



Bassett Creek Watershed Management Commission

Regular Meeting
Thursday, April 21, 2016
8:30 – 11:00 a.m.

Medicine Lake Room, Plymouth City Hall, 3400 Plymouth Blvd., Plymouth MN

AGENDA

1. CALL TO ORDER and ROLL CALL

2. **CITIZEN FORUM ON NON-AGENDA ITEMS** - *Citizens may address the Commission about any item not contained on the regular agenda. A maximum of 15 minutes is allowed for the Forum. If the full 15 minutes are not needed for the Forum, the Commission will continue with the agenda. The Commission will take no official action on items discussed at the Forum, with the exception of referral to staff or a Commissions Committee for a recommendation to be brought back to the Commission for discussion/action.*

3. APPROVAL OF AGENDA

4. CONSENT AGENDA

- A. Approval of Minutes - March 17, 2016 Commission Meeting
- B. Approval of April 2016 Financial Report
- C. Approval of Payment of Invoices
 - i. Keystone Waters, LLC – March 2016 Administrator Services
 - ii. Barr Engineering – March 2016 Engineering Services
 - iii. Amy Herbert – March 2016 Secretarial Services
 - iv. ACE Catering – February 2016 Meeting Refreshments
 - v. Wenck – March 2016 WOMP Monitoring
 - vi. Kennedy Graven – February Legal Services
 - vii. Prairie Moon – Native Seed Packets
 - viii. Talbott Promotions – Dog Bag Dispenser Educational Giveaways
 - ix. Dan Johnson – Photos for website
 - x. Keystone Waters, LLC – Reimbursement for Display Materials
 - xi. MMKR – FY2015 Financial Audit
 - xii. Metro Watershed Partners – 2016 Financial Contribution
 - xiii. Children’s Water Festival – 2016 Financial Contribution
- D. Approval of Reimbursement Request from City of Golden Valley for Twin Lake Alum Treatment (TW-2)
- E. Approval of Reimbursement Request from City of Golden Valley for Schaper Pond Diversion Project (SL-3)

5. BUSINESS

- A. Receive Presentation from Commission Engineer
 - i. 2015 Westwood Lake Water Quality Monitoring Results
 - ii. 2015 Biotic Index Study Results from Bassett Creek, Plymouth Creek, and Sweeney and North Branches of Bassett Creek
 - iii. Plans for 2016 Water Quality Monitoring
- B. Review Draft Feasibility Study for Main Stem Erosion Repair Project (2017CR-M)
- C. Consider Recommendations from BCWMC Education Committee for 2016 Education & Outreach Work Plan and Budget
- D. Discuss Watershed Tour Dates and Stops
- E. Review Draft 2015 Annual Report
- F. Receive Update on West Metro Water Alliance’s “Pledge to Plant” Campaign
- G. Receive Update on Metro Bloom’s Northside (Harrison) Neighborhood Engagement and Opportunities in Clean Water Initiative

6. COMMUNICATIONS

- A. Administrator's Report
 - i. Reminder of May Meeting Location at Golden Valley City Hall
- B. Chair
- C. Commissioners
- D. TAC Members
- E. Committees
 - i. Budget Committee
 - ii. Education Committee (see agenda item 5C)
- F. Legal Counsel
- G. Engineer
 - i. Highway 169 Construction Impacts on Bassett Creek Watershed
 - ii. Unauthorized Filling at 1143 South Shore Drive, Medicine Lake

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. KSTP and Channel 12 News Coverage of Schaper Pond Project: <http://kstp.com/news/water-quality-test-floating-baffle-golden-valley--bassett-creek-watershed-management-commission/4087611/?cat=1> and <http://twelve.tv/news/newsitem.aspx?newsid=324&newsitemid=30159>
- D. Channel 12 News Coverage of Residential BMPs/North Branch Bassett Creek: <http://www.twelve.tv/news/newsitem.aspx?newsid=1499&newsitemid=30165>
- E. Incident Report: Spill in Bassett Creek
- F. Water Links WMWA Newsletter: <https://content.govdelivery.com/accounts/MNHENNE/bulletins/13bae23>
- G. WCA Notice of Application, Plymouth
- H. WCA Notice of Application, New Hope

8. ADJOURNMENT

Upcoming Meetings & Events

- Bassett Creek Clean Up: Saturday April 23rd, 9:30 – 12:00 a.m., Bassett Creek Park, (SE corner of Penn Ave. N. and 1 ½ Ave. N.)
https://www.minneapolisparcs.org/activities_events/events/earth_day_cleanup/#group_1_219258
- Urban Waters Forum: Saturday April 23, 2016, 8:30 a.m. – 12:30 p.m., MN Landscape Arboretum, register at <http://www.arboretum.umn.edu/2016UrbanWaters.aspx>
- Friends of Northwood Lake Annual Meeting: Tuesday April 26th, 7:00 p.m., New Hope City Hall
- BCWMC Budget Committee Meeting: Wednesday May 4th, 12:00 p.m., Medicine Lake Room, Plymouth City Hall
- AMLAC Meeting: Wednesday May 18th, 7:00 p.m., Medicine Lake City Hall
- BCWMC Regular Meeting: Thursday May 19th, 8:30 a.m., Council Conference Room, Golden Valley City Hall

Future Commission Agenda Items list

- Address Organizational Efficiencies
- Finalize Commission policies (fiscal, data practices, records retention, roles and responsibilities, etc.)
- Presentation on joint City of Minnetonka/ UMN community project on storm water mgmt
- State of the River Presentation
- Presentation on chlorides



Bassett Creek Watershed Management Commission

AGENDA MEMO

Date: April 14, 2016

To: BCWMC Commissioners

From: Laura Jester, Administrator

RE: Background Information for 4/21/16 BCWMC Meeting

1. **CALL TO ORDER and ROLL CALL**
2. **CITIZEN FORUM ON NON-AGENDA ITEMS**
3. **APPROVAL OF AGENDA – ACTION ITEM**
4. **CONSENT AGENDA**
 - A. Approval of Minutes – March 17, 2016 Commission meeting- ACTION ITEM with attachment
 - B. Approval of April 2016 Financial Report - ACTION ITEM with attachment
 - C. Approval of Payment of Invoices - ACTION ITEM with attachments (online)
 - i. Keystone Waters, LLC – March 2016 Administrator Services
 - ii. Barr Engineering – March 2016 Engineering Services
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 - iv. ACE Catering – February 2016 Meeting Refreshments
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 - xi. MMKR – FY2015 Financial Audit
 - xii. Metro Watershed Partners – 2016 Financial Contribution
 - xiii. Children’s Water Festival – 2016 Financial Contribution
 - D. Approval of Reimbursement Request from City of Golden Valley for Twin Lake Alum Treatment (TW-2) – ACTION ITEM with attachment (full document online)– *At their meeting in November 2014, the Commission approved an [agreement](#) with the City of Golden Valley to implement the Twin Lake Alum Treatment Project. Treatment specifications were developed by Barr Engineering and one dose of alum was applied last year. Another dose may be applied this year or next, depending on the response in the lake. The City is requesting reimbursement for project costs to date of \$66,812.17. Staff recommends approval of the request.*
 - E. Approval of Reimbursement Request from City of Golden Valley for Schaper Pond Diversion Project (SL-3) – ACTION ITEM with attachment (full document online)– *At their meeting in August 2014, the Commission approved an [agreement](#) with the City of Golden Valley for the design and construction of the Schaper Pond Diversion Project. The project was constructed late last year and will be complete after vegetation management/site cleanup this spring. The City is requesting reimbursement for project costs to date of \$213,668.55. Staff recommends approval of the reimbursement.*
5. **BUSINESS**
 - A. Receive Presentation from Commission Engineer
 - i. 2015 Westwood Lake Water Quality Monitoring Results – INFORMATION ITEM with attachment – *In 2015, the Commission monitored the water quality, aquatic plants, phytoplankton, and zooplankton of Westwood Lake as part of its water monitoring program. Meg Rattei with Barr Engineering will review the monitoring results at this meeting.*
 - ii. 2015 Biotic Index Study Results Bassett Creek, Plymouth Creek, and Sweeney and North

Branches of Bassett Creek – **INFORMATION ITEM with attachment** – *In 2015, the Commission monitored the health of its major creeks by assessing the macroinvertebrate community, water quality, and habitat as part of its water monitoring program. Meg Rattei with Barr Engineering will review the monitoring results at this meeting.*

- iii. Plans for 2016 Water Quality Monitoring – **INFORMATION ITEM no attachment** – *During her presentations above, Meg Rattei will briefly review Commission’s plans for monitoring in 2016 including monitoring in Crane, Medicine, and Northwood Lakes.*
- B. Review Draft Feasibility Study for Main Stem Erosion Repair Project (2017CR-M) – **ACTION ITEM with attachments (appendices available online)** – *At their meeting in October 2015, the Commission approved a [proposal](#) from the Commission Engineer to develop the Bassett Creek Main Stem Erosion Repair Project feasibility study. The draft study was prepared in accordance with the Commission’s required criteria and was reviewed by me, Minneapolis Commissioners, and City of Minneapolis staff. The draft study recommends restoration techniques (and shows estimated costs and pollutant removals for each technique) for 15 sites within three distinct reaches of the project area. Jeff Weiss with Barr Engineering will review the draft report at this meeting. The Commission should review and discuss the study and either take action approving the study’s recommendations, decide on different alternatives at individual sites, or request revisions/additions to the study for final approval at the May meeting. The final feasibility study should be approved no later than the Commission’s May 2016 meeting in order to meet the County’s timeline for 2017 levy requests.*
- C. Consider Recommendations from BCWMC Education Committee for 2016 Education & Outreach Work Plan and Budget – **ACTION ITEM with attachment** – *At the request of the BCWMC Education Committee, at the March meeting Commissioners offered thoughts and ideas for 2016 education and outreach programs/projects. The Education Committee met on April 11th and developed the attached recommendations for the Commission’s consideration. Over \$7,000 remains “unassigned” across the various education and outreach budget categories. The Education Committee will continue to explore ideas for use of that funding including upgrades to the BCWMC display, educational signage or creek crossing signs, and/or development of a presentation series. Staff recommends approval of the Committee’s attached work plan and budget.*
- D. Discuss Watershed Tour Dates and Stops – **DISCUSSION ITEM no attachment** – *Staff would like further direction on scheduling the 2016 watershed tour. The Commission should decide on a tour date and time. Some possible dates include Friday June 10, the week of June 13 or the week of June 20. (The last tour was Thursday May 29, 2014; 1:00 – 4:30 p.m.) The Commission should also decide on 4-5 tour stops. Ideas include an in-field biotic index monitoring demonstration, a public works facility to learn about the science and equipment for deicing, Schaper Pond, Main Stem Restoration Project site in Golden Valley, and the site of future Plymouth Creek Restoration Project.*
- E. Review Draft 2015 Annual Report – **DISCUSSION ITEM with attachment (full document online)** – *The Commission is required to submit an annual report to the MN Board of Water and Soil Resources (BWSR) each year. The final report is due at the end of May. Staff is seeking feedback on the draft report (which does not currently include appendices). The printed meeting packet includes the cover, table of contents, and executive summary. The executive summary can be used as a newsletter or communication piece for the Commission. The full document is online.*
- F. Receive Update on West Metro Water Alliance’s “Pledge to Plant” Campaign – **INFORMATIONAL ITEM no attachment** – *The Commission is a member of the [West Metro Water Alliance](#) – a partnership of watershed organizations in the west metro area that collaborate on educational activities. WMWA recently kicked off its latest project - a campaign designed to engage residents and corporate/institutional partners in converting turf and hard surfaces to native plantings. We are hoping to gather a total of 10,000 plantings by 2025 and are asking people to “pledge to plant for pollinators and clean water.” The Commission will be promoting this campaign through its member cities, website, Facebook page, events, and other avenues.*

- G. Receive Update on Metro Bloom's Northside(Harrison) Neighborhood Engagement and Opportunities in Clean Water Initiative – INFORMATIONAL ITEM with attachment – *At its meeting in December 2015 the Commission received a presentation from Metro Blooms on a proposed project to engage youth and residents in installing small best management projects in alleyways in the Harrison Neighborhood. The Commission supported the project and approved a request that the Commission act as a fiscal agent for a Metropolitan Council grant. Staff continues to work with Metro Blooms by providing letters of support for various grant applications (example attached) and will assist with finalizing the Met Council grant application in the coming weeks (due May 11th). Since funding is not coming together as quickly as hoped, Metro Blooms recently shifted its focus for this year from working in alleyways, to working within boulevards to install bioswales planted with turf alternatives. Fifty-six ash trees are slated for removal in the Harrison Neighborhood this summer, creating the opportunity for this project. Funding and partners have already been secured for this project. Metro Blooms will hold a community event in conjunction with this work early this summer. Metro Blooms is hoping the original youth-engagement/alleyways project receives funding for implementation in 2017.*

