



DRAFT

February xx, 2013

Mr. Brad Wozney
MN Board of Water and Soil Resources
520 Lafayette Road N.
St. Paul, MN 55155

**Re: Major Plan Amendment for the Bassett Creek Watershed Management Commission's
September 2004 "Watershed Management Plan"**

Dear Mr. Wozney:

The Bassett Creek Watershed Management Commission (BCWMC) proposes a major plan amendment to the September 2004 BCWMC *Watershed Management Plan* (BCWMC Plan). The proposed amendment would modify the following parts of the BCWMC Plan:

- Adding to the Capital Improvement Program (CIP) a project for 2014 (SL-3) to modify Schaper Pond, located immediately upstream of Sweeney Lake, to improve the pond's ability to remove phosphorus, and help meet the Sweeney Lake TMDL phosphorus removal goals.
- Adding to the CIP a project for 2014 (BC-7) to construct a water quality treatment pond in the Main Stem watershed to reduce phosphorus loading to Bassett Creek.
- Adding to the CIP a project for 2014 (TW-2) to provide in-lake alum treatment of Twin Lake, to address internal phosphorus loading issues in the lake and prevent further water quality degradation.

The revised CIP (Table 12-2 in the BCWMC Plan) showing all three projects is attached to this request. The revised table shows the three additional projects, along with the completed and future CIP projects. The CIP shows the projects proposed to be completed from 2010 through 2018 and their estimated costs. The CIP also lists the completed CIP projects and the actual project costs; the year of completion is shown in the notes at the bottom of the table.

Also attached is a draft of the language within the BCWMC Plan that is proposed for change (Section 12.6.6, 2013 Major Plan Amendments). This language is in addition to the current plan text and does not replace any existing text.

The remainder of this letter describes the proposed BCWMC Plan modifications in more detail and the major plan amendment process.

Addition to the CIP— Schaper Pond Diversion Project, Golden Valley (BCWMC Project SL-3) (2014)

The Implementation Plan for the Sweeney Lake TMDL includes several options for reducing phosphorus loads to Sweeney Lake. One option in the plan was modification of Schaper Pond to improve the pond's ability to remove phosphorus. Schaper Pond is located immediately upstream (south) of Sweeney Lake. In 2012, the BCWMC completed a feasibility study (Feasibility Report for

the Schaper Pond Improvement Project) that investigated alternatives for modifying the pond. The feasibility study recommended construction of a diversion structure within Schaper Pond to direct more of the stormwater to the northwest (larger, deeper) lobe of the pond where more treatment could be provided.

This project is intended to remove an estimated 81 – 156 pounds of phosphorus during the June through September period each year. This amount of phosphorus removal would go a long way towards reaching the Sweeney Lake TMDL phosphorus removal requirements of 99 pounds during the June through September period.

Table 12-3 in the BCWMC Plan lists potential future water quality capital improvement projects. An improvement option under Sweeney Lake includes “implementation of water quality improvement projects recommended in the Sweeney Lake TMDL study.” Although the Schaper Pond diversion project is not specifically called out, the table shows the BCWMC’s willingness to consider implementing these future projects.

The total estimated project cost is \$550,000.

Addition to the CIP— Briarwood/Dawnview Water Quality Improvement Project, Golden Valley (BCWMC Project BC-7) (2014)

This project in the Main Stem watershed is located just east of T.H. 100, near the intersection of Scott Av N and Dawnview Terrace and is per the recommendations in the BCWMC’s 2000 study (Bassett Creek Main Stem Watershed Management Plan). The 2000 study assumed construction of a water quality treatment pond that would treat runoff from a 63-acre residential watershed and remove 14 pounds of phosphorus per year. The City of Golden Valley is completing a feasibility study that will better define the project scope and scope. Draft study results recommend the construction of a water quality treatment pond that may also incorporate the use of iron filings to improve phosphorus removal.

The recommendations from the 2000 study were incorporated into the BCMWC Plan. Table 12-3 in the BCWMC Plan lists project BC-7 as a future water quality improvement project. Per the requirements of the BCWMC Plan, it would require a minor plan amendment to move the project to the BCWMC’s 10-year CIP (Table 12-2).

The total estimated project cost is \$200,000.

