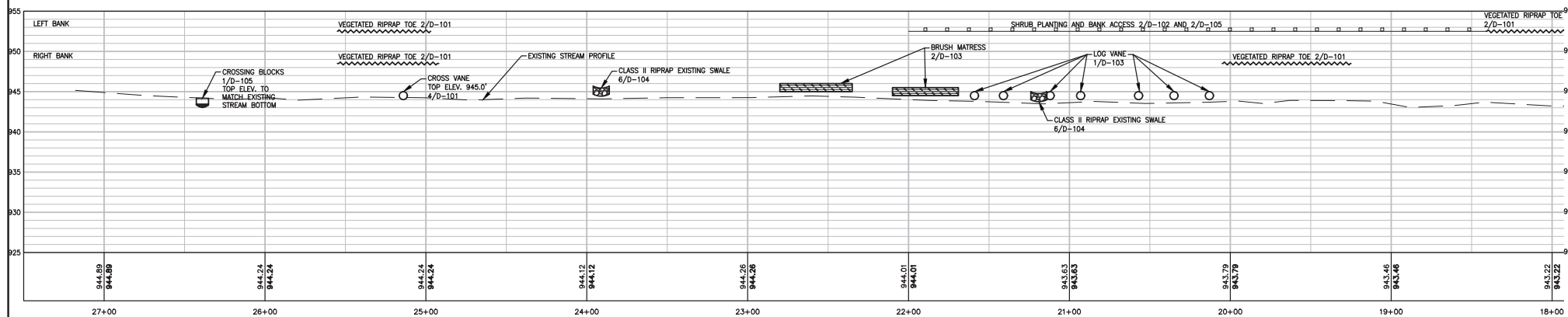
CITY OF PLYMOUTH
3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE
**EXISTING CONDITIONS
AND REMOVALS
9+00 TO 0+00**

DWN BY	CHK'D	APP'D	DWG DATE	MAR 2017
SUB	LNJ	EAM	SCALE	AS SHOWN
PROJECT NO.	SHEET NO.	SHEET NO.		REV NO.
1756-10	C-103			1

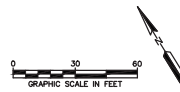


PLYMOUTH CREEK CENTERLINE STA 27+18 TO 18+00



LEGEND

	DECIDUOUS TREE		WATER EDGE
	ACCESS ROUTE BOUNDARY		RETAINING WALL
	EXISTING FENCE		PROPOSED CHANNEL CENTERLINE
	PROPERTY LINE		PROJECT AREA LIMITS
	ROOTWAD WITH STONE TOE		ROOTWAD WITH LOG TOE
	BARE ROOT SHRUB PLANTING		VEGETATED RIPRAP TOE
	SHRUB PLANTING WITH BANK ACCESS		



REV	REVISION DESCRIPTION	DWN	APP	REV DATE
1	90% DESIGN	SUB	EAM	06/30/17
0	60% DESIGN	SUB	EAM	04/20/17

NOT FOR CONSTRUCTION

PRIME CONSULTANT

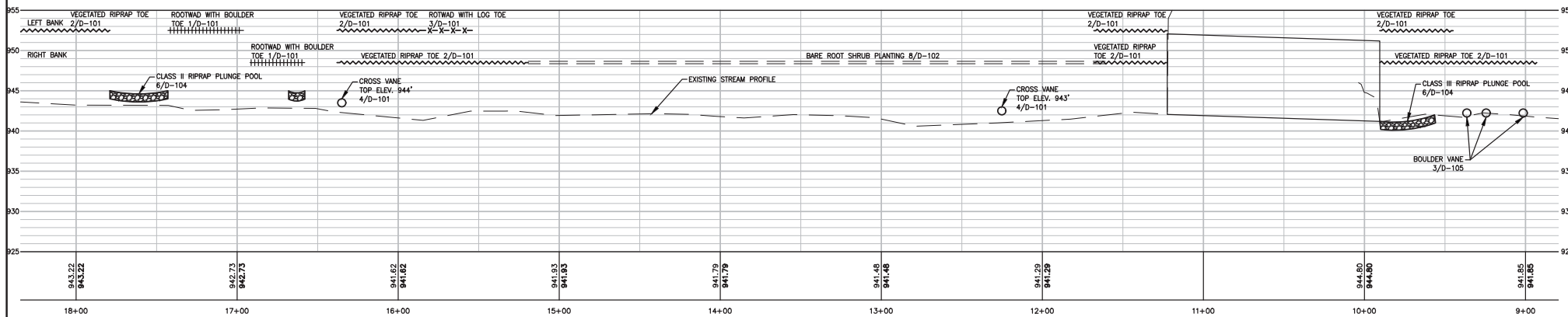
Responsive partner. Exceptional outcomes.

PROJECT TITLE		SHEET TITLE	
PLYMOUTH CREEK CHANNEL RECONSTRUCTION		STABILIZATION PLAN AND PROFILE 27+18 TO 18+00	
CITY OF PLYMOUTH		DWN BY: SJB, CHKD: LNJ, APP'D: EAM, DWG DATE: MAR 2017, SCALE: AS SHOWN	
3400 PLYMOUTH BOULEVARD PLYMOUTH, MN 55447		PROJECT NO. 1756-10, SHEET NO. C-104, REV. NO. 1	

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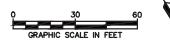


PLYMOUTH CREEK CENTERLINE STA 18+00 TO 9+00



LEGEND

	DECIDUOUS TREE		WATER EDGE
	ACCESS ROUTE BOUNDARY		RETAINING WALL
	PROPOSED CHANNEL CENTERLINE		PROJECT AREA LIMITS
	EXISTING FENCE		ROOTWAD WITH LOG TOE
	PROPERTY LINE		VEGETATED RIPRAP TOE
	ROOTWAD WITH STONE TOE		BARE ROOT SHRUB PLANTING
	BARE ROOT SHRUB PLANTING		SHRUB PLANTING WITH BANK ACCESS



REV	REVISION DESCRIPTION	DWN	APP	REV DATE
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0	60% DESIGN	SUB	EAM	04/20/17

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PROJECT TITLE
 PLYMOUTH CREEK CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH

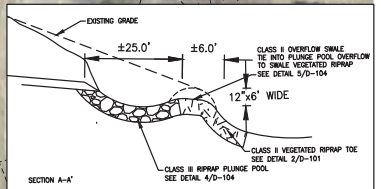
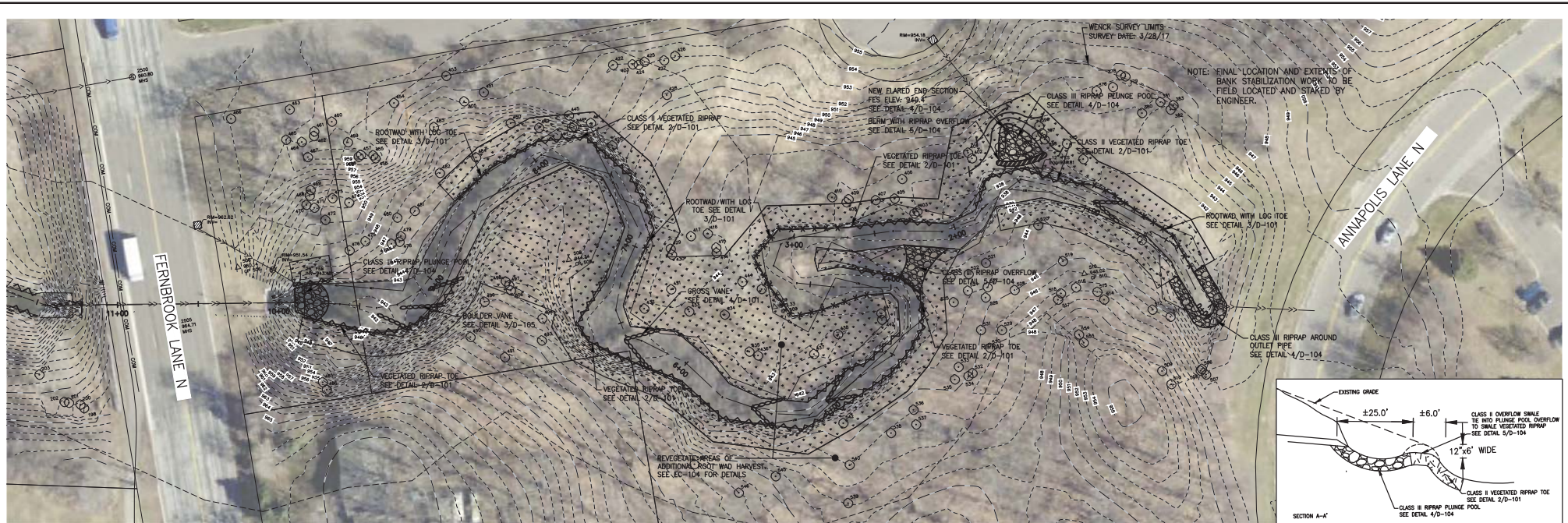
3400 PLYMOUTH BOULEVARD
 PLYMOUTH, MN 55447

SHEET TITLE
 STABILIZATION PLAN AND PROFILE
 18+00 TO 9+00

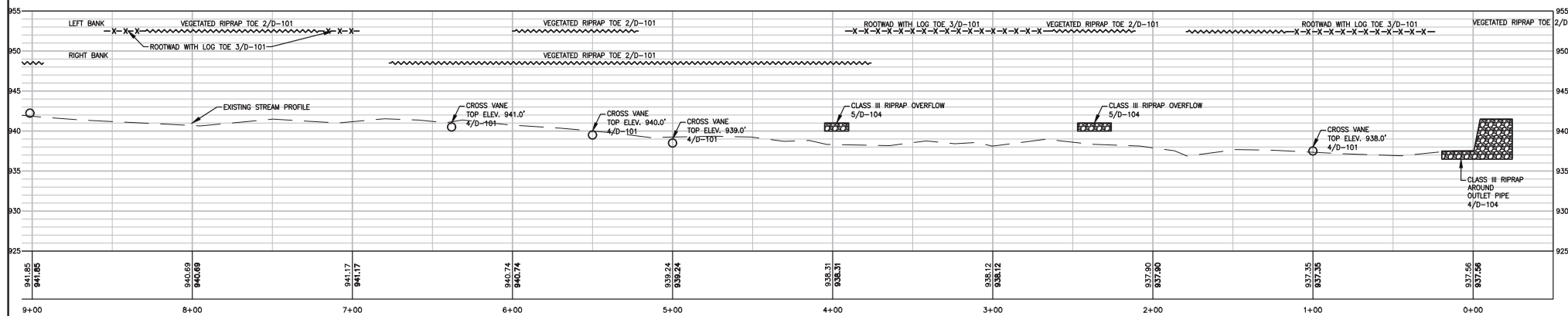
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SUB	LNJ	EAM	SCALE	AS SHOWN