6. COMMUNICATIONS

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- i. Reminder of May Meeting Location at Golden Valley City Hall
- B. Chair
- C. Commissioners
- D. TAC Members
- E. Committees
- i. Budget Committee – **INFORMATIONAL ITEM with attachment** – *The Budget Committee held a meeting on March 31st. Due to the multiple water monitoring projects slated for 2017, the committee decided to request proposals from firms in its engineering pool. The attached Request for Proposals was sent to Barr Inc., Wenck, SEH, Inc., and WSB & Associates. The committee meets again on May 4th. A draft of the 2017 operating budget will be presented at the May Commission meeting for discussion.*
- ii. Education Committee (see agenda item 5C)
- F. Legal Counsel
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Bassett Creek Watershed Management Commission General Account
 General Fund (Administration) Financial Report

Fiscal Year: February 1, 2016 through January 31, 2017

MEETING DATE: April 21, 2016

Item 4B.
 BCWMC 4-21-16

(UNAUDITED)

BEGINNING BALANCE	9-Mar-16	813,323.60
ADD:		
General Fund Revenue:		
Interest less Bank Fees		(13.51)
Met Council - WOMP		4,500.00
Permits:		
Kevitt		1,500.00
Sambateck		2,200.00
AK Investments		1,700.00
Reimbursed Construction Costs		324,735.43
	Total Revenue and Transfers In	334,621.92
DEDUCT:		
Checks:		
2839 Barr Engineering	March Engineering	101,809.43
2840 D'Amico Catering	April Meeting	144.62
2841 Amy Herbert LLC	March Secretarial	2,120.00
2842 Kennedy & Graven	Feb Legal	1,611.90
2843 Keystone Waters LLC	March Administrator	5,308.20
2844 Wenck Associates	March Outlet Monitoring	1,082.70
2845 Daniel Johnson	Electronic Photos	90.00
2846 Hamline University	Metro Watershed Partner	3,500.00
2847 Metro Conservation Dis	Childerens Water Festivab	350.00
2848 MMKR	Augit Services	1,200.00
2849 Prairie Moon Nursery	Seed Packets	118.63
2850 Talbott Promothions	Dog Bone Dispensers	299.50
2851 City of Golden Valley	Twin Lake Alum	66,812.17
2852 City of Golden Valley	Schaper Pond	213,668.55
	Total Checks	398,115.70
ENDING BALANCE	12-Apr-16	749,829.82

Bassett Creek Watershed Management Commission General Account
 General Fund (Administration) Financial Report

(UNAUDITED)

Fiscal Year: February 1, 2016 through January 31, 2017

MEETING DATE: April 21, 2016

	2016 / 2017 BUDGET	CURRENT MONTH	YTD 2016 / 2017	BALANCE
OTHER GENERAL FUND REVENUE				
ASSESSMENTS TO CITIES-PREPAID			0.00	
ASSESSMENTS TO CITIES	490,345		444,375.00	45,970.00
PERMIT REVENUE	0	5,400.00	13,200.00	(13,200.00)
WOMP REIMBURSEMENT	0	4,500.00	4,500.00	(4,500.00)
TRANSFERS FROM LONG TERM FUND & CIP	0	0.00	0.00	0.00
REVENUE TOTAL	490,345	9,900.00	462,075.00	28,270.00
EXPENDITURES				
ENGINEERING & MONITORING				
TECHNICAL SERVICES	120,000	15,605.00	24,898.22	95,101.78
DEV/PROJECT REVIEWS	65,000	13,828.50	20,178.00	44,822.00
NON-FEE/PRELIM REVIEWS	15,000	8,479.50	11,624.50	3,375.50
COMMISSION AND TAC MEETINGS	13,000	1,682.16	3,412.74	9,587.26
SURVEYS & STUDIES	25,000	0.00	0.00	25,000.00
WATER QUALITY/MONITORING	76,000	13,147.42	17,275.92	58,724.08
SHORELAND HABITAT MONITORING	6,000	559.00	559.00	5,441.00
WATER QUANTITY	11,500	413.62	827.24	10,672.76
WATERSHED INSPECTIONS -EROSION CONTROL	1,000	0.00	0.00	1,000.00
ANNUAL FLOOD CONTROL INSPECTIONS	10,000	0.00	0.00	10,000.00
REVIEW MUNICIPAL PLANS	2,000	0.00	0.00	2,000.00
WOMP	17,000	1,935.38	2,380.88	14,619.12
ENGINEERING & MONITORING TOTAL	361,500	55,650.58	81,156.50	280,343.50
ADMINISTRATION				
ADMINISTRATOR	62,000	5,150.00	10,300.00	51,700.00
LEGAL COSTS	18,500	1,233.80	1,233.80	17,266.20
AUDIT, INSURANCE & BONDING	15,500	1,200.00	1,300.00	14,200.00
FINANCIAL MANAGEMENT	3,200	0.00	0.00	3,200.00
DIGITIZE HISTORIC PAPER FILES	5,000	0.00	0.00	5,000.00
MEETING EXPENSES	2,200	144.62	433.86	1,766.14
ADMINISTRATIVE SERVICES	25,000	2,181.44	5,365.77	19,634.23
ADMINISTRATION TOTAL	131,400	9,909.86	18,633.43	112,766.57
OUTREACH & EDUCATION				
PUBLICATIONS/ANNUAL REPORT	2,500	1,246.50	1,246.50	1,253.50
WEBSITE	3,500	90.00	285.00	3,215.00
PUBLIC COMMUNICATIONS	2,500	0.00	0.00	2,500.00
EDUCATION AND PUBLIC OUTREACH	22,500	926.33	10,736.33	11,763.67
WATERSHED EDUCATION PARTNERSHIPS	15,500	3,500.00	3,500.00	12,000.00
OUTREACH & EDUCATION TOTAL	46,500	5,762.83	15,767.83	30,732.17
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	2,057.00	3,347.50	16,652.50
TMDL WORK TOTAL	20,000	2,057.00	3,347.50	16,652.50
TOTAL EXPENSES	609,400	73,380.27	118,905.26	490,494.74

BCWMC Construction Account
Fiscal Year: February 1, 2015 through January 31, 2016
April 2016 Financial Report

(UNAUDITED)

Cash Balance 3/9/2016			
Cash		2,209,822.29	
	Total Cash		2,209,822.29
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		3,201,822.29
Add:			
Interest Revenue (Bank Charges)		(55.11)	
Investment Revenue		5,812.02	
State of MN - BWSR Grant - FY16 Competitive Grant (NL-1)		200,000.00	
State of MN-City of Golden Valley-BWSR-FY12 Competitive Grant (2012CR)		108,750.00	
	Total Revenue		314,506.91
Less:			
CIP Projects Levied - Current Expenses - TABLE A		(281,195.32)	
Proposed & Future CIP Projects to Be Levied - Current Expenses - TABLE B		(29,597.61)	
	Total Current Expenses		(310,792.93)
	Total Cash & Investments On Hand	04/12/16	<u>3,205,536.27</u>
Total Cash & Investments On Hand		3,205,536.27	
CIP Projects Levied - Budget Remaining - TABLE A		(4,312,381.68)	
Closed Projects Remaining Balance		(1,106,845.41)	
2012 - 2014 Anticipated Tax Levy Revenue - TABLE C		6,668.33	
2015 Anticipated Tax Levy Revenue - TABLE C		1,499.07	
Anticipated Closed Project Balance		(1,098,678.01)	
Proposed & Future CIP Project Amount to be Levied - TABLE B		0.00	

TABLE A - CIP PROJECTS LEVIED

	Approved Budget	Current Expenses	2016 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget
Wirth Lake Outlet Modification (WTH-4)(2012) 5/13 Increase Budget - \$22,500	202,500.00	0.00	0.00	201,513.94	986.06
Main Stem Irving Ave to GV Road (2012 CR)	856,000.00	0.00	0.00	857,723.50	(1,723.50)
Lakeview Park Pond (ML-8) (2013)	196,000.00	0.00	0.00	11,589.50	184,410.50
Four Seasons Mall Area Water Quality Proj (NL-2)	990,000.00	0.00	0.00	127,501.84	862,498.16
2014					
Schaper Pond Enhance Feasibility/Project (SL-1)(SL-3)	612,000.00	213,668.55	213,668.55	303,263.45	308,736.55
Briarwood / Dawnview Nature Area (BC-7)	250,000.00	0.00	230,401.91	250,000.00	0.00
Twin Lake Alum Treatment Project (TW-2)	163,000.00	66,812.17	66,812.17	91,037.82	71,962.18
2015			0.00	0.00	
Main Stem 10th to Duluth (CR2015)	1,503,000.00	0.00	0.00	105,042.00	1,397,958.00
2016			0.00	0.00	
Honeywell Pond Expansion (BC-4)	810,930.00	0.00	0.00	13,904.48	797,025.52
Northwood Lake Pond (NL-1)	822,140.00	714.60	31,669.60	131,611.79	690,528.21
	6,405,570.00	281,195.32	542,552.23	2,093,188.32	4,312,381.68

TABLE B - PROPOSED & FUTURE CIP PROJECTS TO BE LEVIED

	Approved Budget - To Be Levied	Current Expenses	2016 YTD Expenses	INCEPTION To Date Expenses	Remaining Budget
2016					
Bryn Mawr Meadows (BC-5)	0.00	0.00	0.00	5,282.80	(5,282.80)
2016 Project Totals	0.00	0.00	0.00	5,282.80	(5,282.80)
2017					
Main Stem Cedar Lk Rd to Dupont (2017 CR-M)		25,439.61	46,581.50	89,253.38	(89,253.38)
Plymouth Creek Restoration (CR-P)		4,158.00	13,229.00	62,641.13	(62,641.13)
2017 Project Totals	0.00	29,597.61	59,810.50	151,894.51	(151,894.51)
Total Proposed & Future CIP Projects to be Levied	0.00	29,597.61	59,810.50	157,177.31	(157,177.31)

BCWMC Construction Account

Fiscal Year: February 1, 2015 through January 31, 2016

(UNAUDITED)

April 2016 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
2016 Tax Levy	1,222,000.00		1,222,000.00			0.00	1,222,000.00	1,222,000.00
2015 Tax Levy	1,000,000.00		1,000,000.00			998,500.93	1,499.07	1,000,000.00
2014 Tax Levy	895,000.00	(2,576.10)	892,423.90			887,798.04	4,625.86	895,000.00
2013 Tax Levy	986,000.00	(13,785.61)	972,214.39			971,003.45	1,210.94	986,000.00
2012 Tax Levy	762,010.00	(5,103.74)	756,906.26			756,074.73	831.53	762,010.00
2011 Tax Levy	863,268.83	(8,962.04)	854,306.79			854,308.66	(1.87)	862,400.00
2010 Tax Levy	935,298.91	(9,027.10)	926,271.81			926,547.20	(275.39)	935,000.00
				<u>0.00</u>			<u>7,890.14</u>	

OTHER PROJECTS:

	Approved Budget	Current Expenses / (Revenue)	2016 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
Sweeney TMDL	119,000.00	0.00	0.00	212,222.86	
Less: MPCA Grant Revenue		0.00	0.00	(163,870.64)	70,647.78
TOTAL TMDL Studies	254,000.00	0.00	0.00	156,117.37	97,882.63
Flood Control Long-Term					
Flood Control Long-Term Maintenance	648,373.00	13,942.50	27,780.50	181,556.17	466,816.83
Less: State of MN - DNR Grants		(13,838.00)	(13,838.00)	(13,838.00)	(13,838.00)
	648,373.00	104.50	13,942.50	167,718.17	452,978.83
Annual Flood Control Projects:					
Flood Control Emergency Maintenance	500,000.00	0.00	0.00	0.00	500,000.00
Sweeney Lake Outlet (2012 FC-1)	250,000.00	0.00	0.00	179,742.18	70,257.82
Annual Water Quality					
Channel Maintenance Fund	325,000.00	0.00	0.00	121,242.95	203,757.05
Total Other Projects	1,977,373.00	104.50	13,942.50	624,820.67	1,324,876.33

Cash Balance 3/9/2016	1,109,250.18
Add:	
Transfer from GF	0.00
MPCA Grant-Sweeney Lk	0.00
Less:	
Current (Expenses)/Revenue	(104.50)
Ending Cash Balance 04/12/16	1,109,145.68
Additional Capital Needed	(215,731)