Addition to the CIP— Twin Lake In-Lake Alum Treatment, Golden Valley (BCWMC Project TW-2) (2014)

This project would reduce internal phosphorus loading of Twin Lake by treating bottom sediments with alum. The treatment is anticipated to reduce the internal phosphorus load by 242 pounds per year and the treatment is expected to last 10 to 20 years. Twin Lake is located directly east of Sweeney Lake and is partially within Theodore Wirth Regional Park. This project is per the recommendation of a March 2011 BCWMC report that studied the existing phosphorous levels in Twin Lake and determined that Twin Lake was experiencing a high rate of internal phosphorous loading whose source was primarily from sediments at the lake bottom. The subsequent 2013 BCWMC feasibility study (Feasibility Report for Water Quality Improvements in Twin Lake, CIP Project TW-2) recommends two applications to increase the effectiveness: once in 2014 and again in 2017.

The BCWMC Plan calls for the BCWMC to “continue to identify opportunities to maintain or improve the excellent water quality of Twin Lake” (i.e., a “non-degradation” policy) (Section 4.2.2.1, policy H, page 4-5). The 2000 BCWMC Twin Lake report (Twin Lake Watershed and Lake Management Plan) identified a stormwater pond expansion to provide additional treatment of runoff in the Twin Lake watershed. This project is identified as project TW-1 in the BCWMC 10-year CIP. The BCWMC authorized construction of the project in 2006, but the project has been delayed because of site contamination and right-of-way issues. Twin Lake is a small urban lake with a small watershed. As such, management options must include control of phosphorus sources internal to Twin Lake as well as reducing stormwater runoff or watershed loading.

The total estimated project cost is \$148,000.

Major Plan Amendment Process

In accordance with MN Statute 103B.231, copies of this proposed plan amendment are being sent to the member cities, Hennepin County, Hennepin Conservation District, the Metropolitan Council, the MDNR, the Minnesota Department of Health, the MPCA, the Minnesota Department of Agriculture, MnDOT, and BWSR for their review and comment. Copies are also being sent to the Minneapolis Park and Recreation Board. Copies of the major plan amendment will also be made available on the BCWMC’s website (www.bassettcreekwmo.org). Written comments should be sent to the Commission at the address shown below. The 60-day review period would end on April 26, 2013. Upon completion of the review period, the BCWMC will respond to comments, hold a public hearing on the plan amendment, and then submit the plan amendment to BWSR for Board approval.

All three projects are proposed to be constructed in 2014. For this to happen, the BCWMC must order the projects and submit its tax levy request to Hennepin County by the end of September 2013.

Thank you for your review of this proposed amendment. We look forward to working with the BWSR staff to gain the BWSR Board’s timely approval of this major plan amendment. After approval of the major plan amendment, but prior to ordering the projects in the amendment, the BCWMC will hold another public hearing to receive comments on the proposed projects.

Please call either Charlie LeFevere, Esq., the BCWMC’s legal representative, at (612) 337-9215, or Karen Chandler, P.E., the BCWMC’s engineer, at (952) 832-22813 if you have any questions.

Sincerely,

Virginia (Ginny) Black, or Jim de Lambert, or Administrator, or engineer?
Chair, Bassett Creek Watershed Management Commission

Note: please send written comments to:
Commission Chair, Acting Chair, Engineer, or Administrator?
Address?

Enclosures

Proposed CIP Table 12-2 in the BCWMC Plan
Proposed language for Section 12.6.6, "2013 Major Plan Amendment"

- c: Hennepin County – Mr. Joel Settles
Hennepin Conservation District – Ms. Stacey Lijewski
City of Crystal – Ms. Janet Lewis, City Clerk
City of Golden Valley – Ms. Sue Virnig, City Clerk
City of Medicine Lake – Ms. Nancy Pauly, City Clerk
City of Minneapolis – Mr. Steven Ristuben, City Clerk
City of Minnetonka – Mr. David Maeda, City Clerk
City of New Hope – Ms. Valerie Leone, City Clerk
City of Plymouth – Ms. Sandra Engdahl, City Clerk
City of Robbinsdale – Mr. Tom Marshall, City Clerk
City of St. Louis Park – Ms. Nancy Stroth, City Clerk
Minnesota Department of Natural Resources – Ms. Charlotte Cohn
Minnesota Pollution Control Agency – Mr. David L. Johnson
Minnesota Department of Health – Mr. Art Persons
Minnesota Department of Agriculture – Ms. Becky Balk
Metropolitan Council – Ms. Judy Sventek
Minnesota Department of Transportation – Nick Tiedeken
Bassett Creek Watershed Management Commission
Minneapolis Park & Recreation Board – Debra Pilger, Director, Environmental & Equipment Services