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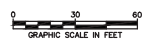


PLYMOUTH CREEK CENTERLINE STA 9+00 TO 0+00



LEGEND

	DECIDUOUS TREE		WATER EDGE
	ACCESS ROUTE BOUNDARY		RETAINING WALL
	EXISTING FENCE		PROPOSED CHANNEL CENTERLINE
	PROPERTY LINE		PROJECT AREA LIMITS
	ROOTWAD WITH STONE TOE		ROOTWAD WITH LOG TOE
	BARE ROOT SHRUB PLANTING		VEGETATED RIPRAP TOE
	SHRUB PLANTING WITH BANK ACCESS		



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PROJECT TITLE
 PLYMOUTH CREEK CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH
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 PLYMOUTH, MN 55447

SHEET TITLE
 STABILIZATION PLAN AND PROFILE 9+00 TO 0+00

DWN BY SJB	CHK'D LNJ	APP'D EAM	DWG DATE MAR 2017
PROJECT NO. 1756-10	SHEET NO. C-106	SCALE AS SHOWN	REV NO. 1

HOLE 1: STREAM CROSSING



GRANITE STEPPERS

HOLE ONE CURRENTLY HAS BANK EROSION WHERE THE FAIRWAY MEETS PLYMOUTH CREEK. THE METHODS PROPOSED TO FIX THE PROBLEM ARE BY INTRODUCING A NEW LOW-FLOW CROSSING POINT WITH BANK STEPS LEADING TO STEPPERS WITHIN THE CREEK BED. INCREASING THE AMOUNT OF VEGETATION THROUGH SHRUB PLANTINGS AND NATIVE GRASSES. THE PUTTING GREEN FOR HOLE FIVE IS LOCATED CLOSE AND TO MITIGATE THE SOIL EROSION THE PROPOSED SOLUTION INCLUDES INCREASING THE HEIGHT OF THE EXISTING BOULDER WALL AND FLATTENING OUT THE "GREEN" AREA. IN ADDITION, ADDING WOOD CHIPS IN THE HIGH TRAFFIC 30 RADIUS OF THE PIN WILL REDUCE THE AMOUNT OF MUD AND IMPROVE PLAY CONDITIONS.

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PLYMOUTH CREEK CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH
3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE			
REFERENCE PICTURES			
DWN BY	CHK'D	APP'D	DWG DATE
SUB	LNJ	EAM	MAR 2017
PROJECT NO.		SCALE	
1756-10		AS SHOWN	
SHEET NO.		REV NO.	
C-601		1	

HOLE 8 LOOKING ACROSS TO TEE BOX OF HOLE 12: STREAM ACCESS + STABILIZATION



STONE STEPS TO CREEK'S EDGE



SHRUB PLANTINGS

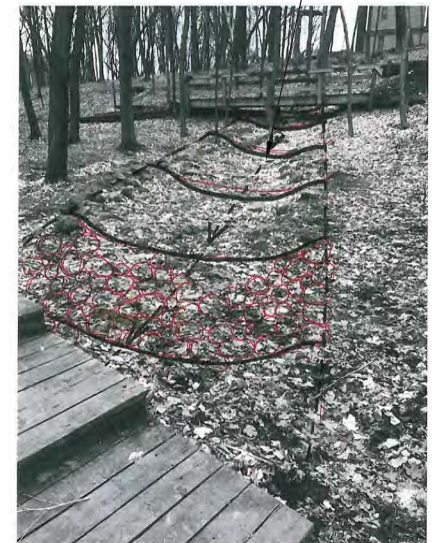


ON HOLE 8 THERE IS A HIGH POTENTIAL FOR DISC'S TO ENTER THE CREEK. THE EXISTING BANKS ARE IN NEED OF EROSION MITIGATION VEGETATION AND ARMORING. IN ORDER TO ACCOMPLISH BOTH DESIRED OUTCOMES A COMBINATION OF SHRUB PLANTINGS TO STABILIZES THE BANK WITH ACCESS STEPS LEADING TO THE CREEK EDGE FOR FISHING DISC'S OUT. THE OUTSIDE BEND WILL BE ARMORED WITH VEGETATED RIPRAP TO COMBAT FLOW VELOCITY AND PRESERVE THE VISUAL AESTHETIC WITH TALL GRASSES GROWING OVER THE ARMORING.

EXISTING SWALES



RIPRAP SWALE



MULTIPLE EXISTING DRAINAGE SWALES OCCUR WITHIN THE DISC GOLF COURSE. THE ADDITION OF RIPRAP TO STABILIZE THE SOILS WILL MITIGATE SOIL MIGRATION INTO THE CREEK. PLAYABILITY OF THE COURSE WILL NOT BE AFFECTED AND A REDUCTION OF OVERALL MUD WILL BE ACHIEVED.

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PLYMOUTH CREEK
CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH

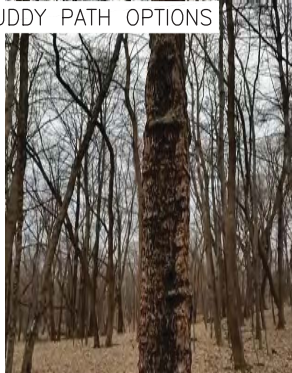
3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE

REFERENCE PICTURES

DWN BY	CHK'D	APP'D	DWG DATE	MAR 2017
SUB	LNJ	EAM	SCALE	AS SHOWN
PROJECT NO.	SHEET NO.	SHEET NO.	REV NO.	REV NO.
1756-10	C-602	1		

HOLE 8: MUDDY PATH OPTIONS



EXISTING TREES WITHIN THE FLIGHT PATH ARE SCARRED BY DISCS REPEATEDLY HITTING THE SOFT TISSUE OF YOUNG TREES. TO PROTECT THE TREES DISC STOP POLES WOULD BE PLACED BETWEEN THE TREE AND THE DIRECTION OF FLYING DISCS. WITH STAGGERED ROWS OF POLES DEFLECTION WILL SERVE TO PROTECT TREES.



SHRUB PLANTINGS



DISC STOP POLES



BOARDWALK TO MATCH EXISTING

FOR AREAS OF HEAVY FOOT TRAFFIC IN SUNNY LOCATIONS THE USE OF GRASSPAVE2 WOULD ALLOW FOR REDUCED COMPACTION AND TRAMPLING OF TURF GRASS COVER. THE SOILS IN THESE LOCATIONS WOULD THUS BE STABILIZED WHILE ALLOWING FOR CONSISTENT GOLFER TRAFFIC. IN AREAS OF HEAVILY SHADE DUE TO TREE CANOPY THE USE OF ADDITIONAL BOARDWALKS WILL SERVE TO FOCUS TRAFFIC MOVEMENTS AROUND TREE ROOTS AND BARE SOILS.



GRASS PAVE2



STEEP SLOPES CAN BE RECTIFIED THROUGH THE USE OF BOARDWALKS WHICH ALSO MINIMIZES THE FOOT TRAFFIC TRAMPLING ANY VEGETATION. THE ADDITION OF DISC STOP POLES WILL PROTECT EXISTING/NEWLY PLANTED TREES AND ADD A NEW ELEMENT OF DIFFICULTY FOR PLAYERS TO SHOOT AROUND.



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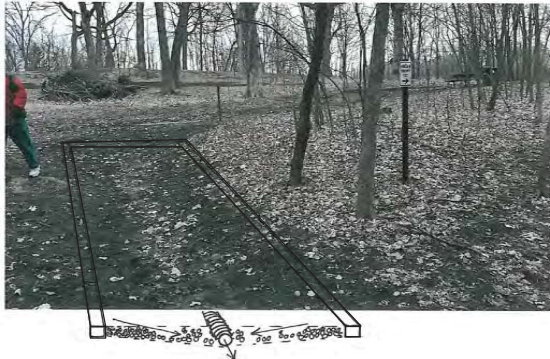
PROJECT TITLE
PLYMOUTH CREEK CHANNEL RECONSTRUCTION

CITY OF PLYMOUTH

3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE			
REFERENCE PICTURES			
DWN BY	CHK'D	APP'D	DWG DATE
SUB	LNJ	EAM	MAR 2017
PROJECT NO.	SHEET NO.	SCALE	AS SHOWN
1756-10	C-603		1

HOLE 11: MUDDY TEE BOX OPTIONS



FOR AREAS OF HEAVY FOOT TRAFFIC IN AND AROUND SHADY TEE BOXES THE PATHWAYS CAN BE BOXED IN USING PRESSURE TREATED TIMBERS AND THE BOXES FILLED WITH EITHER WOODCHIPS OR GRAVEL. THIS WILL SERVE TO REDUCE THE AMOUNT OF MUD AND KEEP THE SOIL MIGRATION DOWN.



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PROJECT TITLE
**PLYMOUTH CREEK
CHANNEL RECONSTRUCTION**

CITY OF PLYMOUTH
3400 PLYMOUTH BOULEVARD
PLYMOUTH, MN 55447

SHEET TITLE			
REFERENCE PICTURES			
DWN BY SJB	CHK'D LNJ	APP'D EAM	DWG DATE MAR 2017
PROJECT NO. 1756-10	SHEET NO. C-604	SCALE AS SHOWN	
			REV NO. 1

OXE-BOW: POLINATOR HABITAT + FOOD



THE RUSTY PATCHED BUMBLEBEE BECAME THE FIRST BEE SPECIES EVER LISTED UNDER THE ENDANGERED SPECIES ACT IN MARCH OF THIS YEAR; HOWEVER, POLLINATORS OF ALL KINDS (BEES, MOTHS, AND BUTTERFLIES) ARE CURRENTLY IN A DECLINING STATE ACROSS THE U.S. FOR THE ISLAND OFF THE EDGE OF THE COURSE BEHIND THE OXE-BOW A DEDICATED POLLINATOR HABITAT AND NECTAR SOURCE IS PLANNED. A COMBINATION OF SEEDING NATIVE GRASSES AND FORBS ARE PROPOSED, AS WELL AS, POTTED FORBS TO INCREASE THE DENSITY. IN ORDER TO ACHIEVE THE NECESSARY SUNLIGHT FOR THESE SPECIES THE CURRENT TREES WILL BE REMOVED.