Bassett Creek Construction Project Details

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)	2016 Bryn Mawr Meadows	2017 Main Stem-Cerar Lk Rd to Dupont (2017 CR-M)	2017 Plymouth Creek Restoration (2017 CR-P)	MPCA Grant From GF	Total Other Projects	TMDL Studies	Sweeney Lake TMDL	Flood Control Emergency Maintenance	Flood Control Long-Term Maintenance	2012 Sweeney Lake Outlet (FC-1)	Channel Maintenance		
Original Budget					1,647,373.00	105,000.00	119,000.00	500,000.00	748,373.00	250,000.00	175,000.00	9,575,843.00	
Added to Budget					163,870.64		163,870.64		(250,000.00)			(3,660.83)	
					343,838.00	30,000.00			163,838.00		150,000.00	163,870.64	
Expenditures:												343,838.00	
Feb 2004 - Jan 2005					6,949.19				3,954.44		2,994.75	637.50	
Feb 2005 - Jan 2006					10,249.09	637.20			9,611.89			6,949.19	
Feb 2006 - Jan 2007					113,141.44	23,486.95	89,654.49					10,249.09	
Feb 2007 - Jan 2008					117,455.33	31,590.12	47,041.86					113,141.44	
Feb 2008 - Jan 2009					76,184.64	31,868.63	44,316.01				38,823.35	138,409.58	
Feb 2009 - Jan 2010					45,375.25	15,005.25	25,920.00			4,450.00		85,504.59	
Feb 2010 - Jan 2011					12,656.65	168.00	5,290.50			7,198.15		116,298.22	
Feb 2011 - Jan 2012					21,094.00	3,194.00					17,900.00	989,942.64	
Feb 2012 - Jan 2013					174,826.03	1,815.00			4,917.00	168,094.03		174,268.66	
Feb 2013 - Jan 2014					59,459.65				24,712.15		34,747.50	994,512.44	
Feb 2014 - Jan 2015	5,282.80	5,282.80			137,357.54				110,580.19		26,777.35	176,588.90	
Feb 2015-Jan 2016	92,084.01		42,671.88	49,412.13								1,135,488.63	
Feb 2016-Jan 2017	59,810.50		46,581.50	13,229.00								602,362.73	
Total Expenditures:	157,177.31	5,282.80	89,253.38	62,641.13	774,748.81	107,765.15	212,222.86		153,775.67	179,742.18	121,242.95	4,544,353.61	
Project Balance	(157,177.31)	(5,282.80)	(89,253.38)	(62,641.13)	1,380,332.83	27,234.85	70,647.78	500,000.00	508,435.33	70,257.82	203,757.05	5,535,537.20	

Proposed & Future CIP Projects (to be Levied)					Other Projects								Totals - All Projects
Total Proposed & Future CIP Projects (to be Levied)	2016 Bryn Mawr Meadows	2017 Main Stem-Cerar Lk Rd to Dupont (2017 CR-M)	2017 Plymouth Creek Restoration (2017 CR-P)		Total Other Projects	TMDL Studies	Sweeney Lake TMDL	Flood Control Emergency Maintenance	Flood Control Long-Term Maintenance	2012 Sweeney Lake Outlet (FC-1)	Channel Maintenance		
Project Totals By Vendor													
Barr Engineering	156,052.31	5,282.80	88,128.38	62,641.13	370,711.33	104,888.70	94,948.17		152,864.56	18,009.90		941,691.22	
Kennedy & Graven					7,011.99	1,164.30	2,902.59		1,099.35	1,461.15	384.60	25,656.59	
City of Golden Valley					215,558.63					160,271.13	55,287.50	1,480,238.37	
City of Minneapolis					26,747.50						26,747.50	763,630.16	
City of Plymouth					38,823.35						38,823.35	981,077.12	
City of New Hope												113,484.84	
MPCA	1,125.00		1,125.00									1,125.00	
Blue Water Science												3,900.00	
S E H					105,590.36		101,598.10		3,992.26			105,590.36	
Misc					14,486.15	1,712.15	12,774.00					14,486.15	
2.5% Admin Transfer												117,654.30	
Transfer to General Fund					23,600.00				23,600.00			23,600.00	
Total Expenditures	157,177.31	5,282.80	89,253.38	62,641.13	802,529.31	107,765.15	212,222.86		181,556.17	179,742.18	121,242.95	4,572,134.11	

Proposed & Future CIP Projects (to be Levied)					Other Projects								Totals - All Projects
Total Proposed & Future CIP Projects (to be Levied)	2016 Bryn Mawr Meadows	2017 Main Stem-Cerar Lk Rd to Dupont (2017 CR-M)	2017 Plymouth Creek Restoration (2017 CR-P)	MPCA Grant	Total Other Projects	TMDL Studies	Sweeney Lake TMDL	Flood Control Emergency Maintenance	Flood Control Long-Term Maintenance	2012 Sweeney Lake Outlet (FC-1)	Channel Maintenance		
Levy/Grant Details													
2009/2010 Levy					163,870.64		163,870.64					902,462	
2010/2011 Levy					60,000.00	10,000			25,000		25,000	220,700	
2011/2012 Levy					60,000.00	10,000			25,000		25,000	822,010	
2012/2013 Levy					60,000.00	10,000			25,000		25,000	1,046,000	
2013/2014 Levy					50,000.00				25,000		25,000	945,000	
2014/2015 Levy					50,000.00				25,000		25,000	1,050,000	
2015-2016 Levy													
Construction Fund Balance					50,000.00				25,000		25,000	1,434,228	
BWSR Grant- BCWMO												904,750	
MPCA Grant-CWPGrant													
DNR Grants-LT Maint					13,838.00				13,838				
Total Levy/Grants					507,708.64	30,000	163,870.64		163,838		150,000	7,325,150	

Item 4D.
BCWMC 4-21-16
Full document online



7800 Golden Valley Road
Golden Valley, MN 55427

April 11, 2016

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

Subject: Twin Lake Alum Treatment (City Project No. 12-27)
1st Request for Reimbursement

Dear Ms. Jester:

Enclosed you will find documentation for engineering and construction expenses for the Twin Lake Alum Treatment Project. This is the first request to the Bassett Creek Watershed Management Commission (BCWMC) for reimbursement of expenses incurred under this project.

The City is requesting reimbursement of \$66,812.17 from the BCWMC for funds spent to date, per the terms of the Cooperative Agreement for the Twin Lake Alum Treatment Project dated November 19, 2014. The attached expenditure report called "General Ledger Activity" shows expenses through September 2, 2015 and is broken down into professional services and construction expenses. A copy of each expense listed on the report is also attached to this letter for your information and documentation.

Professional Services (through September 2015 services)

\$ 27,447.57

Construction Contract (through Payment 1)

\$ 39,364.60

Request for Reimbursement

\$ 27,447.57	Professional Services
+ 39,364.60	Construction Contract
<u>\$ 66,812.17</u>	

The expenditure report, professional service invoices, contract pay vouchers, and the Cooperative Agreement with BCWMC are attached to this letter for reference.

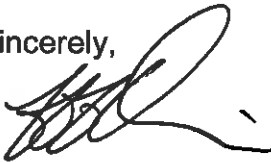
Reimbursement to the City should be sent to:

City of Golden Valley
Finance Department
7800 Golden Valley Road
Golden Valley, MN 55427

The first phase of the Twin Lake Alum Treatment Project has been completed. The project continues to remain open for water quality monitoring and a possible second phase alum treatment if determined to be necessary.

Thank you again for your support on this project. If you have any questions regarding the submission, please contact me at 763.593.8034.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jeff Oliver', with a stylized flourish at the end.

Jeff Oliver P.E., City Engineer

Enclosures

C: Tom Hoffman, Water Resources Technician
Sue Virnig, Finance Director
Marc Nevinski, Physical Development Director



7800 Golden Valley Road
Golden Valley, MN 55427

Remit To:
CITY OF GOLDEN VALLEY
7800 GOLDEN VALLEY RD
GOLDEN VALLEY MN 55427

Billing Address: 116776
BASSETT CREEK WATERSHED MGMT COMMISSION
7800 GOLDEN VALLEY RD
GOLDEN VALLEY MN 55427

INVOICE

8068

Invoice Date 4/5/2016

Due Date 4/5/2016

Page: 1

Item	Remark	Amount
001	TWIN LAKE ALUM-REQUEST 1	66,812.17
	Total Amount Invoiced	66,812.17
	Tax Amount	
	Balance Due	66,812.17

Please return one copy with your payment.

Item 4E.
BCWMC 4-21-16
Full document online



7800 Golden Valley Road
Golden Valley, MN 55427

April 11, 2016

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

Subject: Schaper Pond Diversion Project (City Project No. 13-28)
1st Request for Reimbursement

Dear Ms. Jester,

Enclosed you will find documentation for engineering and construction expenses for the Schaper Pond Diversion Project. This is the first request to the Bassett Creek Watershed Management Commission (BCWMC) for reimbursement of expenses incurred under this project.

The City is requesting reimbursement of \$213,668.55 from the BCWMC for funds spent to date, per the terms of the Cooperative Agreement for the Schaper Pond Diversion Project dated August 24, 2014. The attached expenditure report called "General Ledger Activity" shows expenses through March 7, 2016 and categorizes expenses into professional services and construction expenses. A copy of each expense listed on the report is also attached to this letter for your information and documentation:

Professional Services (through January 2016 services)

\$124,793.68

Construction Contract (through Payment 1)

\$ 88,874.87

Request for Reimbursement

\$124,793.68

+ 88,874.87

\$213,668.55

Professional Services

Construction Contract

The expenditure report, professional service invoices, contract pay vouchers, and the Cooperative Agreement with BCWMC are attached to this letter for reference.

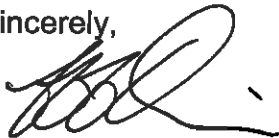
Reimbursement to the City should be sent to:

City of Golden Valley
Finance Department
7800 Golden Valley Road
Golden Valley, MN 55427

The Schaper Pond Diversion project is substantially complete. The remaining work items include spring touch-up and restoration, removing erosion control, and establishing vegetation throughout the project. A final reimbursement request will be made to the BCWMC when the project is completed this summer.

Thank you again for your support on this project. If you have any questions regarding the submission, please contact me at 763.593.8034.

Sincerely,



Jeff Oliver P.E., City Engineer

Enclosures

C: Tom Hoffman, Water Resources Technician
Sue Virnig, Finance Director
Marc Nevinski, Physical Development Director



7800 Golden Valley Road
Golden Valley, MN 55427

Remit To:
CITY OF GOLDEN VALLEY
7800 GOLDEN VALLEY RD
GOLDEN VALLEY MN 55427

Billing Address: 116776
BASSETT CREEK WATERSHED MGMT COMMISSION
7800 GOLDEN VALLEY RD
GOLDEN VALLEY MN 55427

INVOICE

8069

Invoice Date 4/5/2016

Due Date 4/5/2016

Page: 1

Item	Remark	Amount
001	SCHAPER POND-REQUEST 1	213,668.55
Total Amount Invoiced		213,668.55
Tax Amount		
Balance Due		213,668.55

Please return one copy with your payment.



2015 Lake Water Quality Study

Westwood Lake

Prepared for
Bassett Creek Watershed Management Commission



January 2016



Executive Summary

Since 1970, the Bassett Creek Watershed Management Commission (BCWMC, formerly known as the Bassett Creek Flood Control Commission) has periodically monitored water quality conditions in the watershed's 10 major lakes and six ponds. The BCWMC goals for lakes, as specified in the *2015–2025 BCWMC Watershed Management Plan*, are to manage the lakes of the watershed to meet or exceed state standards and protect and enhance fish and wildlife habitat. The BCWMC monitors its priority waterbodies to detect changes or trends in the water quality over time and the effectiveness of efforts to preserve/improve water quality.

This report summarizes the results of water quality monitoring during 2015 in Westwood Lake. Westwood Lake is a 38 acre lake located within the Westwood Hills Nature Center in the City of St Louis Park. The lake has a maximum depth of 6 feet and an average depth of about 4 feet. The conclusions from this study are summarized below.

- In 2015, summer average total phosphorus and chlorophyll *a* concentrations and Secchi disc transparency met the BCWMC/Minnesota Pollution Control Agency (MPCA) standards.
- Trend analyses indicate significant reductions in summer average total phosphorus and chlorophyll *a* concentrations during the past 10 years. Secchi disc transparency depths have increased over that time period, but the increases are not significant. However, since the Secchi disc was visible to the lake bottom during all 2015 sampling events, additional improvements in water transparency cannot be measured. Overall, the lake's water quality has significantly improved over the past 10 years.
- From 1977 through 2015, 80 percent of the summer averages for total phosphorus and 95 percent for chlorophyll *a* and Secchi disc transparency met the MPCA standards. During the past 9 years, summer averages for these parameters have all met the MPCA standards.
- Specific conductance in Westwood Lake has remained relatively stable over time, ranging from about 400 to 500 $\mu\text{mhos/cm}$ @ 25°C during 2011 and 2015, well below the MPCA standard of 1,000 $\mu\text{mhos/cm}$ @ 25°C. Although chlorides have not been measured in Westwood Lake, chloride concentrations can be estimated by using a relationship between specific conductance and chlorides documented for Nine Mile Creek. Using that relationship, the estimated chloride concentrations in Westwood Lake during 2011 and 2015 ranged from about 40 to 50 mg/L, well below the MPCA chronic standard of 230 mg/L.
- In 2015, phytoplankton and zooplankton community compositions were consistent with previous years and the numbers of phytoplankton and zooplankton were within the range observed during the period of record.
- A healthy and diverse plant community was observed in Westwood Lake in 2015.