Table 12-2 Water Quality Management and Flood Control 10-Year Capital Improvements Program

	Water Quality Improvement	Capital Cost ¹		Year								
		A (Actual Project (Cost)	E (Estimated Project Cost)	2010	2011	2012	2013	2014	2015	2016	2017	2018
Medicine Lake												
ML-1 ²	Construct wet detention pond for subwatershed BC94B1 (Option 8 in Medicine Lake Plan)		\$0									
ML-2 ³	Reduce Goose Loadings by 75% (Option 17 in Medicine Lake Plan)											
ML-3, ML-4 ⁴	Reroute flows from subwatershed BC94 to a larger wet detention pond for BC92 (Option 9a in Medicine Lake Plan) & dredging of accumulated sediment Medicine Lake East Beach wet detention pond for subwatershed BC107 (Option 11 in Medicine Lake Plan) & dredging of accumulated sediment	A	\$893,000									
ML-5 ⁵	Construct wet detention pond for subwatersheds BC98, BC98A and BC98B (Option 10a in Medicine Lake Plan) & dredging of accumulated sediment		\$0									
ML-6	Construct wet detention pond for subwatershed BC94B2 (Option 6 in Medicine Lake Plan)	E	\$14,000									\$14,000
ML-7 ⁶	In-Lake Herbicide Treatment (Option 18 in Medicine Lake Plan)	A	\$132,000									
ML-8	Lakeview Park Pond						\$196,000					
ML-11 ¹⁵	Medicine Lake Park Pond	E	\$1,100,000									
Plymouth Creek												
PC-1 ¹⁹	26th Avenue to Medicine Lake	E	\$965,000	\$902,462								
PC-2 ¹⁹	26th Avenue to 37th Avenue	E	\$559,000							\$105,000	\$454,000	
Parkers Lake												
PL-6 ¹⁴	Improvements to stormwater basin in PL-A13 near Circle Park (from the City of Plymouth's <i>Parkers Lake Implementation Plan</i>)	E	\$73,000									
Wirth Lake												
WTH-1 ⁷	Dredging subwatershed FR-5 detention pond (Option 2 in Wirth Lake Plan)	A	\$69,000									
WTH-2 ⁸	Highway 55 detention pond (option 3 in Wirth Lake Plan)	E	\$215,000									
WTH-3 ⁸	In-lake alum treatment (Option 1 in Wirth Lake Plan)	E	\$59,000									
WTH-4	Modify outlet to prevent back-flow (Wirth Lake TMDL Implementation Plan)		\$180,000			\$180,000						
Sweeney Lake												
SL-3	Schaper Pond Diversion Project	E	\$550,000					\$550,000				
Twin Lake												
TW-1 ⁹	Pond expansion (Option 1 in Twin Lake Plan)	E	\$182,000									
TW-2	Twin Lake In-Lake Alum Treatment	E	\$148,000					\$148,000				
Westwood Lake												
WST-1 ¹⁰	Flag Avenue detention/ skimming facility (Option 1 in Westwood Lake Plan)	A	\$174,000									
Bassett Creek Park Pond												
	None-see Table 2 Potential future water quality projects											
Northwood Lake												
NL-1 ¹¹	Construct ponds NB-35A, B, C and NB-29A, B (Option 4 in Northwood Lake Plan)	E	\$595,000							\$595,000		
NL-2 ²²	Four Seasons Mall Area Water Quality Project	E	\$990,000				\$990,000					
NL-3	Divert Lancaster Lane storm sewer (Option 3 in Northwood Lake Plan)	E	\$59,000									\$59,000
NL-4 ¹²	Construct ponds NB-36A, NB-37A, NB-38A and NB-28A, B (Option 5 in Northwood Lake Plan)	A	\$153,000									
NL-7 ¹⁶	Construct pond adjacent to creek	E	\$139,000									
Bassett Creek Main Stem												
BC-1 ¹³	Pond BC 10-3 (Option 4 in Bassett Creek Main Stem Plan)		\$0									
Crystal Boundary to Regent Ave ²⁰	Channel restoration	E	\$636,000	\$34,800	\$601,200							
Wisconsin Ave to Crystal Boundary	Channel restoration	E	\$580,000		\$290,000	\$290,000						
BC-7	Briarwood/Dawnview Water Quality Improvement Project, Golden Valley	E	\$200,000					\$200,000				
Irving Avenue to Golden Valley Road	Channel restoration	E	\$856,000			\$856,000						
Sweeney Lake Branch												
Courtlawn Pond to Turners Crossing ¹⁷	Channel restoration	A	\$386,000									
North Branch												
36th Ave to Bassett Creek Park ²¹	Channel restoration	E	\$835,000		\$600,000	\$235,000						
Grimes, North, & South Rice Ponds												
GR-2	Grimes Pond wet detention pond (Option 4 in Rice and Grimes Ponds Plan)	E	\$104,000									\$104,000
Crane Lake												
CL-1	Ramada Inn detention/ skimming facility (Option 1 in Crane Lake Plan)	E	\$116,000									
CL-2 ¹⁸	Joy Lane Wet Detention Pond (Alt. #2)		\$0									
Turtle Lake												
	None Proposed											
Lost Lake												
	None Proposed											
		Capital Cost		2010	2011	2012	2013	2014	2015	2016	2017	2018
	ANNUAL ESTIMATED COST			\$937,262	\$1,491,200	\$1,561,000	\$1,186,000	\$898,000	\$0	\$700,000	\$454,000	\$177,000