IN ADDITION TO THE POLLINATOR SPECIFIC ISLAND, NATIVE SEED MIXES AND FLOWERING SHRUB SPECIES WILL BE USED TO STABILIZE THE BANKS OF THE CREEK. THE DENSITY OF FLOWERS WILL NOT BE AS INTENSE BUT THEY WILL SERVE AS A CONNECTIVE PATHWAY ALONG THE CREEK TO THE GREATER LANDSCAPE WITHIN PLYMOUTH. LIKE THE POLLINATOR ISLAND, TREES ALONG THE CORRIDOR WILL NEED TO BE REMOVED TO ALLOW NEEDED SUNLIGHT FOR THE NEW COVER TYPES. REMOVALS WILL BE LIMITED TO ONLY WHAT IS NECESSARY AS TO NOT CHANGE THE CHARACTER OF THE PARK AND THE DISC GOLF COURSE.



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CITY OF PLYMOUTH	3400 PLYMOUTH BOULEVARD PLYMOUTH, MN 55447

SHEET TITLE				REFERENCE PICTURES
DWGN BY	CHK'D	APP'D	DWG DATE	MAR 2017
SUB	LNJ	EAM	SCALE	AS SHOWN
PROJECT NO.	1756-10	SHEET NO.	C-605	REV NO.
				1

Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5A – Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project, Annapolis Lane through Plymouth Creek Park (CIP 2017CR-P), Plymouth
Date: July 13, 2017
Project: 23270512017 635

5A. Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project, Annapolis Lane through Plymouth Creek Park (CIP 2017CR-P), Plymouth

Summary

Proposed Work: 2017 Plymouth Creek Restoration Project (CIP 2017CR-P)

Basis for Commission Review: 90% plan review

Change in Impervious Surface: N.A.

Recommendation: Conditional Approval

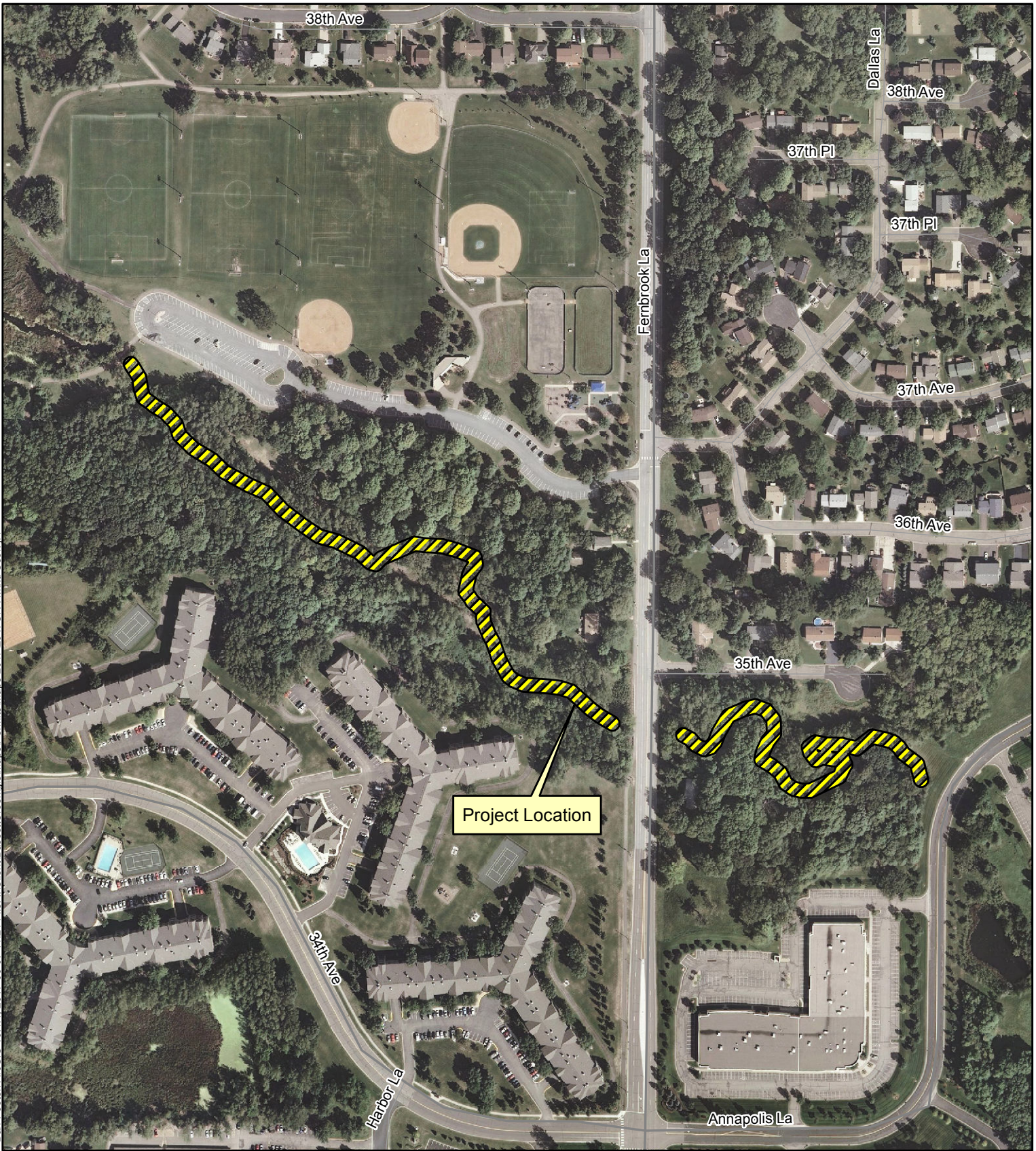
The 2017 Plymouth Creek Restoration project (CIP 2017CR-P) is being funded by the BCWMC's ad valorem levy (via Hennepin County). The City of Plymouth provided the 90% design plans to the BCWMC for review and comment, as set forth in the BCWMC CIP project flow chart developed by the TAC.

Feasibility Study Summary







The BCWMC completed the 2017 Plymouth Creek Restoration Project Feasibility Report (Barr, March 2016) to examine the feasibility of restoring sites along the 2,500-foot reach of the creek in Plymouth Creek Park and between Fernbrook Lane North and Annapolis Lane North (Figure 1). The feasibility report identified 21 sites where bank erosion, bank failure, and infrastructure repairs were needed, in addition to removal of debris and fallen trees.

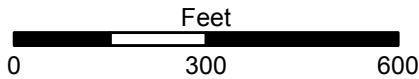
The feasibility report identified 2-4 design options for each site and a final recommendation for each site. For most sites, the feasibility report included two alternative designs: 1) a bioengineering (or soft armoring) approach that uses techniques that rely primarily on vegetation; 2) a more structural (or hard armoring) approach that uses rock and other non-vegetative materials. Some sites included additional alternatives that did not focus on preserving the existing alignment or channel configuration, such as remeandering the channel or reconnecting to the floodplain. Recommendations, based on site-specific

Barr Footer: ArcGIS 10.4.1, 2017-06-07 11:21 File: I:\Client\BassettCreek\gis\maps\Permits\Maps-2017\2017CR-P.mxd User: jrv



Imagery Source: Aerial Express (2009)

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



LOCATION MAP
APPLICATION 2017CR-P
Plymouth Creek Stream
Restoration Project
Plymouth, MN

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 5A – Consider Approval of 90% Design Plans for Plymouth Creek Restoration Project, Annapolis Lane through Plymouth Creek Park (CIP 2017CR-P), Plymouth
Date: July 13, 2017
Page: 3
Project: 23270051 2017 635

considerations, included a mix of hard and soft armoring approaches, and additional alternatives to realign the channel.

The feasibility report estimated that this restoration project would require the removal of approximately 100-150 trees and estimated that project implementation would reduce the total phosphorus load by 52 pounds per year and the total suspended sediment load by 90,800 pounds per year.

Project Summary

The 90% design plans follow many of the recommendations from the feasibility study and include the use of root wads, log vanes, rock/cross vanes, debris clearing and vegetation management. The plans also include the use of vegetated riprap and specific measures to improve the disc golf course adjacent to the creek in Plymouth Creek Park. Measures to improve the disc golf course include a low flow crossing where it was observed that golfers are frequently retrieving discs; disc stop poles to prevent discs from damaging trees and going into the creek; installation of boardwalk sections; and improvements to greens to improve erosion control.

The plans differ from the feasibility recommendations in a few areas, primarily involving the use of hard armoring slightly more than the feasibility recommendations. A concise summary of the differences between the design plans and the feasibility study was provided in the 60% design review.

Temporary and permanent erosion and sediment control measures include:

- Rock construction entrances
- Silt fence
- Inlet protection
- Bioroll
- Floating silt curtain
- Erosion control blanket
- Seeding

The plans show the removal of approximately 83 trees over the project length, with up to 26 additional trees identified as “to be harvested as needed” for re-use on the project.

Previous Reviews

The City of Plymouth submitted the 60% design plans for this project and the BCWMC conditionally approved the 60% plans at its June 15, 2017 meeting. Following the conditional approval of the 60% design plans, the City of Plymouth revised the design drawings to the 90% level with the inclusion of the comments from the BCWMC’s 60% review comments. On June 30th, 2017, the City of Plymouth provided the 90% design plans that included advancement of the design and addressed the BCWMC’s comments

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provided on the 60% submittal. The Commission Engineer reviewed the 90% design submittal as well as the responses to the 60% design comments. The 90% design drawings sufficiently address the majority of the BCWMC Engineer's comments provided as part of the review of the preliminary 60% plans.

However, the 90% plans do not sufficiently address the BCWMC Engineer's comment requiring no change in the flood level resulting from the proposed design. The modeling results provided with the 90% plans show a 0.1 – 0.3 foot increase in the modeled flood elevation upstream of Fernbrook Lane, including the private property at 3535 Fernbrook Lane N and 3450 Fernbrook Lane N. The plans must be revised and/or the modeling refined to show that there will be no increase in the flood level. The City's consultant (Wenck) is working on this and may provide additional information/design changes to the Commission Engineer for their review before the Commission meeting.

The Commission Engineer's 60% design comment letter also requested the following additional information (Wenck June 30th responses and the Commission Engineer's comments are noted):

1. Estimated pollutant removals, compared to pollutant removals estimated in feasibility study

Wenck response:

From the feasibility study:

"The estimated total sediment load from bank erosion is calculated using the approximate dimensions of the eroding stream banks at each site. The effects of stabilization alternatives on water quality are estimated based on the assumption that each stabilization alternative successfully addresses erosion at the site and brings erosion to a low rate, representative of a stable stream in this geologic setting. The total reduction in pollutant loading as a result of the project is estimated as 90,800 pounds per year total suspended sediment and 52.2 pounds per year total phosphorus. The majority of this load reduction will be achieved by stabilizing the eroding banks in Reaches 2 and 3."

Since our project proposes to stabilize the same areas identified in the feasibility study with similar practices that addresses erosion at the site we propose that estimated pollutant removals will be similar to the feasibility study.