-
- The change from a qualitative to a quantitative (point-intercept) plant survey method in 2015 provided a more detailed analysis of the plant community. The methodology change likely explains the increase in observed native species (from 7–10 in previous years to 15–17 in 2015). The quality of the plant community, as measured by floristic quality index (FQI), improved accordingly (from 11.3–14.3 in previous years to 14.7–16.2 in 2015).
 - In 2015, *Lynchnothamnus barbaratus* (bearded stonewort) was observed in Westwood Lake and Minnesota for the first time. Plant samples were sent to the New York Botanical Garden for DNA testing to determine whether the plants in Westwood Lake are genetically similar to the Wisconsin populations and/or other known populations in the world. The results of the genetic testing are not yet available.
 - Three of the species present in Westwood Lake in 2015, bearded stonewort (*Lynchnothamnus barbatus*), fetid stonewort (*Chara contraria*), and coontail (*Ceratophyllum demersum*), are strong nutrient absorbers. The absorption of nutrients by these plants likely reduced the concentrations of nutrients in the water column, subsequently improving water quality.
 - Only two non-native species were present in Westwood Lake: purple loosestrife (*Lythrum salicaria*) and curly-leaf pondweed (*Potamogeton crispus*). These plants are not problematic and do not require management at this time. In 2015, *Galerucella* beetles were present, causing heavy damage to the purple loosestrife plants and managing the infestation. Curly-leaf pondweed has been present in the lake since 1997, but has never been problematic

Recommendations from the study are summarized below:

- Because current watershed management practices are adequately protecting Westwood Lake water quality from degradation and have improved lake water quality over time, the recommendation is to make no changes in management practices.
- Continuation of the current water quality and biological monitoring program at a three-year frequency is recommended to periodically assess the condition of the lake's water quality and biological community. The assessment will determine whether the lake is stable or is changing over time. If changes are detected, the assessment will determine whether the changes are favorable or unfavorable for the lake.
- Addition of chloride monitoring to future programs is recommended to verify that the lake is currently meeting MPCA chloride standards and to determine impacts of deicing practices within the lake's watershed on lake water quality over time.

2015 Water Quality Study
Westwood Lake
January 2016

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3.0 Westwood Lake

3.1 Site Description

Westwood Lake (Minnesota Department of Natural Resources public water # 27-0711) is a 38-acre lake located within the Westwood Hills Nature Center in the city of St. Louis Park in the southern portion of the Bassett Creek watershed (Figure 1). Although the lake does not have a public beach, the adjacent park land and Westwood Hills Nature Center trails provide residents opportunities for canoeing or kayaking, aesthetic viewing, birding, and hiking.



Westwood Lake, pictured above, is surrounded by park land and the Westwood Hills Nature Center. The lake is used for canoeing, kayaking, aesthetic viewing, birding, and hiking.

Westwood Lake is a BCWMC “priority 1” shallow lake, with a maximum depth of 6 feet, a normal water elevation of 886.0 feet (NGVD1929 datum), and a 100-year elevation of 889.0 feet (NGVD1929 datum). The majority of the shallow lake bottom is covered with submerged vegetation; emergent vegetation can be found around the lake’s entire circumference. Westwood Lake has a watershed area of approximately 463 acres. Portions of the cities of St. Louis Park, Golden Valley, and Minnetonka drain towards the lake. Runoff draining to Westwood Lake enters through five storm sewers around its edge. The landuse of the watershed draining to the lake through the five storm sewers is residential and a golf course. A 400-foot-long open channel at the north side of the lake discharges to a 27-inch reinforced-concrete pipe (RCP) storm sewer at an elevation of 886.0. The discharge is conveyed to a stormwater pond (Loop F pond) and eventually is conveyed to Bassett Creek.

3.2 BCWMC/MPCA Water Quality Standards

For priority water waterbodies, such as Westwood Lake, the BCWMC has adopted water quality standards consistent with Minnesota Pollution Control Agency (MPCA) water quality standards, as published in Minnesota Rules 7050 for lakes within the North Central Hardwood Forest Ecoregion. These rules apply to water bodies within the BCWMC, regardless of their BCWMC classification, and differ for lakes classified by the MPCA as shallow or deep. Shallow lakes are defined as those with a maximum depth less than 15 feet or littoral area greater than 80% of the total lake area; Westwood Lake is classified as a shallow lake. The BCWMC/MPCA water quality standards for Westwood Lake are as follows:

1. Average summer total phosphorus concentration not to exceed 60 µg/L
2. Average summer chlorophyll *a* concentration not to exceed 20 µg/L

- Average summer Secchi disc transparency of at least 1.0 meter or 3 feet (Minn. R. Ch. 7050.0222 Subp. 4)

As shown in Figure 2, Figure 3, and Figure 4, the summer average total phosphorus, chlorophyll *a*, and Secchi disc transparency in Westwood Lake met the BCWMC/MPCA water quality standards in 2015.

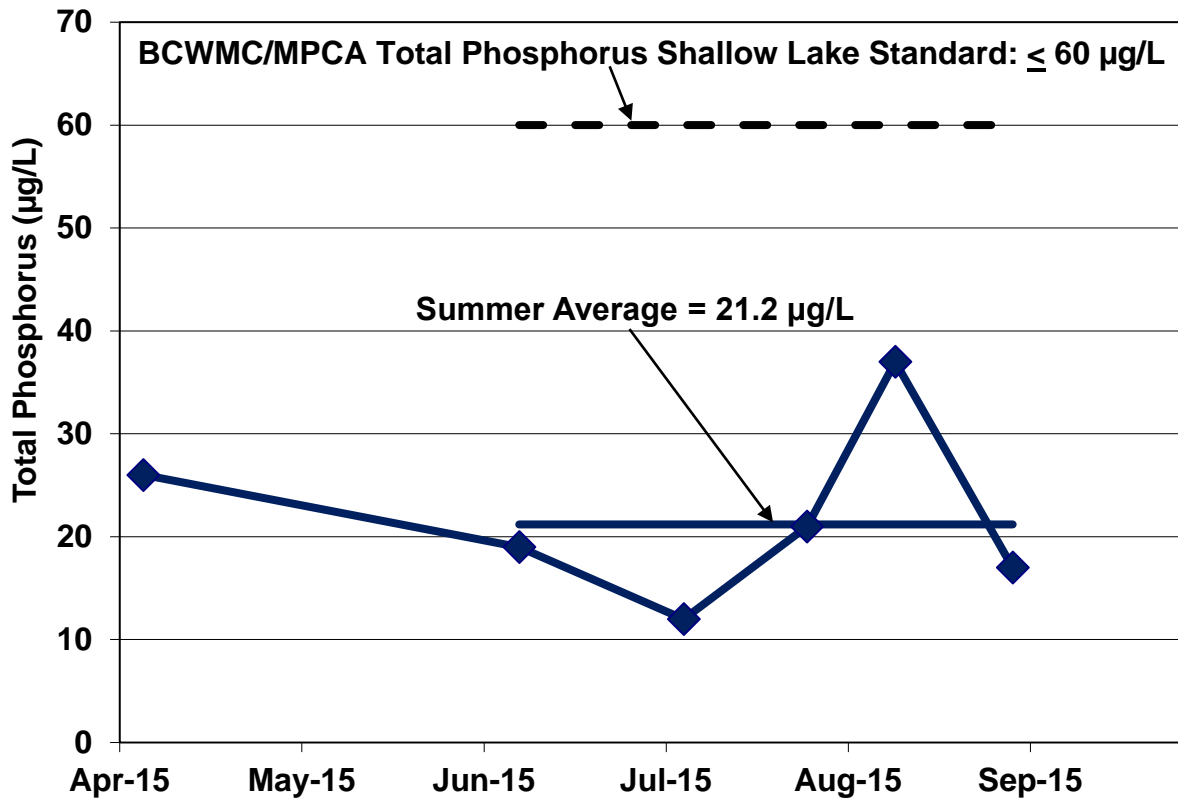


Figure 2 2015 Westwood Lake Total Phosphorus Concentrations Compared to BCWMC/MPCA Total Phosphorus Standard for Shallow Lakes within the North Central Hardwood Forest Ecoregion

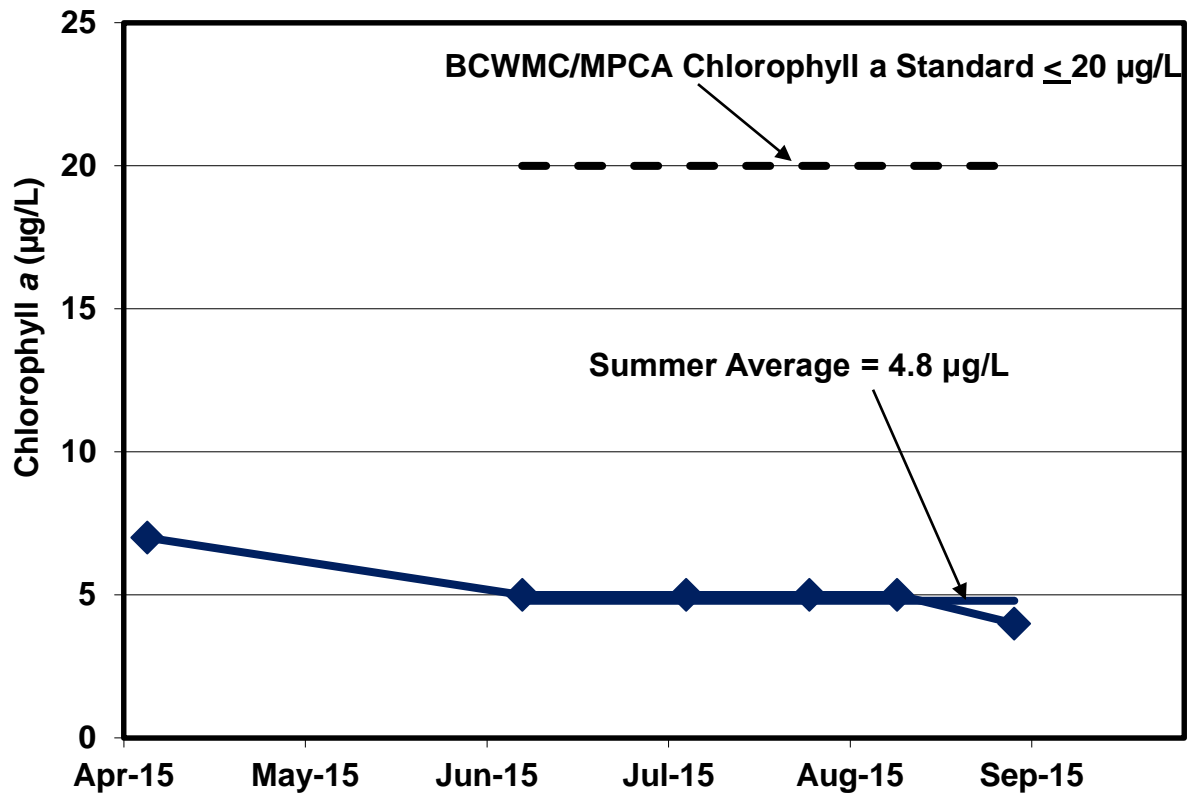


Figure 3 2015 Westwood Lake Chlorophyll a Concentrations Compared to BCWMC/MPCA Chlorophyll a Standard for Shallow Lakes within the North Central Hardwood Forest Ecoregion

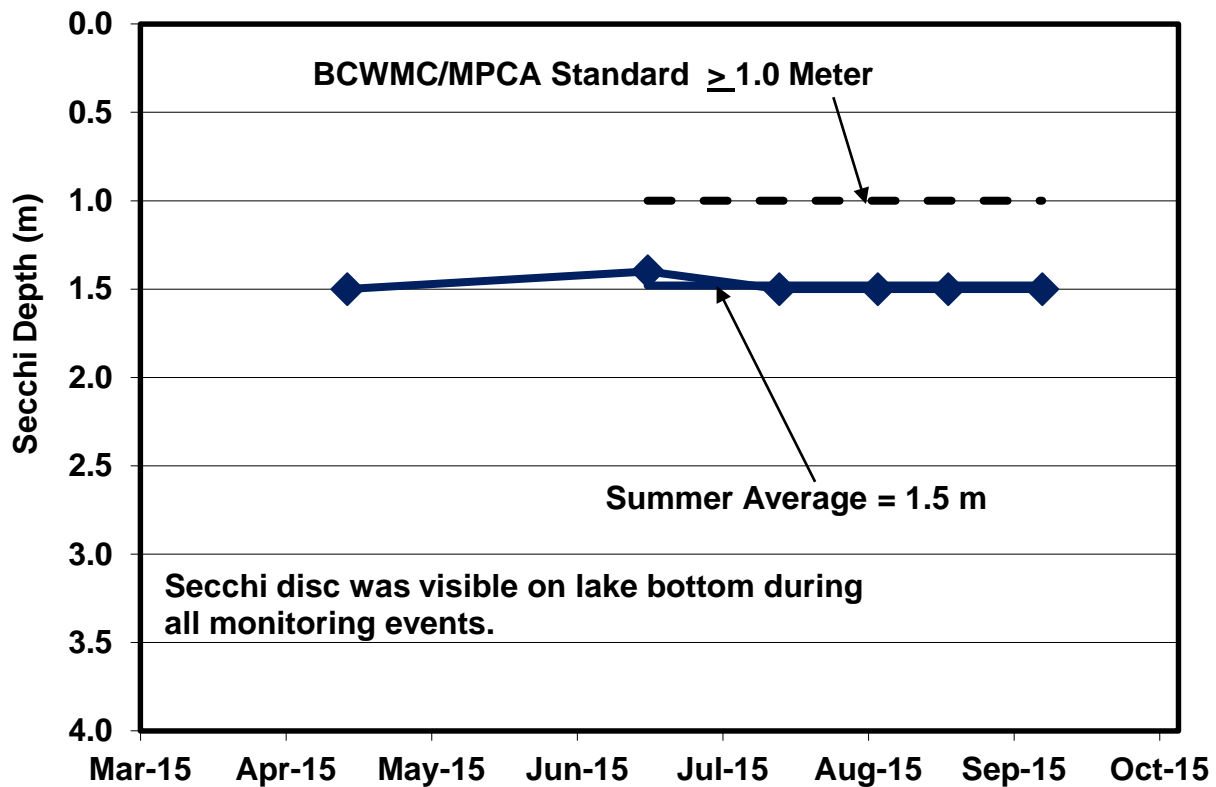


Figure 4 2015 Westwood Lake Secchi Disc Water Transparency Compared to BCWMC/MPCA Secchi Disc Standard for Shallow Lakes within the North Central Hardwood Forest Ecoregion

3.3 Water Quality Monitoring Results

Water quality monitoring results for temperature, dissolved oxygen, specific conductance, total phosphorus, chlorophyll *a*, and Secchi disc transparency are summarized in this section.