Notes:

1. Capital Cost does not include land acquisition costs, but does include legal, administration, and 25% additional for contingencies.
2. Constructed by City.
3. Periodically completed by City.
4. This project includes dredging of accumulated sediment and was completed in 2006.
5. Mn/DOT sound wall construction in New Hope will require relocation and resizing of storm sewer in this watershed.
6. Treatment completed by the City of Plymouth in 2005, 2006, and 2008.
7. Completed in 2006.
8. Project authorized in 2006. Issues regarding participation by Mn/DOT and future maintenance have delayed construction, no current schedule.
9. Project authorized in 2006. Issues regarding site contamination and right-of-way have delayed construction, no current schedule.
10. Project completed in 2006.
11. The City of New Hope constructed NB-35A, B, C but not to the same degree as proposed in the lake and watershed management plan. NB-29 A and B have not been constructed. These improvements will need to be re-evaluated as part of the feasibility study. Costs shown are for NB-29A and B only. Costs will be added to the CIP to upgrade these ponds if the feasibility study indicates that they should be upgraded.
12. The City of New Hope constructed NB-28A and B. NB-36A, NB-37A and NB-38A were completed in 2006.
13. This project was completed as part of the Boone Ave and Brookview Golf Course improvement projects in 2004.
14. Project approved for construction in 2006, to be completed as part of street repaving project.
15. Minor Plan Amendment approved April 2007. Project to be completed in 2010.
16. Minor Plan Amendment approved September 2007. Project completed in 2009.
17. Minor Plan Amendment approved August 2007. Project completed in 2008.
18. Not feasible per city of Minnetonka in 2008.
19. Minor Plan Amendment approved June 2009. Project PC-1 to be completed in 2011.
20. Minor Plan Amendment approved June 2009.
21. Project construction proposed to start in 2011 using CIP reserve funds.
22. The Four Seasons Mall Area Water Quality Project includes construction of two new water quality treatment ponds and restoration of an eroding stream channel. One of the ponds will be located on the Four Seasons Mall site; the other pond will be located southwest of the mall site, near the intersection of 40th Ave. N. and Pilgrim Lane. The original proposed project (from the 1996 *Northwood Lake Watershed and Lake Management Plan*) was to dredge and enlarge pond NB-07 to provide additional treatment of stormwater runoff. The 2012 feasibility study for the Four Seasons Mall Area Water Quality Project concluded that it was not feasible to convert pond NB-07 (a wetland) to a stormwater pond. The feasibility study also included two scenarios as alternatives to the proposed dredging. The Commission selected Scenario 1 as their preferred alternative.

12.6.6 2013 Major Plan Amendment

In [month] and [month] 2013, BWSR approved and the BCWMC adopted, respectively, a major plan amendment to add the following projects to the BCWMC's 10-year CIP (Table 12-2): Schaper Pond Diversion Project (2014), Briarwood/Dawnview Water Quality Improvement Project (2014), and the Twin Lake In-Lake Alum Treatment Project (2014).