Commission Engineer comment:

We concur.

2. Educational signage in park/disc golf course

Wenck response:

The sign pictured below was completed, along with several others, by a Girl Scout working on her Gold Award. These signs were done for the previous Elm Creek restoration project done by the City of Plymouth and turned out as nice as a professionally designed sign for the cost of printing and materials. The City is willing to work with Bassett Creek Watershed Management Commission

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and a future Gold Award candidate on completing signage for the Plymouth Creek restoration project. The challenge is in timing; when another girl scout contacts the City seeking a project.



Commission Engineer comment:

The City's proposed approach is a good idea, but without a Girl Scout lined up to work on the sign, it could be some time after project completion before a sign is installed.

3. Table and/or graphic showing golf course-related project components and costs vs. other restoration features and costs

Wenck response:

A construction cost estimate is attached showing a breakdown of course-related project costs versus stream restoration costs.

Commission Engineer comment:

The cost estimate is attached to this memo.

4. Tree survey results

Wenck response:

The appendix of surveyed trees indicating which trees are selected for removal and trees that are available for harvest as needed to supply addition rootwads and footer logs as needed is attached. This appendix will be included with the project specification manual.

Commission Engineer comment:

Trees to be removed (83 noted in tree survey) include American elm, basswood, bitternut hickory, black cherry, black willow, box elder, cottonwood, green ash, red oak, and sugar maple. Trees to be harvested, if needed (26 noted in tree survey), include American elm, basswood, black cherry, black willow, box elder, green ash, quaking aspen, red oak, sugar maple, and white oak. In follow-up communication with Wenck staff, we learned that 57 larger-diameter trees (10-inch diameter or larger) are needed for the project (used in restoration measures); 53 of the trees to be removed fit this criteria, so an additional four trees will need to be removed for use in the project. The four trees would be selected from the "harvest if needed" trees in the tree survey.

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There are discrepancies between trees listed as “remove” trees on the tree survey and the tree removals indicated by “X’s” on the plans (for instance, a 25 inch DBH red oak, #161 is slated for removal in the survey but is not “X’ed” in the plans; the same situation holds for a box elder #162). The information in the tree survey and on the plan sheets must be reviewed for discrepancies and corrected as needed.

The tree survey is included in the electronic packet.

The Commission Engineer’s 60% design comment letter also requested information about the June 26th public open house and/or outreach to disc golfers. Wenck’s response noted that the public open house had seven attendees. Five attendees were from the Park Place Apartments; they had questions pertaining to the water level of the wetland upstream of the project. Two attendees were from 3450 Fernbrook Ln N. (John & Jeanne Starr); they had concerns about 1) the steep slope of their property that leads into the creek, and whether the project would address the overall slope stability; and 2) the conservation area on an adjacent property and whether that prevents removal of trees.

The Starrs subsequently contacted Plymouth staff and the Commission Administrator, expressing their above concerns, plus concerns about tree removal, especially the “old growth” trees in the conservation easement. (See documents in 5Aiii.) The Commission legal counsel reviewed the agreement between the developer and adjacent property owners (including the Starrs) and found that the covenants the developer placed on the property (the conservation area) do not limit the right of the city to use the drainage and utility easement areas dedicated to the public in the plat. Covenants are private limitations placed on the use of property that can address a wide range of issues. The city is not bound by those restrictions and plays no role in enforcing them. The recording of the plat conveyed easements to the city to carry out the purposes for which the particular areas were dedicated. The Commission legal counsel believes the proposed Plymouth Creek project fits squarely within the scope of a platted drainage easement. In short, although the Commission should work to minimize disturbances to the natural area, the agreement is between the property owners and the developer and does not limit the right of the city to use the drainage and utility easement areas.

Many of the trees slated for removal in this area north of the Starr property may not require removal (see relatively flat area south of the creek on sheet C-103) because 1) the trees are not located in an actively eroding area; 2) the trees are located in a conservation area; and 3) the stream restoration measures in the area (vegetated riprap) may not require the additional sunlight.

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Recommendations

- A. Authorize BCWMC Engineer to provide administrative approval after final plans have been revised and comments have been sufficiently addressed.
- B. Conditional approval of 90% drawings based on the following comments:
 1. Modeling or other documentation must be submitted to verify no change in the flood level caused by the proposed design.
 2. Construction limits on the plan sheets should be shown, including all access routes to (and between) stabilization areas.
 3. The information in the tree survey and on the plan sheets must be reviewed for discrepancies and corrected as needed.
 4. We recommend that the following trees not be removed: #495, 499, 501-505, and 509 (shown on sheet C-103 and called out in tree survey).
 5. A stilling basin downstream of the Fernbrook Lane culvert calls for Class III riprap but the detail on sheet D-104 calls for Class IV. The appropriate riprap size should be verified and the plan sheets modified accordingly.
 6. The erosion and sediment control plans show installation of erosion control blanket only after final grading. We recommend using additional erosion control measures (e.g., compost logs) during construction on the banks and along the stream side of access routes to provide additional erosion control prior to final stabilization.
 7. Temporary vegetative cover must be spread at 1.5 times the usual rate per acre. If temporary cover is to remain in place beyond the present growing season, two-thirds of the seed mix shall be composed of perennial grasses.
 8. Educational signage in the park/disc golf course must be provided/installed before the city receives final reimbursement for the project.
 9. The final plans must be submitted to the BCWMC Engineer for review and approval after modifications have been completed.

PLYMOUTH CREEK STREAM RESTORATION
CITY PROJECT NO. 16007
90% ENGINEERS ESTIMATE
June 30, 2017

Stream Stabilization Disc Golf Course Improvement for
Stabilization

Bid Item	Description	Units	Unit Price	Quantity	Extension	Quantity	Extension
BASE BID - Fall/Winter 2017/2018 Construction							
1	Fall/Winter Mobilization and Demobilization	LS	\$35,000.00	1	\$35,000.00	0	\$0.00
2	Tree Clearing & Harvesting	LS	\$25,000.00	1	\$25,000.00	0	\$0.00
3	Chip Onsite and Spread Woodchips on Existing Trails & Course Greens	LS	\$15,000.00	1	\$15,000.00	0	\$0.00
4	Haul and Dispose Offsite All Unchipped Wood	LS	\$15,000.00	1	\$15,000.00	0	\$0.00
5	Remove and Dispose of 12" RCP Flared End Section	EA	\$250.00	1	\$250.00	0	\$0.00
6	Remove 12" RCP Pipe	LF	\$10.00	40	\$400.00	0	\$0.00
7	Furnish and Install 12" RCP Flared End Section	EA	\$1,000.00	1	\$1,000.00	0	\$0.00
8	New Tie Rod Installation	LS	\$1,000.00	1	\$1,000.00	0	\$0.00
9	Construct, Maintain, & Restore Site Access and Staging Areas	LS	\$15,000.00	1	\$15,000.00	0	\$0.00
10	Woven ECB, Rolanka BioD-Mat 40	SY	\$6.00	3310	\$19,860.00	0	\$0.00
11	Non-Woven ECB Cat 3 Type Straw 2S (No Poly Netting)	SY	\$3.00	3310	\$9,930.00	0	\$0.00
12	Footer Log & Log Vanes	EA	\$50.00	52	\$2,600.00	0	\$0.00
13	Root Wad	EA	\$350.00	57	\$19,950.00	0	\$0.00
14	Seating Log	EA	\$450.00	0	\$0.00	5	\$2,250.00
15	Silt Fence, Type MS - Maintained	LF	\$4.00	400	\$1,600.00	0	\$0.00
16	Flotation Silt Curtain Type Moving Water - Maintained	LF	\$35.00	50	\$1,750.00	0	\$0.00
17	Sediment Control Log Type Straw (Or Bioroll) - Maintained	LF	\$6.00	200	\$1,200.00	0	\$0.00
18	Inlet Protection - Maintained	EA	\$500.00	5	\$2,500.00	0	\$0.00
19	Temporary Construction Entrance - Maintained	EA	\$2,500.00	4	\$10,000.00	0	\$0.00
20	Street Sweeper (With Pickup Broom)	HR	\$125.00	20	\$2,500.00	0	\$0.00
21	Temporary Sedimentation Basin - Maintained	LS	\$2,500.00	1	\$2,500.00	0	\$0.00
22	Cross Vane (No Limestone)	TON	\$125.00	150	\$18,750.00	0	\$0.00
23	Class II Riprap, No Limestone (Veg Riprap Toe, Swales & Brush Mattress)	TON	\$125.00	740	\$92,500.00	0	\$0.00
24	Class III Riprap, No Limestone (Channel Overflow & Plunge Pools)	TON	\$125.00	225	\$28,125.00	0	\$0.00
25	MN DOT Type V, Non-Woven Geotextile Fabric	SY	\$5.00	1780	\$8,900.00	210	\$1,050.00
26	24" to 36" Fieldstone Boulders	TON	\$150.00	45	\$6,750.00	70	\$10,500.00
27	Brush Mattress	SY	\$65.00	30	\$1,950.00	0	\$0.00
28	CU Structural Soils	TON	\$110.00	0	\$0.00	60	\$6,600.00
29	Common Excavation - On-site (EV)	CY	\$15.00	0	\$0.00	200	\$3,000.00
30	Subgrade Preparation	SY	\$15.00	0	\$0.00	100	\$1,500.00
31	Granite Charcoal Stepper	EA	\$500.00	0	\$0.00	8	\$4,000.00
32	Trap Rock Step	EA	\$500.00	0	\$0.00	68	\$34,000.00
33	Aggregate Base CL 5	TON	\$45.00	0	\$0.00	20	\$900.00
34	Aggregate Base CL 2	TON	\$35.00	0	\$0.00	45	\$1,575.00
35	Grass Pave2	SY	\$40.00	0	\$0.00	125	\$5,000.00
36	Disc Stop Poles	EA	\$750.00	0	\$0.00	132	\$99,000.00
37	Timber Edge Path	LF	\$50.00	0	\$0.00	270	\$13,500.00
38	Woodchip or Gravel, If not reusing from tree removal	CY	\$75.00	0	\$0.00	110	\$8,250.00
39	Boardwalk	LF	\$150.00	0	\$0.00	155	\$23,250.00
40	4" Drain Tile Pipe	LF	\$30.00	0	\$0.00	155	\$4,650.00