3.3.1 Temperature

Vertical profiles of temperatures collected during 2015 show the lake was mixed throughout the monitoring period (Figure 5). The vertical lines in Figure 5 show that temperature was the same from surface to bottom. Change in temperature is represented by changes in color. The change in color from dark green at the far left (i.e., spring) to light yellow in the center (i.e., mid-summer) shows that the lake warmed during the growing season. As shown, water temperatures increased from about 16° C in spring to about 26° C in mid-summer and then cooled to about 20 to 22° C in late summer.

2015 Biotic Index Evaluation of Plymouth Creek and Bassett Creek

Prepared by
Bassett Creek Watershed Management Commission



April 2016



2015 Biotic Index Evaluation of Plymouth Creek and Bassett Creek

April 2016

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Acronyms

Acronym	Description
MPCA	Minnesota Pollution Control Agency
HBI	Hilsenhoff Biotic Index
ICI	Invertebrate Community Index
BCWMC	Bassett Creek Watershed Management Commission
M-IBI	Macroinvertebrate Biotic Index
ClimberCh	Taxa richness of climbers (number of climbers' taxa)
ClingerChTxPct	Relative percentage of taxa adapted to cling to substrate in swift flowing water
DomFiveChPct	Relative abundance (%) of dominant five taxa in subsample (chironomid genera treated individually)
HBI_MN	A measure of pollution based on tolerance values assigned to each individual taxon, developed by Chirhart
InsectTxPct	Relative percentage of insect taxa
Odonata	Taxa richness of Odonata (number of Odonata taxa)
Plecoptera	Taxa richness of Plecoptera (number of Plecoptera taxa)
Predator	Taxa richness of Predators (number of predators' taxa)
Tolerant2ChTxPct	Relative percentage of taxa with tolerance values equal to or greater than 6, using Minnesota tolerance values (TVs)
Trichoptera	Taxa richness of Trichoptera (number of Trichoptera taxa)

1.0 Executive Summary

During 2015, the Bassett Creek Watershed Management Commission (BCWMC) monitored Plymouth Creek, North Branch Bassett Creek, Sweeney Lake Branch Bassett Creek, and Main Stem Bassett Creek to evaluate the macroinvertebrate community, water quality, and habitat. Macroinvertebrates are organisms without backbones which are visible to the eye without the aid of a microscope. The BCWMC began periodic monitoring of the macroinvertebrate communities in these creeks in 1980 and has monitored every three years since 2000. In 2015, monitoring occurred on the following streams: one location each on Plymouth Creek, North Branch Bassett Creek, and Sweeney Branch Bassett Creek, and three locations on Main Stem Bassett Creek. Macroinvertebrate monitoring locations are shown in Figures 3-1 through 3-7.

The BCWMC has used biotic indices to evaluate the water quality of Plymouth Creek, North Branch Bassett Creek, Sweeney Lake Branch Bassett Creek, and Main Stem Bassett Creek since 1980. From 1980 through 2015, the Hilsenhoff Biotic Index (HBI) was used to assess the long-term oxygen content of the streams. HBI assesses stream oxygen content by determining the average tolerance of the macroinvertebrate community to low oxygen conditions. A second index, the Invertebrate Community Index (ICI), was added in 1995 to provide a second assessment of long-term water quality. The ICI provides a broader view of the streams' water quality than the HBI, determining the average tolerance of the macroinvertebrate community to a wide range of pollutants.

Trend analyses were completed on HBI and ICI values for the period of record at individual sample locations using Water Quality Statistics (WQ Stat) software. The trend analyses document statistically significant changes over time.

In 2015, a third biotic index was added to the biological assessment of Plymouth Creek, North Branch Bassett Creek, Sweeney Lake Branch Bassett Creek, and Main Stem Bassett Creek: the Macroinvertebrate Index of Biotic Integrity (M-IBI). The M-IBI was developed by the Minnesota Pollution Control Agency (MPCA) to help identify biologically impaired rivers and streams by assessing the health of their macroinvertebrate communities. In this case, it was used to assess whether Plymouth Creek, North Branch Bassett Creek, Sweeney Lake Branch Bassett Creek, and Main Stem Bassett Creek met the MPCA standard for macroinvertebrates. For these creeks, the MPCA standard is an M-IBI value of at least 37. Figure 8-1 and Table 8-1 summarize the M-IBI results for the six monitoring stations. The streams have not yet been assessed by the MPCA for macroinvertebrates and, hence, none of the streams are impaired for macroinvertebrates. Currently, the sole biological impairment is the Main Stem of Bassett Creek for "fish bioassessments."

The BCWMC also added water quality and habitat monitoring to its program in 2015. Good water quality and good habitat support a high-quality macroinvertebrate community, while poor habitat and water quality limit the macroinvertebrate community to species tolerant of those conditions. The water quality and habitat data provide insight into the factors that influence the quality of the biological community. Water quality parameters measured in 2015 include temperature, dissolved oxygen, specific conductance, pH, and turbidity.

A summary of the results of the (1) water quality, (2) habitat monitoring, (3) HBI and ICI trend analyses, and (4) M-IBI assessment at the individual monitoring stations is presented in Sections 1.1 through 1.6. Recommendations are presented in Section 1.7. The 2015 macroinvertebrate data were submitted to the MPCA per Policy 10 in the BCWMC 2015-2025 Watershed Management Plan.

1.1 Plymouth Creek at Industrial Boulevard

Water Quality. The measured specific conductance value exceeded the MPCA standard, which indicates the macroinvertebrate community may be stressed by excess ions in the stream. Chlorides, a dissolved compound added to lakes, streams, and groundwater from road and parking lot runoff during snowmelt, increases specific conductance levels. Hence, specific conductance can be used as a surrogate for chlorides and high specific conductance levels may indicate high levels of chlorides. Plymouth Creek is currently impaired for chlorides.

All other water quality parameters met the MPCA standard.

Habitat. Streambank erosion and embeddedness were prevalent and habitat diversity was limited; these factors may contribute to the biological impairment of Plymouth Creek. (Embeddedness is the extent to which large particles, such as gravel or rocks, are covered by small particles, such as sand or silt.) Tables 5-1 and 5-2 summarize the results of the habitat survey.

HBI. 2015 data show fair oxygen conditions. A trend analysis of historical HBI data indicates improving water quality, but the changes are not significant. The trend analysis also indicates that the HBI values have been relatively stable over time.

ICI. 2015 data show better than average water quality. A trend analysis of historical ICI data indicates degrading water quality, but the changes are not significant. Because the changes are not significant, the trend analysis indicates that the ICI values have been relatively stable over time.

M-IBI. With an M-IBI score of 18 (compared to the MPCA standard of 37), Plymouth Creek at Industrial Boulevard does not meet the State standard for macroinvertebrates. Section 8.0 and Appendix B provide more information about the M-IBI and the individual biological metrics used to generate the M-IBI scores.

1.2 Sweeney Lake Branch of Bassett Creek at Woodstock Avenue

Water Quality. The measured specific conductance value exceeded the MPCA standard, which indicates the macroinvertebrate community may be stressed by excess ions in the stream. Specific conductance can be used as a surrogate for chlorides and high specific conductance levels may indicate high levels of chlorides.

All other water quality parameters met the MPCA standard.

Habitat. Streambank erosion, embeddedness, and depth of fine sediment were prevalent. Although these factors may cause stress on the macroinvertebrate community, the excellent habitat diversity in the Sweeney Lake Branch of Bassett Creek supported a healthy and diverse macroinvertebrate community.

HBI. 2015 data show fairly poor oxygen conditions. A trend analysis of historical HBI data indicates degrading water quality, and the changes are significant. The degrading water quality is correlated with increased precipitation (Appendix A).

ICI. 2015 data show average water quality. A trend analysis of historical ICI data indicates degrading water quality, but the changes are not significant. Because the changes are not significant, the trend analysis indicates that the ICI values have been relatively stable over time.

M-IBI. With an M-IBI score of 39 (compared to the MPCA standard of 37), the Sweeney Lake Branch of Bassett Creek meets the MPCA standard for macroinvertebrates.

1.3 North Branch of Bassett Creek at 34th Avenue

Water Quality. All water quality parameters met the MPCA standards.

Habitat. Embeddedness was prevalent in the North Branch of Bassett Creek and may stress the macroinvertebrates. Algae attached to the stream substrate and boulders were prevalent and provided good habitat for macroinvertebrates.

HBI. 2015 data showed good oxygen conditions. A trend analysis of historical HBI data indicates degrading water quality, but the changes are not significant. Because the changes are not significant, the trend analysis indicates that the HBI values have been relatively stable over time.

ICI. 2015 data show better than average water quality. A trend analysis of historical ICI data indicates degrading water quality, but the changes are not significant. Because the changes are not significant, the trend analysis indicates that the ICI values have been relatively stable over time.

M-IBI. With an M-IBI score of 30 (compared to the MPCA standard of 37), the North Branch of Bassett Creek does not meet the State standard for macroinvertebrates.

1.4 Main Stem of Bassett Creek at Rhode Island Avenue

Water Quality. The measured specific conductance value exceeded the MPCA standard, which indicates the macroinvertebrate community may be stressed by excess ions in the stream. Specific conductance can be used as a surrogate for chlorides and high specific conductance levels may indicate high levels of chlorides. The Main Stem of Bassett Creek is impaired for chlorides.

All other water quality parameters met the MPCA standard.

Habitat. Streambank erosion and embeddedness were prevalent and habitat diversity was very limited; these factors may contribute to the biological impairment of the Main Stem of Bassett Creek at Rhode Island Avenue.

HBI. 2015 data showed good oxygen conditions. A trend analysis of historical HBI data indicates improving water quality, but the changes are not significant. The trend analysis also indicates that the HBI values have been relatively stable over time.

ICI. 2015 data show better than average water quality. A trend analysis of historical ICI data indicates degrading water quality, but the changes are not significant. Because the changes are not significant, the trend analysis indicates that the ICI values have been relatively stable over time.

M-IBI. The M-IBI score of the Main Stem of Bassett Creek at Rhode Island Avenue is 13—well beneath the MPCA standard of 37.

1.5 Main Stem of Bassett Creek East of Brookridge Avenue

Water Quality. The measured specific conductance value exceeded the MPCA standard, which indicates the macroinvertebrate community may be stressed by excess ions in the stream. Specific conductance can be used as a surrogate for chlorides and high specific conductance levels may indicate high levels of chlorides. The Main Stem of Bassett Creek is impaired for chlorides.

All other water quality parameters met the MPCA standard.

Habitat. Streambank erosion and embeddedness were prevalent and habitat diversity was limited; these factors may contribute to the biological impairment of the Main Stem of Bassett Creek east of Brookridge Avenue.

HBI. 2015 data showed good oxygen conditions. A trend analysis of historical HBI data indicates improving water quality, and the changes are significant.

ICI. 2015 data show better than average water quality. A trend analysis of historical ICI data indicates degrading water quality, but the changes are not significant. Because the changes are not significant, the trend analysis indicates that the ICI values have been relatively stable over time.

M-IBI. The M-IBI score of the Main Stem of Bassett Creek east of Brookridge Avenue is 17—well beneath the MPCA standard of 37.

1.6 Main Stem of Bassett Creek at Irving Avenue

Water Quality. All water quality parameters met the MPCA standards.

Habitat. Streambank erosion and embeddedness were prevalent and habitat diversity was limited; these factors may contribute to the biological impairment of the Main Stem of Bassett Creek at Irving Avenue.

HBI. 2015 data show fair oxygen conditions. A trend analysis of historical HBI data indicates improving water quality, but the changes are not significant. The trend analysis also indicates that the HBI values have been relatively stable over time.

ICI. 2015 data show better than average water quality. A trend analysis of historical ICI data indicates improving water quality, but the changes are not significant. Because the changes are not significant, the trend analysis indicates that the ICI values have been relatively stable over time.

M-IBI. The M-IBI score of the Main Stem of Bassett Creek at Irving Avenue is 19—well beneath the MPCA standard of 37.