Schaper Pond Diversion Project Description

The Implementation Plan for the Sweeney Lake TMDL includes several options for reducing phosphorus loads to Sweeney Lake. One option in the plan was modification of Schaper Pond to improve the pond's ability to remove phosphorus. Schaper Pond is located immediately upstream (south) of Sweeney Lake. In 2012, the BCWMC completed a feasibility study (Feasibility Report for the Schaper Pond Improvement Project) that investigated alternatives for modifying the pond. The feasibility study recommended construction of a diversion structure within Schaper Pond to direct more of the stormwater to the northwest (larger, deeper) lobe of the pond where more treatment could be provided.

This project is intended to remove an estimated 81 – 156 pounds of phosphorus during the June through September period each year. This amount of phosphorus removal would go a long way towards reaching the Sweeney Lake TMDL phosphorus removal requirements of 99 pounds during the June through September period.

Table 12-3 in the BCWMC Plan lists potential future water quality capital improvement projects. An improvement option under Sweeney Lake includes "implementation of water quality improvement projects recommended in the Sweeney Lake TMDL study." The 2013 major plan amendment more specifically describes a project (Schaper Pond Diversion Project) recommended in the Sweeney Lake TMDL study.

This project is on the BCWMC CIP for 2014 (project SL-3 in Table 12-2 – CIP table) with an estimated cost of \$550,000.

Briarwood/Dawnview Water Quality Improvement Project Description

This project in the Main Stem watershed is located just east of T.H. 100, near the intersection of Scott Avenue North and Dawnview Terrace in Golden Valley. This project is per the recommendations in the BCWMC's 2000 study (Bassett Creek Main Stem Watershed Management Plan) to improve the quality of stormwater runoff reaching Bassett Creek. The 2000 study assumed construction of a water quality treatment pond that would treat runoff from a 63-acre residential watershed and remove 14 pounds of

phosphorus per year. The City of Golden Valley is completing a feasibility study that will better define the project scope and scope. Draft study results recommend the construction of a water quality treatment pond that may also incorporate the use of iron filings to improve phosphorus removal.

The recommendations from the 2000 study were incorporated into this Plan. Table 12-3 lists this project (project BC-7) as a future water quality improvement project. Per the requirements of this Plan, a minor plan amendment is required to move the project to the BCWMC's 10-year CIP (Table 12-2). The 2013 major plan amendment moved this project from Table 12-3 to Table 12-2.

This project is on the BCWMC CIP for 2014 (project BC-7 in Table 12-2 – CIP table) with an estimated cost of \$200,000.

Twin Lake In-Lake Alum Treatment Project Description

This project would reduce internal phosphorus loading of Twin Lake by treating bottom sediments with alum. The treatment is anticipated to reduce the internal phosphorus load by 242 pounds per year and the treatment is expected to last 10 to 20 years.

Twin Lake is located directly east of Sweeney Lake in Golden Valley, and is partially within Theodore Wirth Regional Park. This project is per the recommendation of a March 2011 BCWMC report that studied the existing phosphorous levels in Twin Lake and determined that Twin Lake was experiencing a high rate of internal phosphorous loading whose source was primarily from sediments at the lake bottom. The subsequent 2013 BCWMC feasibility study (Feasibility Report for Water Quality Improvements in Twin Lake, CIP Project TW-2) recommends two applications to increase the effectiveness: once in 2014 and again in 2017.

This Plan calls for the BCWMC to “continue to identify opportunities to maintain or improve the excellent water quality of Twin Lake” (Section 4.2.2.1, policy H. page 4-5). The 2000 BCWMC Twin Lake report (Twin Lake Watershed and Lake Management Plan) identified a stormwater pond expansion to provide additional treatment of runoff in the Twin Lake watershed. This project is identified as project TW-1 in the BCWMC 10-year CIP (Table 12-2). The BCWMC authorized construction of the project in 2006, but the project has been delayed because of site contamination and right-of-way issues. Twin Lake is a small urban lake with a small watershed. As such, management options must include control of phosphorus sources internal to Twin Lake as well as reducing stormwater runoff or watershed loading.

This project is on the BCWMC CIP for 2014 (project TW-2 in Table 12-2 – CIP table) with an estimated cost of \$148,000.