PLYMOUTH CREEK STREAM RESTORATION
CITY PROJECT NO. 16007
90% ENGINEERS ESTIMATE
June 30, 2017

41	Seeding	AC	\$2,500.00	1.5	\$3,750.00	0	\$0.00
42	Native Seed Mix	LB	\$50.00	40	\$2,000.00	0	\$0.00
43	Fescue Seed Mix	LB	\$2.50	150	\$375.00	150	\$375.00
44	Hydraulic Matrix, Type Bonded Fiber Matrix (BFM)	LB	\$1.50	3000	\$4,500.00	0	\$0.00
					\$349,640.00		\$219,400.00
	BASE BID - Spring 2018 Vegetation						
45	Spring Mobilization and Demobilization	LS	\$3,000.00	0.6	\$1,800.00	0.3	\$900.00
46	Tree Planting	EA	\$500.00		\$0.00	4	\$2,000.00
47	Shrub Planting,	EA	\$50.00	365	\$18,250.00	365	\$18,250.00
48	Perennial Planting Enhancement of Seeded Areas	EA	\$15.00	250	\$3,750.00	250	\$3,750.00
49	Bare Root Shrubs	EA	\$5.00	250	\$1,250.00	0	\$0.00
50	Live stakes	EA	\$5.00	100	\$500.00	0	\$0.00
51	Vegetation Establishment and Maintenance	LS	\$15,000.00	0.6	\$9,000.00	0.3	\$4,500.00
					\$34,550.00		\$29,400.00
					\$384,190.00		\$248,800.00
					20% CONTINGENCY \$76,838.00		\$49,760.00
					\$461,028.00		\$298,560.00
							\$759,588.00

From:
To: [Laura Jester](#)
Cc: [Lucius N. Jonett](#); [Derek Asche](#)
Subject: Re: Plymouth Creek Restoration Project
Date: Tuesday, July 11, 2017 2:11:31 PM
Attachments: [IMG_9010MotherGreyFox.jpg](#)
[IMG_9087GreyFoxCubs.jpg](#)

Please forward to Basset Creek Watershed Management Commission

Laura Jester BCWMC
Administrator

Plymouth Creek Channel Restoration Project: Annapolis Lane Upstream Through Plymouth Creek Park

As the owners of the property at 3450 Fernbrook Lane N, we attended the public hearing on September 15, 2016 and were introduced to the project.

At the meeting we mentioned a conservation area adjacent to our property but it seems there was a misunderstanding on what this was. Other than the meetings, we were never contacted about the planning even though our property intersects with the creek and is connected by a conservation agreement with the property owners of the property surrounding reach 3. This is PID: 2211822220030. We also attended the June 26, 2017 meeting and found that many things in the design had changed. Again we brought up a conservation agreement and were told that it was just a drainage easement. We contacted the city during the next few days and sent them a description of the August 22, 1991 Conservation Agreement. We were told they were interpreting this as an easement. The city went through their legal department and on July 6 we received an email stating that CIP had jurisdiction over the conservation agreement. We feel that there are requirements in this document that need to be addressed.

As for the specific planning, the early plans described alternatives. Later plans had recommendations. Then plans had changed again in the week following the June 26 meeting. We are now waiting to hear things such as the specific tree removal plans. The feasibility report mentions 100 - 150. We feel that this tree removal is overly damaging to the forest, wildlife and environment.

We treasure every maple tree, from the largest to the smallest. We have many "understory" trees that have had their growth stunted by the shade of the maple canopy. These trees experience explosive growth when exposed to sunlight from openings in the canopy from tree loss or tree storm damage.

Historical information links this area to old growth forest. Much is discussed in the DNR website about value given to older woods and forests. Unique habitats and species benefit. There is a place for trees in the changing urban landscape.

http://www.dnr.state.mn.us/forests_types/oldgrowth/description.html
http://www.dnr.state.mn.us/forests_types/oldgrowth/importance.html

Our property's sugar maple canopy gives us the benefits of seeing wildlife commonly

associated with a hardwood forest.

“Nesting” seen from our back windows: Red fox den, grey fox den (see attachment photo), raccoon families, Great Horned Owls nest, Barred Owls nest, Red-tailed Hawk nest, Wild Turkey nest, Wood Duck nest, Pileated Woodpecker’s nest, Mallard duck nest

Other animals seen in our back yard: deer, pheasant, mink, many woodpecker species (including red-bellied & red-headed), other unidentified hawks, owls & other species of birds.

A few years, we tapped some of our sugar maple trees and enjoyed the syrup for many years.

We give you this wildlife information in hope that it will be considered in the final planning. The MN drainage code mandates that “conservation values be weighed by drainage authorities in deciding whether to establish, improve or repair drainage systems.” The drainage code was amended in 1955 to require the drainage authority to duly consider “conservation of soil, water, forests, wild animals, and related natural resources, and ... other public interests affected” in deciding whether to authorize work on a drainage system. Laws 1955, c. 681, §1 (Ref: MINNESOTA DRAINAGE LAW ANALYSIS AND EVALUATION; Smith Partners; Mpls,MN; August 15, 2011)

We realize that this is a very short time frame to have our questions answered. We were unaware the city did not seem to be aware that there was a conservation agreement that involved over 6 acres in Reach 3. I sent them a copy and they sent it to their legal department the week of July 3, 2017. All approvals were given in the feasibility study without input that there was a Conservation Agreement. We had no time to verify any details. The project could be finalized on the July 20 meeting with the BCWMC.

We also have general comments and questions specific to our situation. Some details were outlined in our July 4, 2017 email to the CIP

- On July 4 we contacted CIP about erosion control on the hill on the north side of our home. The erosion change at the base of this hill is dominated by the flow of water from the culvert changes and addition of the storm sewer. It seems the land use in Reach 3 has less impact than storm sewers on the hydrology. The trees have only seasonal impact. Storm sewers and flow from upstream land use have a continuous impact.

- What area would be contracted out to eliminate the buckthorn? What is the project area? 50 feet? The woods will still disappear with the adjacent areas growing buckthorn and **no one will remove it since it is in the conservation area.**

- Periodic mowing? This will affect wildlife? There will be different habitat.

- The identified trees are promised to be shown towards the end of planning. We have questions.

- We also have questions on the access driveway (permanent parts to this?) What does the 50 foot access area mean in its entirety and in the long term?

- Is this a stormwater maintenance problem? Do we need take down maple trees? Can we use other measures such as sediment removal and stabilizing without reduction in forest?

- This Conservation area has to be protected.

ATTACHMENTS: IMG_9010MotherGreyFox.jpg and IMG_9087GreyFoxCubs.jpg (June, 2017 - our back yard)

John and Jeanne Starr (Starczewski)
3450 Fernbrook Lane N
Plymouth, MN 55447
(763)559-0489



From:
To: [Derek Asche, Plymouth](#)
Cc: [Laura Jester](#)
Subject: Re: Plymouth Creek Restoration Project
Date: Tuesday, July 4, 2017 10:42:35 PM

Earlier comments
to city

Derek Asche
Water Resources Manager
City of Plymouth

Thank you for your time in meeting with us on Friday, July 30. We had some questions and concerns on the plans for the Plymouth Creek Restoration Project in the area adjacent to our home. Among the items we discussed were:

1. Steep slope on north side of our home. *Site 15 Reach 3 as shown in Appendix A of Final Feasibility Report for Plymouth Creek Restoration Project (March 2016)*

The suggested stabilization of the bottom of the hill still leaves us vulnerable to much erosion from the entire slope. We note that since we have lived here (over 40 years), Fernbrook Lane more than doubled in width. The culvert changed twice and storm sewers were put in, increasing amount and direction of water flow. In 1980 the road width changed and a corrugated steel round culvert was used. Then recently the corrugated culvert (center flow) was replaced by a flat bottom. Combined with the storm sewer it caused a significant increase in flow at the creek southern bank near our house. This area has a very steep north facing slope with some trees and very few other plants and is in full shade.

We have noticed a significant increase in the erosion in the last few years.

Of note: the culvert redo in 2014 left wood and other debris in the creek and contributed to jams in the creek.

Our request would be that you do more to prevent erosion on the steep slope (shown in Appendix A Erosion Site Photos, Photo 14, *Final Feasibility Report for Plymouth Creek Restoration Project (March 2016)*) up to our property line on the north side of our home. A combination of erosion measures may be needed including construction and shade tolerant planting.

We would note that our roof slopes and gutter downspouts have always pointed to the east and west, not towards this area. Also, the house is less than 20 feet from the hill.

2. Site 16 Reach 3 Proposed significant tree removal.

The areas uphill from this site are naturalized with many small maple trees and other shrubs that slow drainage down the hill. Contour mapping shows drainage directed to the east of this spot.

The proposed tree removal may not have the expected sun-lighting of the creek

banks. The other existing trees adjacent to this area are on a hill. There is a virgin maple canopy that may continue to shade the area. There are also hundreds of small sugar maples in the understory. The proposed tree removal will not allow much sunlight to support the expected benefits and encourage growth on the opposite bank (north side). This is due to the observed path of sunlight through the hours of the day. Site 16 is a low treed area.

Sites 16 through 20 are included in a conservation area which may impact removal of trees and other vegetation. The slightly more than 6 acre conservation area east of Fernbrook Lane North is mainly virgin sugar maple trees. There are hundreds of understory trees that can be observed on the site photos. Taking out the maples for vegetation may make it more suitable for buckthorn and other invasive species that will grow on the perimeter. As a conservation area, no one may clear it: especially in the long term. Eventually the maples may disappear.

In researching after meeting with you, we realized that this is perhaps a small scale rare maple stand that is very old. We wonder about cutting an old-growth area of sugar maples to improve the creek. We did not discuss this much, but hope most trees are preserved. We have lived here many years and the conservation area fits the DNR description of an Old Growth northern hardwood stand of trees:

Large, dead standing trees and branches (snags) are common.

Large fallen trees and branches lie on the ground.

The forest is a mix of young, old, and middle-aged trees (multi-aged).

Small openings (canopy gaps) are visible between the tree crowns.

Dirt piles and holes from tipped-over trees (tip-up mounds and pits) dot the ground.

3. We expressed questions on how the overall project affects, or is affected by the conservation agreement.

We would like to know the final proposed tree removal including type of tree. Thank you for your help.

John and Jeanne Starr
3450 Fernbrook Lane N
Plymouth, MN

From: [Derek Asche](#)
To: [\[REDACTED\]](#)
Cc: [Laura Jester](#); [Lucius N. Jonett](#)
Subject: RE: Plymouth Creek Restoration Project
Date: Thursday, July 6, 2017 3:22:40 PM

Response to comments
from 7/4/17

Good afternoon John and Jeanne,

I reviewed the slope on the north side of your home with the project engineer. The erosion seemed minimal and with such a significant amount of shade on the north slope, the canopy would need to be opened for more sunlight and a long term solution. This exposes your property more to Fernbrook Lane and I am uncomfortable with that exposure. We are proposing to work from the top of the stream bank towards your house for 16 feet but further work up slope would not help with the project goal of improving water quality and would be difficult to justify to the Bassett Creek Watershed who is funding the project.