1.7 Recommendations

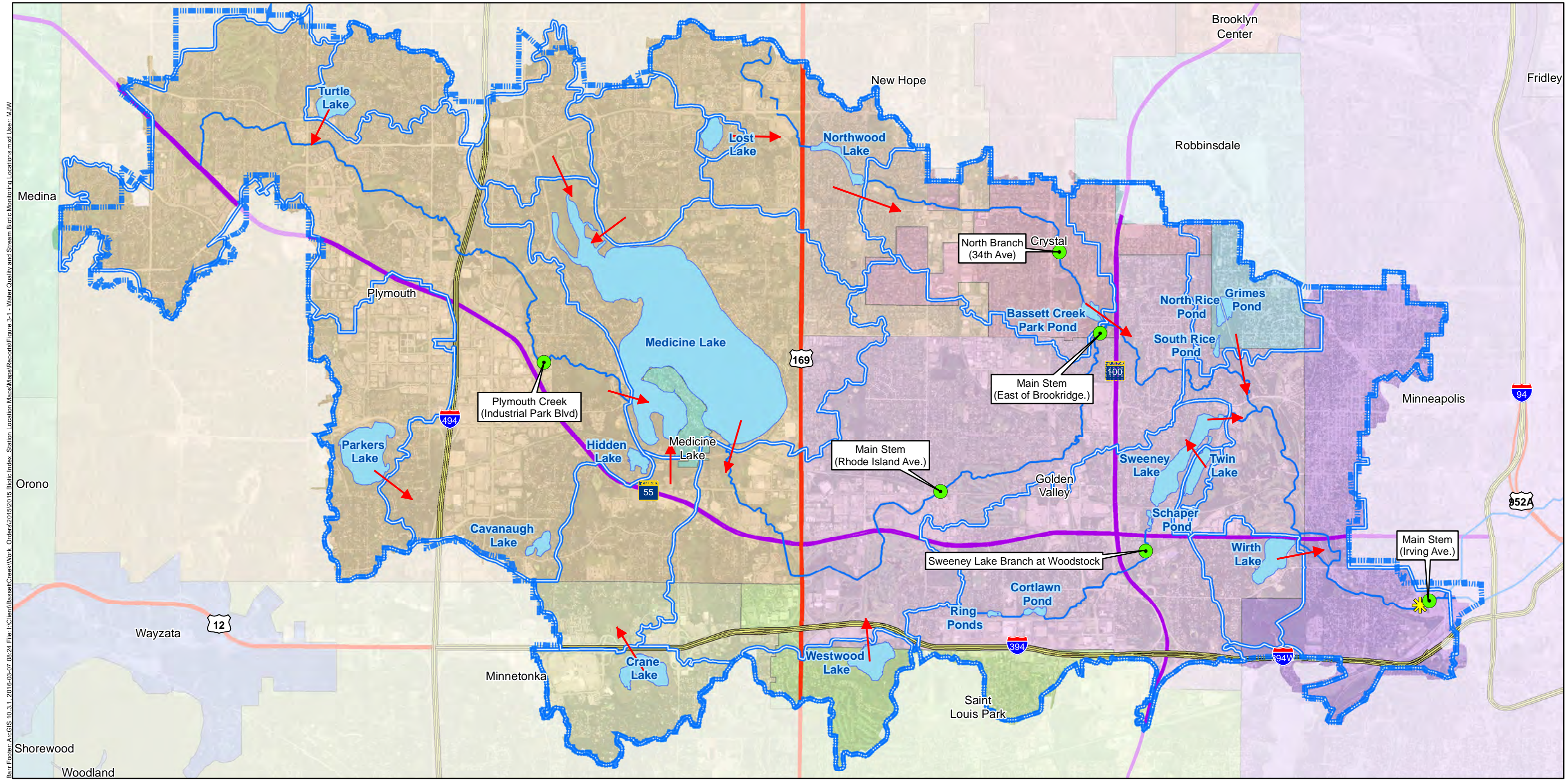
Recommendations include:

- Monitoring chloride concentrations in Plymouth Creek and the Main Stem of Bassett Creek to determine how frequently chloride concentrations fail to meet MPCA chloride standards and the contribution of ionic stress toward the impairment of the macroinvertebrate communities. Plymouth Creek and the Main Stem of Bassett Creek are currently impaired for chlorides.
- Monitoring chloride concentrations in the North Branch of Bassett Creek and the Sweeney Lake Branch of Bassett Creek to determine whether chloride concentrations meet MPCA chloride standards and the contribution of ionic stress toward the impairment of the macroinvertebrate communities. The North Branch of Bassett Creek and the Sweeney Lake Branch of Bassett Creek are not currently impaired for chlorides. However, a high specific conductance measurement was observed in the Sweeney Lake Branch of Bassett Creek during October of 2015, indicating chloride concentrations were high.
- Implementing habitat improvement projects for specific reaches of Plymouth and Bassett Creeks. Assessing Plymouth and Bassett Creeks to identify additional feasible opportunities for habitat improvement to improve the quality of the macroinvertebrate community.
- Monitoring the biota of Plymouth and Bassett Creeks at a three year frequency is recommended to periodically assess the biological community. Using the M-IBI to assess the macroinvertebrate data is recommended to determine whether or not the macroinvertebrate community meets the State standard. Using the HBI and ICI, including trend analyses, is recommended to identify significant changes in oxygen conditions and/or water quality over time. These recommendations are consistent with the monitoring recommendations in Appendix A of the BCWMC 2015-2025 Watershed Management Plan





http://www.bassettcreekwmo.org/application/files/3114/4676/8825/BCWMC_2015_Watershed_Management_Plan_Appendices.pdf.



- Monitoring habitat and water quality when biological samples are collected is recommended to determine whether changes have occurred since 2015 and to identify stressors to the biological

communities These recommendations are consistent with the monitoring recommendations in Appendix A of the BCWMC 2015-2025 Watershed Management Plan (http://www.bassettcreekwmo.org/application/files/3114/4676/8825/BCWMC_2015_Watershed_Mgmt_Plan_Appendices.pdf).



Barr, Feather, ArcGIS 10.3.1, 2015-03-07 08:24, File: L:\Client\BassettCreek\Work_Orders\2015\2015 Biotic Index - Station Location Maps\Reports\Figure 3-1 - Water Quality and Stream Biotic Monitoring Locations.mxd User: MJW

-  BCWMC Jurisdictional Boundary
-  Major Subwatersheds
-  Flow Directions
-  Creeks

-  Watershed Outlet Monitoring Program (WOMP) Station
-  2015 Biotic Monitoring Locations (BCWMC)

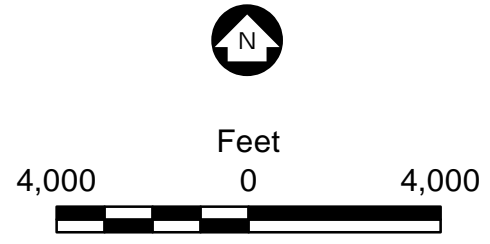


Figure 3-1
PLYMOUTH AND BASSETT CREEK
2015 BIOTIC MONITORING LOCATIONS
 Bassett Creek Watershed
 Management Commission

Item 5B.
BCWMC 4-21-16
Appendices online separately

Feasibility Report for the Bassett Creek Main Stem Erosion Repair Project - DRAFT

Minneapolis, Minnesota

Prepared for
Bassett Creek Watershed Management Commission

April 2016



Feasibility Report for the Bassett Creek Main Stem Erosion Repair Project

Minneapolis, Minnesota

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Bassett Creek Watershed Management Commission

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Feasibility Report for the Bassett Creek Main Stem Erosion Repair Project

April 2016

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Certifications

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

Jeff Weiss
PE #: 48031

Date

Acronyms and Abbreviations

Acronym	Description
BCV	Bassett Creek Valley
BCWMC	Bassett Creek Watershed Management Commission
BMNA	Bryn Mawr Neighborhood Association
CIP	Capital Improvement Plan
cfs	cubic feet per second (stream flow rate)
ESA	Environmental Site Assessment
fps	foot per second (stream flow velocity)
HNA	Harrison Neighborhood Association
MDNR	Minnesota Department of Natural Resources
MPCA	Minnesota Pollution Control Agency
MPRB	Minneapolis Park and Recreation Board
RMP	2009 BCWMC Resource Management Plan
SHPO	State Historic Preservation Office
USACE	United States Army Corps of Engineers

1.0 Executive summary

1.1 Background

The Bassett Creek Watershed Management Commission's (BCWMC) 2015 Watershed Management Plan (Plan) addresses the need to repair and stabilize stream reaches damaged by erosion or affected by sedimentation. Section 3.4 of the Plan describes the issue and the benefits of stream restoration, and Section 4.2.5 describes the Commission's policies related to stream bank restoration and stabilization.

This study examines the feasibility of completing erosion repair and creek bank stabilization at sites along the Main Stem of Bassett Creek from Cedar Lake Road to Dupont Avenue North (the entrance to the New Bassett Creek tunnel) and Second Avenue North (the entrance to the Old Bassett Creek tunnel), plus the Fruen Mill site between Glenwood Avenue North and the Soo Line Railroad Bridge. These reaches of the creek are collectively referred to as the project area (see Figure 2-1). The Plan's 10-year Capital Improvement Program (CIP) includes this project area, which will be completed in 2017 and 2018 through an ad valorem tax levied by Hennepin County on behalf of the BCWMC.

1.2 Site characteristics

The project area along Bassett Creek extends approximately 4,000 feet, including approximately 800 feet at the Fruen Mill site and 3,200 feet between Cedar Lake Road and the Bassett Creek Tunnel entrances. Three reaches have been identified for inclusion in this feasibility study based on bridges and the Bassett Creek tunnel that clearly delineate the ends of each reach (see Figure 2-1). Reach 1 includes the historic Fruen Mill on the east bank and a wooded portion of Bassett Creek Park on the west bank. Reaches 2 and 3 are within an area of historically heavy industrial use downstream of Cedar Lake Road that includes the City of Minneapolis impound lot on the south bank.

Within the project area, Bassett Creek is a low-gradient, channelized stream that flows through an unconfined alluvial valley. Since construction of the Fruen Mill Dam circa 1900, the creek has been armored in approximately its current alignment through Reach 1. In Reaches 2 and 3, the stream was channelized into its current alignment between Cedar Lake Road and the entrance to the Old Bassett Creek Tunnel in the 1930s, with an additional channel connecting with the New Bassett Creek Tunnel constructed in 1992. The channel bed and banks throughout the project area vary in composition. Some banks and portions of the bed have been heavily armored with riprap while other banks appear to consist of fill materials used during historic channelization of the reaches. Unarmored sections of the bed are mostly varying mixtures of silt, sand, and gravel. Additional description of the stream geomorphic characteristics, channel alignment, and watershed land use is provided in Section 3.0.

A Phase I Environmental Site Assessment was completed for the project area in December 2015 (Appendix D), which identified several recognized environmental conditions requiring additional investigation of potential soil contamination. A Phase II Environmental Investigation was performed in February 2016 (Appendix E), and included soil sampling at multiple sites where stream bank stabilization is recommended. The Phase II investigation results show that most of the soil in the areas targeted for

stabilization does not meet Minnesota Pollution Control Agency (MPCA) guidelines for unregulated fill, indicating the soil is not suitable for reuse at another site and if removed, will require disposal at a landfill.

Portions of Bassett Creek and fringe wetlands were delineated in November 2015 (Appendix G). Wetlands delineated in the project area totaled approximately 0.5 acres and were made up of seasonally flooded basin, shallow marsh/shrub-carr, and excavated wet meadow/shallow marsh communities.

1.3 Recommended stabilization project description

This feasibility study evaluates a variety of alternatives for stabilizing up to 15 sites along Bassett Creek within the project area. The measures considered for potential implementation include the following:

- Restoring the vegetative buffer and improving stream bank vegetation
- Installing a variety of stream stabilization measures, including riprap, live fascines, vegetated reinforced soil stabilization (VRSS), rock or log vanes, and stone toe protection
- Removing non-native channel bed material (brick and concrete block)

The recommended stabilization measures include a combination of bioengineering and hard armoring techniques and are discussed in Section 5.2 and shown in Figure 5-2, Figure 5-3, and Figure 5-4.

Additional details for all stabilization alternatives considered for this study are provided in Appendix I.

1.4 Project impacts and estimated costs

Potential impacts from the stabilization project are discussed in Section 6.0; these include temporary impacts to walking trail usage, tree loss, and bat habitat. The most significant consideration for the project is the need to manage excavated soils because of the high likelihood of soil contamination, as indicated by the results of the Phase I Environmental Site Assessment (ESA) and the subsequent Phase II environmental investigation. Completion of the proposed project will reduce risks associated with the residual soil contamination in the project area by establishing an improved cover on the stream bank. Historical environmental concerns on adjoining properties located beyond the creek bank will not be addressed as part of this project.

The proposed project will result in reduced stream bank erosion and, therefore, reduced sediment and phosphorus loading to Bassett Creek. Estimates of existing erosion rates and pollutant loading are presented in Section 6.3. The total reduction in pollutant loading as a result of the project is estimated as 48,300 pounds per year total suspended sediment and 27.8 pounds per year total phosphorus. The majority of this load reduction will be achieved by stabilizing three sites of eroding bank: in the vicinity of the Fruen Mill dam (Site 5), downstream of Cedar Lake Road (Site 6), and downstream of Irving Avenue (Site 12).