The area is a moderate quality Maple-Basswood Forest so we will take precautions on tree removal always starting with the dangerous trees such as leaners or damaged trees and then to those trees susceptible to disease such as Ash (Emerald Ash Borer) followed by trees that are necessary to be removed. The City will contract for long-term maintenance within the project area to combat buckthorn or other invasive species which may want to creep into this area. I did look into the conservation easement but it provides that the restrictions do not apply to any action required to be taken pursuant to law, ordinance or requirement of a governmental unit having jurisdiction over the conservation areas so the conservation easement does not affect this project.

We will work on getting you some details on the tree removals in this area.

Last, I did reach out to the City Forester regarding any Maple tree diseases in the area but he indicated there was nothing specific out there at this time.

[Derek Asche](#) | [Water Resources Manager](#)

From: [Karen Galles](#)
To: [Laura Jester](#)
Subject: Hennepin County Board Approved BCWMC Plan Amendment
Date: Thursday, July 6, 2017 3:25:34 PM

Laura,

At its meeting on June 26, the Hennepin County Board of Commissioners voted to approve the Bassett Creek Watershed Management Commission's proposed Minor Plan Amendment. There was no discussion of the proposed Minor Plan Amendment.

Staff reviewed the Amendment and found it to be consistent with the Surface Water Management section of the Hennepin County 2030 Comprehensive Plan Update and the Hennepin County Natural Resources Strategic Plan. We commend you for the excellent work the Commission is doing to protect and restore the waters of Hennepin County and we look forward to exploring opportunities to partner with the Commission on these and future projects.

We thank you for the opportunity to review and provide comment.

All my best,
Karen Galles

Karen Galles
Hennepin County Environment and Energy

612-348-2027 (office) | 507-301-9625 (mobile)
Karen.Galles@hennepin.us
www.hennepin.us/environment

701 Building
701 Fourth Avenue South, Suite 700
Minneapolis, Minnesota 55415-1842

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Item 5Cii.
BCWMC 7-20-17

PROPOSED REVISIONS Table 5-3 BCWMC 2015-2025 CIP

Gray boxes indicate revised areas including additions (underlined) and deletions (strikeout)

BCWMC ID	Capital Project Description	Estimated Capital Cost ^{1,2}	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 resulting from Metro Chloride TMDL (pending) to address chloride loading (Policy 18)										TBD	TBD	TBD	TBD	TBD
	Implementation of water quality improvement projects resulting 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							\$ 500,000		\$ 200,000	\$ 300,000		
ML-14 ³		Medicine Lake shoreland restoration	\$ 100,000									After 2020-2023			
ML-15		Wet pond (0.5 acre) at downstream end of each major subwatershed	\$ 2,000,000									After 2020-2023			
ML-16		Water quality retrofits to existing ponds upstream of Medicine Lake	\$ 11,000,000									After 2020-2023			
ML-17		In-lake alum treatment (Option 18 in Medicine Lake Plan)	\$ 1,400,000									After 2020-2023			
ML-19 ⁴		Chemical treatment of inflow to Medicine Lake from watershed	\$ 1,000,000									After 2020-2023			
ML-20		<u>Mt. Olivet Stream Restoration Project</u>	<u>\$400,000</u>								\$400,000				
ML-21	<u>Jevne Park Stormwater Pond, City of Medicine Lake to alleviate flooding/improve water quality</u>	<u>\$500,000</u>								\$ 200,000	\$300,000				
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	\$600,000 \$863,573				\$200,000 \$580,930	\$400,000 \$282,643								
Sweeney Lake															
SL-3 ⁶	Projects address phosphorus load reduction requirements in Sweeney Lake TMDL	Schaper Pond Diversion Project	\$ 612,000												
SL-4		Sweeney Lake shoreland restoration	\$ 300,000									After 2020-2023			
SL-5		Water quality retrofits to existing ponds upstream of Sweeney Lake	\$ 800,000									After 2020-2023			
SL-6		Dredging of Spring Pond and diversion of Sweeney Lake branch into Spring Pond.	\$ 1,000,000									After 2020-2023			
SL-7		Projects to reduce loading from untreated Hennepin County and MnDOT right-of-way	\$ 400,000									After 2020-2023			

PROPOSED REVISIONS Table 5-3 BCWMC 2015-2025 CIP

Gray boxes indicate revised areas including additions (underlined) and deletions (strikeout)

BCWMC ID	Capital Project Description	Estimated Capital Cost ^{1,2}	Year													
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025			
SL-8	Projects to address phosphorus load reduction TMD	In-lake alum treatment of Sweeney Lake	\$ 275,000								After 2020-2023					
SL-9 ⁴		Chemical treatment of inflow to Sweeney Lake from Sweeney Lake Branch of Bassett Creek	\$ 1,000,000								After 2020-2023					
SL-10		Impervious area runoff retention and retrofits, including bioretention, rainwater gardens, and soil restoration (various locations)	\$ 500,000								After 2020-2023					
SL-11		Stormwater treatment system for dissolved phosphorus removal in Golden Valley	\$ 400,000							\$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			TBD	TBD	TBD	TBD			
Northwood Lake																
NL-1 ⁷		Northwood Lake Water Quality Project to reduce phosphorus loading	\$676,000 \$1,769,070		\$ 676,000	\$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			
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	\$400,000 \$1,064,472		\$ 400,000	\$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							\$ 500,000	After 2023					
BC-2/BC-8 ¹¹		Sandburg Rd and Louisiana Ave Water Quality Improvement and Flood Reduction Project, Main Stem Watershed (Golden Valley) to reduce phosphorus loading and reduce flooding	504,000					\$ 201,000	\$ 300,000							
BC-3		Water Quality Improvement Site in Theodore Wirth Regional Park (Golden Valley) to treat untreated stormwater runoff to reduce phosphorus and sediment loading	\$ 1,100,000				\$ 501,000	\$ 599,000								
BC2,3,8, 10		Medicine Lake Road and Winnetka Avenue Long Term Flood Mitigation Plan Implementation	\$ 2,900,000					\$ 500,000	\$ 1,100,000		\$ 300,000	\$ 1,000,000				

PROPOSED REVISIONS Table 5-3 BCWMC 2015-2025 CIP

Gray boxes indicate revised areas including additions (underlined) and deletions (strikeout)

BCWMC ID	Capital Project Description	Estimated Capital Cost ^{1,2}	Year											
			2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
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							
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				
BC-9	Restoration and stabilization of historic Bassett Creek channel, Main Stem Watershed (Minneapolis) to reduce phosphorus and sediment loading	\$ 500,000							\$ 500,000		\$ 500,000			
Westwood Lake														
<u>WST-2</u>	<u>Westwood Lake Water Quality Improvement Project in Westwood Hills Nature Center</u>	<u>\$300,000</u>						<u>\$300,000</u>						
Parkers Lake														
<u>PL-7</u>	<u>Parkers Lake Drainage Improvement Project to reduce erosion, suspended solids, and total phosphorus to Parkers Lake</u>	<u>\$400,000</u>								<u>\$200,000</u>	<u>\$200,000</u>			
Crane Lake														
CL-3 ¹⁴	Retention of impervious area drainage at Ridgedale area (e.g., bioswales, tree trenches, rain gardens) to reduce phosphorus loading										TBD	TBD	TBD	TBD
Total Annual Estimated Cost¹⁵		\$31,395,000 \$35,239,115	\$1,503,000	\$1,878,000	\$400,000 \$2,074,000	\$1,301,000 \$1,947,115	\$1,300,000	\$1,300,000	\$1,300,000	\$1,300,000	TBD \$1,200,000	TBD \$1,300,000		

Notes:

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

- Project costs presented in 2015 dollars.
- Estimated costs are from TMDL studies or from BCWMC 2017-2021 working CIP; as projects are added to the CIP, preliminary cost estimates will be added to the 5-year working CIP and refined through the feasibility study process.
- 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.
- Estimated cost of projects ML-19 and SL-9 do not include the annual cost of chemical precipitant and operation/maintenance of treatment facility.
- 2017CR-P: Project is based on recommendations in the 2009 Plymouth Creek Restoration feasibility study. Changes in figures reflect updated estimates
- SL-3 and TW-2: Projects already levied, to be constructed in 2015.
- 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. Changes in figures reflect actual costs.
- 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.
by BCWMC closed project account; to be constructed in 2015.
- 2017CR-M: Project is based on recommendations in the Feasibility Study for 2012 Bassett Creek Main Stem Restoration Project (2011). Changes in figures reflect updated estimates.
- BC-2/BC-8: Option 2 BC-HH1111-1 and Option 3 BC-HH11-1 in the Bassett Creek Main Stem Watershed Management Plan (2000).
- BC-4: Project would divert currently untreated stormwater runoff to the pond.
- 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.
- CL-3: Project is based on recommendations in the Crane Lake Watershed and Lake Management Plan (1995).
- 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 balance.



Bassett Creek Watershed Management Commission

MEMO

To: Bassett Creek Watershed Commissioners
 From: Laura Jester, Administrator
 Date: July 11, 2017

RE: APM/AIS Committee Recommendations

[Please note: All committee meeting agendas, notes, presentations, and materials can be found at: <http://www.bassettcreekwmo.org/document/meeting-materials-minu.>]

Background and Initial Committee Work

The BCWMC Aquatic Plant Management/Aquatic Invasive Species Committee met on eight occasions from June 2016 to June 2017 to discuss and consider the Commission’s role in these issues. The committee included commissioners and alternate commissioners; Commission Engineers Chandler and Rattei; TAC members from Plymouth and Golden Valley; representatives of Sweeney Lake, Parkers Lake, and Medicine Lake; and representatives from Three Rivers Park District (TRPD), Minneapolis Park and Rec Board, Hennepin County, Metropolitan Council, and the Department of Natural Resources (DNR).

In order to guide their discussions, the committee identified types of projects where the Commission should have a role in APM/AIS. Reflecting the goals of the BCWMC Watershed Management Plan, the committee decided on the following levels of involvement:

PRIMARY OBJECTIVE of PROJECT	Commission should be involved	Commission should be involved only as a partner	No Commission role; although may be outcome of project
Activities that improve water quality	X		
Activities that improve habitat and the overall ecology of the waterbody	X		
Activities that protect the function or capacity of Flood Control Project	X		
Activities that improve recreation		X	
Activities that improve or protect human health and safety		X	
Activities that improve aesthetics			X

The committee noted that “recreation” is a broad term that means different things to different people and that improving water quality, in turn, improves recreation. The committee noted that effects on recreation would be taken into consideration for any Commission project or program and the Commission could partner with others on recreation-based projects. Although there wasn’t complete consensus, most committee members agreed that projects which have the primary objective of improved recreation should not be led by the Commission. Alt. Commissioner Holter believe the Commission should have “improved recreation” included as a primary focus of the Commission’s work and role in these issues.

In order to help determine where Commission involvement should be concentrated, the committee reviewed a map and description of the different classifications of waterbodies in the watershed, the locations and descriptions of different AIS already in the watershed and in nearby watersheds, and a list of impaired waterbodies in the watershed. (See Table 1)

The committee also received a presentation from the DNR on the latest studies, observations, and monitoring results regarding control of curly-leaf pondweed (CLP), and a presentation from TRPD on a whole-lake treatment on Medicine Lake that was part of a collaborative pilot project conducted in 2004 – 2006.

Table 1. BCWMC Waterbodies

Waterbody	BCWMC Classification¹	AIS Present	Impairment/TMDL completion date and reference	Local Partners
Medicine Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil, carp	Nutrients 2011: https://www.pca.state.mn.us/water/tmdl/medicine-lake-excessive-nutrients-tmdl-project	TRPD, AMLAC
Parkers Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil	Chloride 2016 ²	
Sweeney Lake	Priority 1 deep lake	CLP, yellow iris, carp	Nutrients 2011 https://www.pca.state.mn.us/water/tmdl/sweeney-lake-total-phosphorus-tmdl-project Chloride 2016 ²	Homeowners Assoc.
Twin Lake	Priority 1 deep lake	CLP, carp	None	
Wirth Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil	Nutrients 2010 (since delisted) https://www.pca.state.mn.us/water/tmdl/wirth-lake-excess-nutrients-tmdl-project Chloride 2016 ²	MPRB
Northwood Lake	Priority 1 shallow lake	CLP	Nutrients – no TMDL	Friends of Northwood
Westwood Lake	Priority 1 shallow lake	CLP		Westwood Nature Center
Cavanaugh (Sunset) Pond	Priority 2 shallow lake			
Crane Lake	Priority 2 shallow lake	CLP		
Lost Lake	Priority 2 shallow lake	CLP		
Main Stem Bassett Creek	Priority stream	CLP	Chloride 2016 ² + Bacteria 2014 ³	Friends of Bassett Creek
North Branch Bassett Creek	Priority stream		Bacteria 2014 ³	
Plymouth Cr.	Priority stream		Chloride 2016 ² + Bacteria 2014 ³	
Sweeney Br. Bassett Cr.	Priority stream			

CLP = Curly-leaf Pondweed

¹ Priority 1 Lakes– “MDNR Public Waters” Lakes, greater than 10 acres, with public access or adjacent to public land

Priority 2 Lakes – “MDNR Public Waters” Lakes, greater than 10 acres, without public access or adjacent to public land

Priority 1 Streams – “MDNR Public Waters” Watercourses

²Twin Cities Metro Area Chloride TMDL: <https://www.pca.state.mn.us/sites/default/files/wq-iw11-06e.pdf>

³ Upper Mississippi Bacteria TMDL: <https://www.pca.state.mn.us/water/tmdl/upper-mississippi-river-bacteria-tmdl-project>

Committee Recommendations

Over the course of four meetings, the committee reviewed and discussed activities related to AIS early detection, rapid response, studies, prevention, and management. The committee determined which APM/AIS activities the Commission should lead and which activities could include the Commission as a partner only. To help develop recommendations, the committee often prioritized the activities, considering the activity’s impact vs. the level of effort needed for the activity.

The committee recommends the following activities by the Commission:

1. EARLY DETECTION TRAINING	
Recommendation: The committee recommends that the Commission cooperate with other organizations on training groups or individuals on early detection of AIS in all waterbodies. Possible Commission activities include advertising training sessions, helping to recruit participants, assisting with venue coordination, reimbursing registration costs for Commissioners and active CAMP volunteers, and providing some modest funding. Because training programs and curriculum already exist, the Commission should not develop its own program.	
Current Activity by Others:	DNR, Hennepin County, TRPD and U of M offer training programs
Priority:	HIGH due to low effort for high impact

2. EARLY DETECTION MONITORING	
Recommendation: The committee recommends that the Commission purchase \$600 worth of zebra mussel sampler plates (approx. 50 plates) with 2017 APM/AIS funds for use by CAMP volunteers and lake residents on Priority 1 lakes and CAMP lakes. Further, the Commission should cooperate with other organizations and/or actively recruit and train volunteers to detect zebra mussels on all Priority 1 lakes, aiming for at least one volunteer in each lake quadrant. Finally, the Commission should consider recruiting one “AIS captain” per lake to field calls and questions from volunteers and to collect samples, as needed, to reduce time spent by Commission administrator.	
Current Activity by Others:	<ul style="list-style-type: none"> • Routine Commission monitoring will detect invasive plants, snails, spiny waterflea, and rusty crayfish in lakes and streams • TRPD performs early detection monitoring on Medicine Lake for zebra mussels (but could use help in expanding program) • MPRB performs early detection monitoring on Wirth Lake
Priority:	HIGH due to low effort for high impact

3. RAPID RESPONSE PLAN DEVELOPMENT	
Recommendation: The committee recommends that the Commission begin developing a rapid response action plan for key species (including zebra mussels and starry stonewort) in Priority 1 lakes using 2017 APM/AIS budget (up to \$15,000). The Commission should request a proposal from the Commission Engineer to develop lake-specific rapid response plans that consider infestation thresholds for action, consider experience and recommendations of the DNR and other organizations, assign responsible parties, and list possible funding partners for plan implementation. The Commission could request that this committee review the draft plan and implementation recommendations.	
Current Activity by Others:	MPRB has a Zebra Mussel Action Plan for Wirth Lake
Priority:	HIGH due to need to identify responsible parties and funding mechanisms for quickest, most effective response to new infestations.

4. RAPID RESPONSE TO NEW INFESTATIONS	
Recommendation: The committee recommends the Commission follow guidance resulting from the rapid response plan.	
Current Activity by Others:	MDNR works with local entities to implement rapid responses
Priority:	No priority level set by committee

5. INVENTORIES AND STUDIES	
“Inventories and studies” could include a very thorough and detailed inventory of all AIS, an assessment of the proximity of AIS to BCWMC waterbodies, an analysis of various pathways of AIS into the BCWMC, and an assessment of vulnerability of each waterbody to various AIS.	
Recommendation: At this time, the committee recommends that additional water quality parameters be added to routine monitoring starting in 2018 in order to assess the vulnerability of waterbodies to harboring AIS; and that water monitoring reports include a brief assessment of vulnerability. In 2018 this additional work, estimated at \$2,800, could come from APM/AIS budget.	
Current Activity by Others:	Henn County analyzed the risk of AIS originating from pet stores & nurseries
Priority:	HIGH: Inventory and general vulnerability analysis with routine monitoring through addition of some water quality parameters LOW: Developing full blown studies and assessments for every lake

6. AIS PREVENTION: BOAT LAUNCH AND ACCESS MANAGEMENT

Activities could include inspections of boats entering/leaving lake for AIS; installation and management of washing stations and/or compost bins at launches; regulation of launch closures/open hours.

Recommendation: The committee believes that boat launch owners (including private owners, cities, TRPD, and MPRB) should be responsible for monitoring and managing launches. However, the committee recommends the Commission begin an AIS Prevention Grant Program beginning with the 2019 BCWMC Budget to assist boat launch owners with inspections, equipment purchase, educational signage, staff training, etc.

Current Activity by Others:	TRPD performs inspections during peak hours at their boat launch on Medicine Lake. MPRB closed the boat launch on Wirth Lake to help prevent AIS movement
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Priority:	No priority level set by committee.
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7. AIS PREVENTION: AIS EDUCATION

Recommendation: The committee recommends that the Commission add materials and activities regarding AIS to its education and outreach program including 1) providing printed educational materials during events (using existing materials rather than developing new materials); 2) distributing newsletter articles to cities about AIS; 3) adding AIS information to news items on BCWMC website home page; and 4) considering ideas or requests from cities/lake groups for tailored educational materials through Education Committee's annual work and budget planning.

Current Activity by Others:	TRPD, MPRB, Hennepin County, DNR, and lake groups each provide some level of AIS education through various avenues
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Priority:	No priority level set by committee.
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8. AIS PREVENTION: POLICY DEVELOPMENT/ADVOCACY

Advocating for and/or assisting with policy changes or ordinance development at the local or state level.

Recommendation: The committee doesn't recommend Commission involvement at this time. The committee did direct the Administrator to determine if the Commission could be a member of the Minnesota Lakes and Rivers Advocates due their lobbying efforts on AIS at the legislature. Upon review, the Administrator/Legal Counsel determined the Commission cannot be an actual member of the organization. However, the committee suggested that the organization's newsletter could be distributed or posted with BCWMC materials.

Current Activity by Others:	Some lake groups are member of Minnesota Lakes and River Advocates. Park districts and cities may have AIS issues within their policy agendas.
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Priority:	No priority level set by committee.
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9. MANAGEMENT: MONITORING CURRENT INFESTATIONS

Recommendation: The committee notes that the BCWMC's current routine monitoring program includes monitoring AIS infestations except for fish. The committee recommends that the Commission gather and review existing information on fish surveys during routine lake monitoring to determine if a survey is needed and/or if there are ways to partner with others on surveys. The committee further recommends that the Commission request a presentation from the DNR and others performing fish surveys (such as TRPD and the City of Plymouth) on fish populations in BCWMC waterbodies.

Current Activity by Others:	BCWMC's current monitoring program includes surveys of current AIS infestations except fish. TRPD surveys fish on Medicine Lake City of Plymouth surveys fish on all lakes
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Priority:	No priority level set by committee.
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10. MANAGEMENT: HERBICIDE SPOT TREATMENTS WITH APPROVED PLAN	
Includes spot treating aquatic invasive plants with herbicide (as opposed to treating a whole lake)	
Recommendation: The committee recommends that the Commission perform herbicide spot treatments of aquatic invasive plants where the following conditions are met: 1) treatment of the plant is considered a management tool for improving water or habitat quality according to an approved management plan such as a TMDL; and 2) another entity or organization is sharing the cost of the treatment. (This is consistent with the committee’s recommendation and Commission approval of curly-leaf pondweed control on Medicine Lake in January 2017.)	
Current Activity by Others:	TRPD and MPRB use spot treatments at access points, fishing piers, and beaches. (City of Plymouth previously treated curly-leaf pondweed in Medicine Lake.)
Priority:	No priority level set by committee.