The feasibility-level opinion of cost for implementing all of the identified measures for the 2017 Bassett Creek Main Stem Erosion Repair Project is \$950,000, as shown in Table 8.1. This total includes \$542,000 for construction, \$163,500 each for construction contingency and engineering (design, permitting, and construction observation), and \$83,000 for environmental oversight (field oversight, planning, and

reporting). The costs result in a 30-year annualized cost of approximately \$2,400 per pound of phosphorus reduction and approximately \$1.38 per pound of TSS reduction. The methodology and assumptions used for the cost estimates are discussed in Section 7.0, and detailed cost estimates for all stabilization alternatives considered are provided in Appendix J. When adding in the cost for the feasibility study (\$104,600), the total project cost is \$1,054,600.

The cost estimate above summarizes the costs for final design and construction. Table 1-1 summarizes the total project cost estimate, including feasibility study costs.

Table 1.1 Project Cost Summary

Project Component	Estimated Project Cost
Construction Cost Estimate	\$542,000
Construction Contingency	\$163,500
Engineering (Design, Permitting, and Reporting)	\$163,500
Environmental Oversight (field oversight, planning, and reporting)	\$83,000
Subtotal	\$950,000
Feasibility Study (this report)	\$104,600
Project Total	\$1,054,600

1.5 Recommendations

Erosion repair and creek bank stabilization within the project area will provide water quality improvement by 1) repairing actively eroding sites and 2) preventing erosion at other sites by installing preemptive measures to protect stream banks. We recommend that the opinion of cost identified in this study be used to develop a levy request for this project and that the erosion repair and creek bank stabilization proceed to the design and construction phase.

Recommended 2016 BCWMC Education and Outreach Budget and Work Plan

**Item 5C.
BCWMC 4-21-16**

	Activity	Amount Already Budgeted	Recommended by Ed. Cmte	Notes
1	Publications/Annual Report	\$2,500	\$2,500	To develop and distribute the Commission's Annual Report, as required by State Rule .
2	Website Hosting/Maintenance	\$3,500	\$3,500	For website hosting and maintenance by HDR. 2016 contract with HDR estimates \$4,420. (\$360 for hosting + 3 hrs/month for labor, as needed)
	Subtotal	\$6,000	\$6,000	
3	<u>Watershed Education Partnerships</u>			
	a. Citizen Assisted Monitoring Program	\$5,000	\$4,600	This program through the Met Council sponsors volunteer monitors on several of BCWMC lakes. The BCWMC has spent an average of \$3,440. Spending could get up to \$4,600 if volunteers collect all samples.
	b. River Watch Program	\$2,000	\$2,000	BCWMC has sponsored this program for many years. The 2015 Annual Report was Item 7G in the February Commission packet.
	c. MetroWaterShed Partners	\$3,500	\$3,500	BCWMC provides funding to support the Clean Water MN Media Campaign. Watershed organizations our size (including our CIP budget) are asked to contribut between \$3,000 and \$5,000.
	d. FreshWater Society	\$2,000	\$0	Last year the BCWMC provided \$2,000 to the FreshWater Society to help develop its online Master Water Stewards Training materials. It's my understanding these materials are developed and the training program is continuing with watershed organizations sponsors students through the program.
	e. Metro Blooms Workshops	\$3,000	\$3,000	Provides workshops (arranged through WMWA) for residents on water friendly yard practices.
	Subtotal Water Ed Partnerships	\$15,500	\$13,100	
4	<u>Education and Public Outreach</u>			
	a. West Metro Water Alliance	\$9,750	\$9,750	Contract approved by BCWMC 2/19/15. Administrator attends monthly WMWA meetings and is involved with this organization and its activities.
	b. Prairie Moon Native Seeds	\$0	\$105	Already purchased for 2016 events.
	c. Plymouth Home Expo Booth	\$0	\$60	Booth fee for April 8-9th Expo. Exhibit was manned by Commissioners or volunteers only.
	d. West Metro Non-point Education for Municipal Officials (NEMO)	\$0	\$0	The BCWMC provided support (both cash and in-kind assistance) to this program in 2014 and 2015. This program is not slated to continue this year.
	e. Children's Clean Water Festival Dona	\$0	\$350	For the last two years, BCWMC has donated \$350 to this event that targets 4th graders throughout the Metro. Same amount is recommended again this year.
	f. Training for Commissioners (registrations, fees)	\$0	\$1,000	Last year was the first year Education funds were used to pay registration fees for Commissioners, Alt. Commissioners, or Committee members to attend workshops, trainings, and other events. Pre-approval from the Commission is be required for each expenditure and funds are to be used to reimburse individuals with proper receipts and documentation. No meals, travel expenses or other expenses are allowed for reimbursement. Funds are distributed on a first come, first serve basis until depleted. A total of \$575 was used in 2015.
	g. Metro Blooms Harrison Neighborhood Project Support	\$0	\$4,000	At the December 2015 Commission meeting, Metro Blooms requested support for a large project to engage youth and install small BMPs in alleyways in the Harrison Neighborhood. It's not yet known what grants will become available to Metro Blooms for this project. However, in December, Commissioners expressed great support for the project. Education Committee recommends \$4,000 in cash support to help match grants.
	h. Purchase of 150 dog waste bag dispensers	\$0	\$300	This was a very popular item last year and we ran out in the fall. 150 more dispensers were purchased for use this year.
	i. Purchase of miscellaneous display materials		\$158	"Rake stickers" and laminating for the display board.
	j. Watershed Tour	\$0	\$2,000	The last watershed tour was held May 29, 2014 for approximately \$670 plus staff time. Another tour is recommended this year with budgeting for bus rental, refreshments, printing, and some Barr staff time (to help develop tour map and to attend the tour).
	Subtotal Education & Public Outreach	\$22,500	\$17,723	
5	<u>Public Communications</u>	\$2,500	\$2,500	This budgeted amount is for required announcements and public notices.
	TOTAL ASSIGNED	\$46,500	\$39,323	
6	<u>Unassigned Education Funds</u>	\$0	\$7,177	This is the total difference between the "already budgeted" and "recommended" items above. It may be used for additional projects the Education Committee is considering further including educational signage, trainings, presentation development, display upgrades, etc.

Item 5E.
BCWMC 4-21-16
Full document online (w/o appendices)

Bassett Creek Watershed Management Commission



DRAFT 2015 Annual Report

Crystal • Golden Valley • Medicine Lake • Minneapolis
Minnetonka • New Hope • Plymouth • Robbinsdale • St. Louis Park



April 2016

Bassett Creek Watershed Management Commission 2015 Annual Report

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Cover photo: Main Stem Bassett Creek Restoration Project, completed 2015
..... Theodore Wirth Park, Golden Valley

Bassett Creek Watershed Management Commission

Executive Summary: 2015 Annual Report



2015 Activities & Achievements

The BCWMC worked on the following activities Feb 2015 – Jan 2016 in order to fulfill its mission:
Stewardship of Water Resources to Protect and Enhance Our Communities.

Major Projects (Capital Improvement Program)

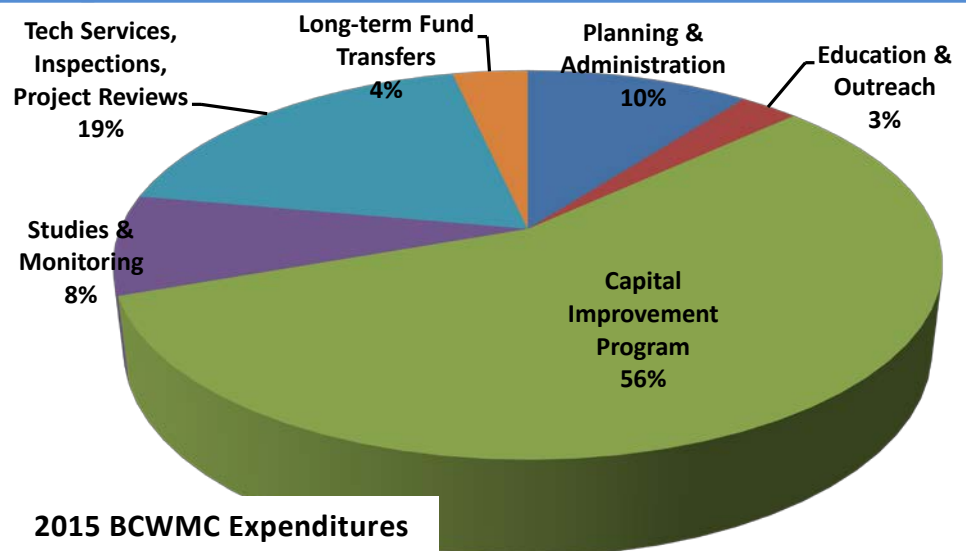
The BCWMC continued to implement its capital improvements program. Information on all BCWMC projects (completed, on-going and proposed) can be found at www.bassettcreekwmo.org.

- **COMPLETED:** Restoration of the Bassett Creek Main Stem through Theodore Wirth Park in Minneapolis and Golden Valley (pictured). This project was partially funded by a Clean Water Land & Legacy Funds through a MN Board of Water & Soil Resources grant. Work included streambank stabilization and restoration of buffers to reduce erosion and improve habitats.
- **COMPLETED:** Construction of a water quality treatment pond the Briarwood/Dawnview area of Golden Valley. This new pond will capture and treat runoff from 184 acres of residential properties.
- **COMPLETED:** The Schaper Pond Diversion Project in Golden Valley is expected significantly improve the water quality of Sweeney Lake, just downstream. This project modified Schaper Pond by installing a floating baffle that redirects flow through the pond and to increase its ability to remove phosphorus.
- **COMPLETED:** Twin Lake in Golden Valley was treated with alum to reduce the amount of phosphorus available for algae and to maintain excellent water clarity in the lake. Although another alum dose may be needed in the next couple years to fully complete the intended project, excellent water quality should continue in the lake.



Budget

In FY 2015, the BCWMC spent approximately \$621,500 on activities and programs. Another \$805,000 was spent capital projects. BCWMC income included \$490,300 from member cities, \$1M from Hennepin County tax levy on watershed residents, \$80,000 in State grants, and \$55,700 in development review fees. For an itemization or more information on the BCWMC's 2015 expenditures, see the Financial Information in Appendix A of the annual report.



The Bassett Creek Watershed Management Commission (BCWMC) is governed by a board composed of representatives from each of the nine member cities: Crystal Golden Valley Medicine Lake Minneapolis Minnetonka New Hope Plymouth St. Louis Park and Robbinsdale. Representatives are appointed by their cities and serve three-year terms on the board.

Water Monitoring Activities

- Assessed the health of Westwood Lake by collecting data on water quality, plankton, and aquatic plants
- Assessed the health of Plymouth Creek, North Branch and Sweeney Branch of Bassett Creek and the Main Stem of Bassett Creek by analyzing the macroinvertebrates (bugs) and habitat in the streams.
- Performed continuous stream monitoring on Bassett Creek, in cooperation with the Metropolitan Council Environmental Services
- Provided funding for the Hennepin County's River Watch program which educates and uses high school students to collect benthic invertebrates, indicators of stream health, from various site along Bassett Creek
- Participated in Metropolitan Council Environmental Services' Citizen-Assisted Monitoring Program (CAMP) for six lakes

WATER QUALITY DATA AND REPORTS ARE AVAILABLE AT www.bassettcreekwmo.org

2015 Watershed Management Plan

In September the BCWMC finalized and adopted its 2015 – 2025 Watershed Management Plan. The plan includes goals and policies for the organization and its member cities that will guide the organization's work over the next ten years! It includes a re-prioritization of their lakes and streams, new requirements for development and redevelopment (the Minimal Impact Design Standards), requirements for buffers along some streams and wetlands, and a list of capital projects.

Education & Outreach Activities

- Participated with the West Metro Water Alliance, a consortium of watershed organizations and other partners that collaborate on education programming.
- Provided watershed education to the public at the Plymouth Yard/Garden Expo and Golden Valley Arts and Music Festival.
- Provided native plant seed packets at watershed education events and at displays in member city halls.
- Participated in the Non-point Education for Municipal Officials program (NEMO) – workshops for west metro local officials.
- Provided financial support to Metro Watershed Partners for their "Clean Water MN" media campaign, the Children's Water Festival, and the Freshwater Society.
- Provided funding for Commissioner education for conference registrations.
- Held public meetings and presentations to gather input on 2017 capital projects.
- Designed new website with better access to information on waterbodies, projects, meetings and events, etc.

Check it out at: www.bassettcreekwmo.org





Item 5G.
BCWMC 4-21-16

Bassett Creek Watershed Management Commission

April 10, 2016

Ms. Rebecca Rice
Metro Blooms
310 East 38th Street
Minneapolis, MN 55409

Dear Ms. Rice,

The Bassett Creek Watershed Management Commission (BCWMC) fully supports the Metro Blooms for the Northside Neighborhood Engagement and Opportunities in Clean Water Initiatives.

This project would result in improved water quality in Bassett Creek and would engage residents in understanding and caring for the creek in their community. Bassett Creek is an important natural resource in Minneapolis and the BCWMC has classified it as a high priority (Priority 1) waterbody in its Watershed Management Plan. While the BCWMC works to implement large projects that improve water quality throughout the watershed, the work of protecting and improving the creek cannot rest with one organization or group. It takes the collaborative effort of multiple groups and the cooperation of residents to improve water quality because the everyday activities of homeowners have a significant effect on the health of the creek.