11. MANAGEMENT: HERBICIDE SPOT TREATMENTS WITHOUT APPROVED PLAN	
Includes spot treating aquatic invasive plants with herbicide (as opposed to treating a whole lake)	
Recommendation: The committee recommends that the Commission consider requests for spot treatments on lakes without an approved plan on a case by case basis.	
Current Activity by Others:	TRPD and MPRB use spot treatments at access points, fishing piers, and beaches.
Priority:	No priority level set by committee.

12. MANAGEMENT: WHOLE LAKE HERBICIDE TREATMENTS

Recommendation: The committee recommends that the Commission consider requests for whole lake herbicide treatments and that the Commission Engineer continue to engage with the DNR regarding this as well as other new treatment methods and technologies.

Current Activity by Others:	TRPD treated curly-leaf pondweed in Medicine Lake through a whole lake herbicide treatment (2004-2006) as part of a pilot program in coordination with the DNR.
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Priority:	No priority level set by committee.
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13. MANAGEMENT: CARP HARVESTING/FISH BARRIERS

Common carp can have a significant negative impact on water quality and aquatic vegetation, particularly in shallow lakes.

Recommendation: The committee recommends that the Commission consider the need for managing carp populations in Priority 1 lakes if fish surveys and other data indicate that carp are a significant problem.

Current Activity by Others:	TRPD and neighboring watershed organizations have performed or will be performing carp management activities including harvesting and barrier installation.
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Priority:	No priority level set by committee.
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14. MANAGEMENT: WATER LEVEL MANAGEMENT

In some lake systems, water levels can be lowered in order to consolidate sediments, encourage native plant growth, and significantly reduce invasive plants such as curly-leaf pondweed.

Recommendation: The committee recommends that the Commission consider water level management on a case by case basis if recommended in an approved management plan.

Current Activity by Others:	Neighboring watershed organizations have performed water level management activities.
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Priority:	No priority level set by committee.
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15. MANAGEMENT: BIOLOGICAL TREATMENT

Insects are sometimes used to control invasive species, including beetles introduced to control purple loosestrife infestations.

Recommendation: The committee recommends that the Commission consider biological control on a case by case basis as a possible future control method and to stay informed on new biological control agents.

Current Activity by Others:	Many entities have released purple loosestrife beetles in the past with great success. The DNR continues to “collect and move” beetles in limited cases.
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Priority:	No priority level set by committee.
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16. CONVENING LAKE GROUPS TO UNDERSTAND OPTIONS FOR ORGANIZATION

During the discussion of many of the prevention and management options, it was noted that formal [lake improvement districts](#) may be the best type of organization to implement many of the prevention and management tools noted above and that BCWMC lake groups might need more information about the pros and cons of forming a lake improvement district.

Recommendation: The committee recommends that the Commission convene a meeting of lake groups and other interested groups/individuals in the BCWMC and request a presentation from the DNR and other experts to learn about lake improvement districts vs. lake associations and other less formal lake groups.



Bassett Creek Watershed Management Commission

MEMO

Date: July 12, 2017
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.>)

2017 Plymouth Creek Restoration Project, Annapolis Lane to 2,500 feet Upstream (2017CR-P): (See Item 5A)

The final feasibility study and project information are available online at <http://www.bassettcreekwmo.org/index.php?CID=284>. The BCWMC recently executed agreements with the BWSR for a \$400,000 Clean Water Fund grant and with Hennepin County for a \$50,000 Opportunity Grant. A subgrant agreement with the City was recently executed. Project design is underway through a contract between the City and Wenck Associates. The City will soon apply for permits from the U.S. Army Corps of Engineers and the Department of Natural Resources. Ninety-percent designs were submitted to the Commission Engineer and will be presented at this meeting. A public open house on the project was held on Monday June 26th. The City and Commission received comments and requests for further details from an adjacent landowner (see item 5Aiii). The project is slated for construction next winter.

2017 Main Stem Bassett Creek Streambank Erosion Repair Project (2017CR-M): The feasibility study for this project was approved at the April Commission meeting and the final document is available on the project page at: <http://www.bassettcreekwmo.org/index.php?CID=281>. A Response Action Plan to address contaminated soils in the project area was completed by Barr Engineering with funding from Hennepin County and was reviewed and approved by the MPCA. At the September 2016 meeting, the Commission held a public hearing on the project and adopted a resolution ordering the project and certifying a final levy to Hennepin County. Also at that meeting, the Commission entered an agreement with the City of Minneapolis to design and construct the project. 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 is contracting with Barr Engineering to design and construct the project. Fifty-percent designs will be presented at the August Commission meeting.

2013 Four Season Area Water Quality Project/Agora Development (NL-2): At their meeting in December, 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 meeting the Commission approved an agreement with Rock Hill Management 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. The developer recently submitted plans for the wetland restoration portion of the project to the Commission Engineer for review. The plans were submitted to the Commission Engineer in late May. The Commission Engineer and the developer's consultant, Solution Blue, are working through some details. The plans with Commission Engineers comments and recommendations are slated for presentation at the August Commission meeting. At this time, the development parcel has not yet been sold to Rock Hill Management.

2014 Schaper Pond Diversion Project, Golden Valley (SL-3): Last August, the Commission Engineer reported that the structure had been vandalized and repair was needed. The City executed a change order with Sunram Construction (the contractor for the project) to add weights to some of the baffle anchors; which was accomplished this spring. Unfortunately, city staff recently noticed that another anchor had pulled out. This was an anchor that had not been given the extra weights this spring. Based on discussions with the Commission Engineer, the City is recommending adding weights to all remaining anchors and reinstalling the anchor that has pulled out. The city is waiting to hear from the Sunram Construction about a time line to complete the work. Depending on the response, the City may decide to complete the work with its own staff. The contractor has some final vegetation establishment to complete before the contract can be closed. Erosion control will be removed once the final stabilization is completed. The Commission Engineer recently began the effectiveness monitoring with equipment purchase; coordination with vendors on equipment options/system design; obtaining quotes and place equipment orders; and visiting the site and preparing the shelter for equipment and start up.

2014 Twin Lake In-lake Alum Treatment, Golden Valley (TW-2): (No update since January.) 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 this summer will help determine if a second dose of alum is needed to retain water quality.

2015 Main Stem Restoration Project 10th Avenue to Duluth Street, Golden Valley (2015CR): 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 second phase of the contract, Native Buffer Vegetation installation is underway. 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.

2016 Northwood Lake Improvement Project, New Hope (NL-1): Northwood Lake Improvement Project is nearing completion with all major work complete. The storm water tank was fully operational in June and will be irrigating the fields for the summer. The educational sign is being designed and will be installed soon. The 2nd rain garden was planted with the fescue grass in June.

Semi-annual grant reporting will be completed this month. I recently submitted grant audit materials to MPCA which were approved. A grand opening of the park was held on May 15th. Friends of Northwood Lake disseminated water quality educational materials, including BCWMC materials.

Photos and construction progress are available at: <http://www.ci.new-hope.mn.us/departments/publicworks/2016infrastructure.shtml>

2016 Honeywell Pond Expansion Project, Golden Valley (BC-4): In spring 2016, the Honeywell Pond Project was bid as part of the City of Golden Valley and Hennepin County's Douglas Drive (CSAH 102) Reconstruction Project. The reconstruction project began in June 2016. Excavation of the pond basin is complete and the disturbed soils around the pond were temporarily stabilized. The force main work was recently completed. WSB and Park Construction are finalizing the shop drawings for the lift station. The connection to Sandburg Athletic Complex was bid as part of the Douglas Drive Landscaping Project. Hoffman & McNamara are in the process of finalizing the irrigation system and will make the connection at Honeywell Pond. Final stabilization of the Pond will be completed this fall.

2018 Bassett Creek Park Pond & Winnetka Pond Dredging, Crystal (BCP-2): The final feasibility study for this project was approved at the May 2017 meeting and is now available on the project page online at <http://www.bassettcreekwmo.org/index.php?CID=403>. Hennepin County Commissioners recently approved the 2018 maximum levy request for this project. At its September 2017 meeting, the Commission will hold a public hearing on the project and consider a resolution to order the project and enter an agreement for design and construction with the City of Crystal.

Other Work

It's been a fairly summer for the BCWMC so far! Here are some of the tasks completed and ongoing:

Administrative, Financial, CIP Projects:

- Attended Hennepin County Commission Committee meeting re: 2018 maximum levy and minor plan amendment
- Attended public open house for Plymouth Creek Restoration Project and corresponded with adjacent residents
- Corresponded with City of New Hope regarding educational sign for Northwood Lake Improvement Project

Volunteers and Education:

- Submitted application to participate in Golden Valley Arts and Music Festival
- Developed and sent email to Commissioners with upcoming events and opportunities
- Coordinated with Dawn Pape regarding newly approved educational activities
- Picked up CAMP lake samples from volunteers

Other Activities:

- Attended meeting with Blue Line LRT Project Office staff, Commission Engineer, and city representatives. The Commission will likely hear a presentation on the Blue Line LRT project at their August meeting.
- Prepared for and attended APM/AIS Committee meeting; prepared committee recommendations document
- Updated and posted water quality graphs for Crane Lake with 2016 monitoring data



Item 6Ai.
BCWMC 7-20-17

June 27, 2017

Laura Jester
BCWMC
16145 Hillcrest Lane
Eden Prairie, MN 55346

Dear Ms. Jester:

BWSR is in the initial phases of creating a pilot performance based watershed implementation funding program aka "Fund the Plan" for FY2018-19. This initiative is due largely to support from both the Local Government Water Roundtable (LGWR) and The Clean Water Council wanting to see a shift from hyper-competitive grant funding for local implementation of projects and program to one which is more predictable and systematic. Creating stable and predictable funding for local governments to implement coordinated watershed management activities which are prioritized, targeted, and capable of achieving measureable results, is critical for Minnesota to reach its clean water goals. As local water planning across the state begins shifting to a watershed based framework, a watershed based funding approach has gained momentum.

As part of this process, BWSR has committed to continue working with Local Governments across the state through the involvement of the Local Government Water Roundtable (AMC, MASWCD, and MAWD). BWSR recognizes that Watershed Management Organizations in the metro area may be affected by a shift away from strictly competitive funding. I am reaching out to you, with the support from the LGWR, to see if you would like to join the LGWR Workgroup assisting BWSR in developing this pilot program. The workgroup will be meeting up to 3 times over the course of next 6 months. We currently have a meeting date set for July 24th and we are anticipating 1 or 2 more meetings in late summer or fall. If you have any questions regarding this effort, please feel free to contact me or any of the following metro area Workgroup members.

Brian Watson, Dakota County Soil and Water Conservation District

Diane Lynch, Prior Lake Spring Lake Watershed District

Matt Moore, South Washington Watershed District

Sincerely,

Kevin D. Bigalke
Central Region Manager