For this reason, it's imperative that the community come to understand the resource in their neighborhood, their effects on water quality, and ways in which they can positively impact the creek. The program proposed by Metro Blooms brings together all of the important elements for a successful program with goals that align perfectly with those of the BCWMC.

At their December 17, 2015 meeting, the Board of Commissioners of the BCWMC voted to support the project with financial and in-kind support. In their discussion at the meeting, Commissioners expressed strong support, recognizing this project's potential to improve Bassett Creek water quality, increase environmental awareness, and engage and train youth in this highly underserved community.

The BCWMC's 2016 budget includes \$4,000 as cash match for this project. The BCWMC will provide additional in-kind support and can also provide water quality and quantity data and other technical assistance to help implement and evaluate the project.

Good luck with the project proposal as it moves forward! We look forward to continuing to collaborate with you on projects that engage watershed residents in improving water quality and caring for natural resources in their community. If you have questions or would like to discuss BCWMC's involvement further, please contact me at 952-270-1990 or laura.jester@keystonewaters.com.

Sincerely,

A handwritten signature in cursive script that reads "Laura Jester".

Laura Jester, Administrator



Bassett Creek Watershed Management Commission

MEMO

Date: April 14, 2016
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 agenda item 5J): The draft feasibility study for this project was presented at the February meeting and was approved pending some minor edits. The final feasibility study is not available online at <http://www.bassettcreekwmo.org/index.php?CID=284> and will be used to request 2017 levy funds from Hennepin County later this year. In September, the Commission is expected to hold a public hearing on the project, order the project, and enter an agreement with the City of Plymouth to design and construct the project.

2017 Main Stem Bassett Creek Streambank Erosion Repair Project (2017CR-M): (See Item 5B) The draft feasibility study for this project will be presented by the Commission Engineer at this meeting. There has been considerable community outreach for this project. Most recently, the Bassett Creek Redevelopment Oversight Committee chairperson was notified that the draft study would be discussed at this meeting.

2013 Four Season Area Water Quality Project (NL-2): No change since November 2015 report. The City of Plymouth has been looking at different options for this area including the original stream restoration, using only rock to stabilize the channel, and a flocculation facility. The City received comments on these options at a public meeting in January. Currently, the City is waiting for the Four Seasons Mall property to redevelop with hopes of building treatment into a redevelopment project.

2014 Schaper Pond Diversion Project, Golden Valley (SL-3): Tom Hoffman with Golden Valley and I gave on-camera interviews at Schaper Pond about this project. (See Item 7C.) There are no other changes regarding this project since February: The Commission approved 90% plans at their February 2015 meeting. The City's consultant (Barr Engineering) completed contract documents for the project May 21st, the bid advertisement publication date. The city council awarded the contract on July 7th to Sunram Construction. The pre-construction meeting was held July 30th. Mobilization began on November 11 and construction began on November 24. On December 10, the baffle was installed and fully deployed, and the contractor demobilized from the site for the season. In spring 2016, the contractor will perform final clean-up and any needed site restoration to ensure turf establishment.

2014 Twin Lake In-lake Alum Treatment, Golden Valley (TW-2): No change since July 2015 report. 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.

City staff reports no complaints or comments from residents since the treatment and also reports consistently clear water since the last actual reading on May 20, 2015.

2014 Briarwood/Dawnview Water Quality Improvement Project, Golden Valley (BC-7): At the March meeting the Commission received a final report for this project (now available [online](#)) and approved a final reimbursement request from the City of Golden Valley.

2015 Main Stem Restoration Project 10th Avenue to Duluth Street, Golden Valley (2015CR): The project is being constructed in two phases, each under separate contract. Phase one includes 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. The initial stabilization work in Areas A, B, C, D and E wrapped up by March 2016 in time for spring load restrictions, with the exception of relocating the trail away from the stream in Area E. The contractor will return in the spring to complete the work in Area E, and perform final grading and restoration in all areas of the project.

Phase two includes the establishment of native vegetation along the stream which will commence this spring and continue over two additional growing seasons to ensure proper establishment. The bid opening for phase two, native vegetation establishment, was on March 16, 2016. On April 5, 2016, the Golden Valley City Council awarded the contract to the lowest responsible bidder, Applied Ecological Services for \$152,182.60, which was under the engineers estimate. 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): Construction on this project began recently. Photos and construction progress are available at: <http://www.ci.new-hope.mn.us/departments/publicworks/2016infrastructure.shtml>. The City of New Hope reports that:

- Tree removals are complete.
- Construction of the underground tank is underway, with concrete pours occurring this week.
- Storm sewer along Boone Avenue will be installed this week.
- Lake sediment from the west outlet into the lake has been removed.
- The large 66" RCP pipe at Jordan Ave has been installed.
- Construction of Jordan Avenue water main and storm sewer is underway.
- Grading work on the Jordan Avenue storm water pond (Concept C) will likely start next week.



2016 Honeywell Pond Expansion Project, Golden Valley (BC-4): At the August meeting, the Commission entered an agreement with the City of Golden Valley to design and construct the project. At the September meeting, the Commission granted conditional approval of the 50% design plans for the project and authorized the City to proceed with final plans and contract documents. 90% design plans were presented and approved at the November Commission meeting. The bid opening for this project (in conjunction with the Douglas Drive Project) was held April 12th. Construction is slated to begin in June.

Other Projects

Committee Meetings: Both the Budget Committee and Educational Committees have met recently. The Commission will receive updates from those committees at this meeting. At the direction of the Budget Committee, I developed a Request for Proposals for 2017 water monitoring activities and submitted the request to firms in the Commission's Engineering Pool. I am also working on securing speakers for the May 5th TAC meeting to discuss MIDS in linear projects in other areas of the Twin Cities.

Chloride Trainings/Education: I have been working to learn more about how the Commission can help reduce the amount of chloride in waterbodies. I have met with other watersheds, MPCA staff and Fortin Consulting about training opportunities for road authorities and commercial deicer applicators and ways to improve the State's database of certified professionals. I will also participate on a technical stakeholder committee for a permeable paver research project being conducted by the University of Minnesota. Their first meeting was March 14th.

Hennepin County Natural Resources Partnership: This group met on February 23rd and received presentation from several Met Council staff on their various monitoring programs (including WOMP, CAMP, etc.) and monitoring results. The next meeting is scheduled for April 26th on the new buffer law and wetland management.

Non-Point Education for Municipal Officials (NEMO) Workshops: Two of the three workshops were held in 2015 (Lake Minnetonka on July 23rd and a winter maintenance workshop on October 7th.) In order to fulfill the 2015 contract, the U of M Extension's NEMO Program will hold individual programs for select cities in the west metro. Currently, staff is working to bring a NEMO workshop to the St. Louis Park City Council.

New Commissioner Materials: Posting of materials to the website were completed earlier this year and are available at: <http://www.bassettcreekwmo.org/CommissionOrientation/CommissionOrientationHomepage.htm>.

Records Retention/Management and Data Practices: At the direction of the Administrative Services Committee, I updated the Commission's Records Retention Schedule and asked legal counsel to review and recommend any changes needed. Additionally, a Data Practices Procedure was drafted for the Commission by our legal counsel. The Commission will review these documents at a future meeting. Also, I continue to work on records management including locating all official records, determining what records should be disposed of or sent to the State Archives, how paper records can be digitized, and how and where to store our electronic records. I will be researching and gathering input on different options for records management and storage over the course of the year.

Organizational Efficiencies: At the direction of the Administrative Services Committee I will be drafting an organizational chart and have been discussing practices and procedures with TAC members, Commission staff, and Commissioners to ensure the proper and efficient use of staff's time and to streamline communications where needed.



Item 6Ei.
BCWMC 4-21-16

Bassett Creek Watershed Management Commission

REQUEST FOR PROPOSAL FOR 2017 WATER MONITORING SERVICES

The Bassett Creek Watershed Management Commission (BCWMC) is seeking proposals from firms in its Engineering Pool for three water quality monitoring projects being considered for 2017.

BACKGROUND:

Three separate but related water monitoring projects are being considered by the BCWMC for 2017.

1. Routine Lake Monitoring

The BCWMC Monitoring Plan calls for monitoring its priority lakes once every three years. Lakes scheduled for regular monitoring in 2017 include Twin Lake and Sweeney Lake in the City of Golden Valley and Lost Lake in the City of Plymouth.

Lake monitoring includes monitoring two locations on Sweeney Lake, and one location each at Twin Lake and Lost Lake on six occasions for selected parameters (total phosphorus, soluble reactive phosphorus, total nitrogen, pH, chlorophyll a, and chloride), sample analysis, phytoplankton and zooplankton collection and analysis, an aquatic plant survey (two occasions), submission of data to the State's EQIS database (sites are already established), and preparation of a final report. Full details on the monitoring methods and data expected can be found in the BCWMC Monitoring Plan, Appendix A of the 2015 BCWMC Watershed Management Plan at: http://www.bassettcreekwmo.org/application/files/7914/4676/6436/Appendix_A_Monitoring_Plan.pdf.

Deliverable: All raw data and a report that includes trend analyses using past data (supplied by the BCWMC)

2. Sweeney Lake Aeration Study

The Homeowners Association of Sweeney Lake in Golden Valley uses multiple aerators in the lake to keep it mixed during the summer. The Association believes this helps improve the water quality of the lake. During the development of the 2011 Sweeney Lake TMDL, the aerators were turned off for the 2007 and 2008 monitoring seasons but effects on water quality were found to be inconclusive. The BCWMC seeks to perform a more vigorous study and one that involves turning off the lake aeration system and monitoring during 2017, followed by detailed lake water

quality modeling calibrated to aerated and non-aerated conditions. The scope includes using the detailed lake model to further evaluate the best in-lake management strategies that should be considered for TMDL attainment. It's expected that some additional lake water quality monitoring would be needed to supplement the Schaper Pond (see #3) and baseline Sweeney Lake monitoring program (see #1) for 2017.

This study relies upon the results of the Schaper Pond effectiveness monitoring and the detailed Sweeney Lake water quality monitoring.

Deliverable: Results should be analyzed and discussed in a project report.

3. Schaper Pond Effectiveness Monitoring

The [Schaper Pond Diversion Project](#) was completed by the BCWMC as a Capital Improvement Project in late 2015. The project included the installation of a floating baffle and curtain (typically only used in wastewater treatment plants) to direct flows through the pond to the northwest lobe of the pond, thereby keeping water in the pond for a longer period of time and allowing for more treatment. Schaper Pond is tributary to Sweeney Lake. This project is estimated to remove 81 – 156 pounds of total phosphorus each year. The BCWMC wishes to monitor the effectiveness of the project by repeating monitoring that was performed during the [feasibility study](#) for the project including monitoring of two major inlets to Schaper Pond and the pond outlet to analyze changes in treatment capacity since the completion of the pond improvements.

Deliverable: Results should be analyzed and discussed in a project report.

RESPONSES:

To submit a proposal for the services outlined in this Request for Proposal, please provide 5 paper copies and one electronic copy of the proposal **no later than 4:30 p.m. on Thursday April 28, 2016** to BCWMC Administrator Laura Jester (contact information below). The BCWMC reserves the right to accept a bidder's proposal in part or in whole, depending on the BCWMC's desire to move forward with one or more of the three projects in 2017.

PROPOSAL CONTENT:

Provide an example (preferably a link to an example) of the type/format of monitoring report that would be developed for #1. Please note that past reports of BCWMC water quality monitoring activities should not necessarily be used as examples. The BCWMC is seeking a more refined, summarized report with data presented for a lay audience. Methods and more technical analyses can be included in appendices or referenced in other documents.

Firms will submit a proposal that outlines the scope of work and estimated budget for each of the three projects as indicated below and company/staff qualifications with a total proposal length of no more than 15 pages.

Scope of Work

- Describe the tasks and activities to carry out each of the projects along with methods, timeline, and budget for each major task including costs for field labor, lab analyses, data analyses, report generation, and final presentation to BCWMC at a regular meeting.
- Include one total estimate for each of the projects separately (understanding that projects #2 and #3 rely on some data gathered in project #1).
- Include a list of subcontractors and/or laboratories to be used for each project.
- Provide a list deliverable(s) after the completion of each task within each project.
- Define the information that will be needed from BCWMC staff, and when it will be needed.

Qualifications and Experience of Staff

- Describe similar or related past projects and references.
- Provide qualifications of staff to be assigned to these projects.
- Provide links to examples of reports or other deliverables similar to those proposed here.

In addition, the proposal should meet the following requirements:

- Proposal will address items under Proposal Content in a complete and concise fashion;
- Proposal will not contain non-applicable promotional materials and should include only information that addresses the project outlined for this project; and
- Proposal will be submitted electronically in PDF format along with 5 (five) paper copies **by 4:30 p.m. on Thursday April 28, 2016 to BCWMC Administrator Laura Jester.**

Please direct proposals and other inquiries regarding this project to:

Laura Jester, BCWMC Administrator

Laura.jester@keystonewaters.com

952-270-1990

c/o 16145 Hillcrest Lane

Eden Prairie, MN 55346