



February 25, 2011

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) one project to restore 2.5 miles of the Main Stem of Bassett Creek from Irving Avenue North in Minneapolis to Golden Valley Road in Golden Valley for 2012.
- Adding to the CIP a project to modify the outlet of Wirth Lake to prevent backflow from the creek during flooding which would reduce phosphorus loading to the lake, as recommended in the Wirth Lake TMDL Implementation Plan for 2012.
- Adding to the CIP a project to construct a pond at Lakeview Park within the Medicine Lake watershed that would reduce nutrient loading to this impaired water for 2013.

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 12.6.4, 2011 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— Main Stem of Bassett Creek through Minneapolis and Golden Valley (2012)

The BCWMC Plan recognized the need to restore stream reaches damaged by erosion or affected by sedimentation. Section 7.0 of the BCWMC Plan describes the issue, the Commission's policies relating to channel restoration, and the benefit of stream restoration in preserving fisheries habitat and minimizing nutrient and sediment loads to the creek and downstream waters. The Commission established the Creek and Streambank Trunk System Maintenance, Repair and Sediment Removal

Fund (the Restoration Fund) to address the issue. The Commission decided to assess the cities in the watershed \$25,000 annually to fund channel restoration projects (Restoration Fund). The cities conducted inventories of the channel reaches and the BCWMC Plan identified specific problem areas.

The main stem of Bassett Creek through Minneapolis and Golden Valley has numerous problem areas identified in the Minneapolis Park & Recreation Board (MPRB) Erosion Site Survey. The problems include degraded vegetative diversity and invasive species, steeply incised banks, areas of active bank erosion, and deposition of sediments.

The work to restore the channel in this area has been requested by the MPRB, which owns nearly all of the property adjacent to the creek. The MPRB is redeveloping a large portion of adjacent park area in Wirth Regional Park and desires to minimize the disruption to the park and coordinate the restoration work with the park development.

The Bassett Creek Minneapolis Main Stem channel restoration project proposed to be added to the CIP will consist of a variety of erosion control measures including:

- Rock vanes to direct flow away from eroding stream banks
- Check dams to prevent erosion of the stream bottom
- Armoring the banks
- Removing accumulated sediment
- Redirecting runoff that is contributing to slope failures
- Re-grading, stabilizing and re-vegetating slopes and the shoreline.

The total estimated cost of the restoration project is \$600,000.

Addition to the CIP— Wirth Lake Outlet Modification (2012)

The Implementation Plan for the Wirth Lake TMDL calls for a project to modify the lake's existing outlet structure to prevent the flow of water from the creek to the lake during high-water flood events. Based on analysis of historic data, the modification of the Wirth Lake outlet will be required to achieve the annual load reductions prescribed in the TMDL allocations. The modifications would include replacing the existing bulkhead (or stationary head wall) with a fabricated steel lift gate. The lift gate would be raised with an electric motor and controls, to block back flow of the creek into Wirth Lake. This would prevent water from the creek from entering the lake during flood flows. The reductions in phosphorus that would be achieved are estimated to be sufficient to meet the water quality goals for the lake.

This is a new water quality project with BWSR grant funding that must be spent within two years. The total preliminary estimate of capital construction cost to modify the Wirth Lake outlet and install a gate and controls is \$250,000 including permitting and administration.

Addition to the CIP—Lakeview Park Water Quality Pond (2013)

The Lakeview Park Water Quality Pond will be located in Lakeview Park in western Golden Valley, northwest of the intersection of Winsdale Street and Gettysburg Avenue. It will receive runoff from a 160-acre watershed that drains to Medicine Lake, an impaired water with an approved TMDL Study. A portion of the runoff in the watershed is treated in a pond in East Medicine Lake Park that was

constructed cooperatively by the City of Plymouth and the Commission in 2005. The construction of Lakeview Park Pond will improve the TSS and nutrient removal capabilities of the East Medicine Lake Park Pond. The cost of the project is estimated at \$196,000.

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 state review agencies, MnDOT, MPRB, and BWSR for their review and comment. 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 May 2, 2011. 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.

Two of these three projects are proposed to be constructed in 2012. For this to happen, the BCWMC must order the project and submit its tax levy request to Hennepin County by the end of September 2011.

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 LeFevre, Esq., the BCWMC's legal representative, at (612) 337-9215, or Len Kremer, P.E., the BCWMC's engineer, at (952) 832-2781 if you have any questions.

Sincerely,



Linda R. Loomis
Chair, Bassett Creek Watershed Management Commission

Note: please send written comments to:

Ms. Linda Loomis
Bassett Creek Watershed Management Commission, Chairperson
c/o Barr Engineering Co.
4700 West 77th Street
Minneapolis, MN 55435

Enclosures

Proposed CIP Table 12-2 in the BCWMC Plan
Proposed language for Section 12.6.4, "2011 Major Plan Amendments"

- 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	Recycle 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 8 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 ⁵	Medicine Lake Park Pond	E	\$1,100,000									
Plymouth Creek												
PC-1 ⁹	26th Avenue to Medicine Lake	E	\$965,000	\$902,462								
PC-2 ⁹	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 Parkers Lake Implementation Plan)	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	Muddy outlet to prevent back-flow (Wirth Lake TMDL Implementation Plan)		\$250,000			\$250,000						
Sweeney Lake												
Twin Lake												
TW-1 ⁹	Pond expansion (Option 1 in Twin Lake Plan)	E	162,000									
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	Dredge pond NB-07 (Option 2 in Northwood Lake Plan)	E	\$943,000				\$943,000					
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 ¹⁰	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	\$638,000	\$34,800	\$601,200							
Highway 169 to Crystal Boundary	Channel restoration	E	\$780,000		\$398,800	\$381,200						
BC3, BC5, BC7		E	1,300,000					\$15,800	\$984,200	\$300,000		
BC2, BC4, BC8		E	1,000,000									
Living Avenue to Golden Valley Road	Channel restoration	E	\$600,000			\$600,000						
Sweeney Lake Branch												
Courtawn Pond to Turners Crossing ¹⁷	Channel restoration	A	\$386,000									
North Branch												
36th Ave to Bassett Creek Park ²¹	Channel restoration	E	\$660,000		\$616,800	\$41,200						
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		\$937,262	\$1,616,800	\$1,272,400	\$1,154,800	\$1,000,000	\$984,200	\$1,000,000	\$454,000	\$177,000
	ANNUAL ESTIMATED COST											

Notes:

- Capital Cost does not include land acquisition costs, but does include legal, administration, and 25% additional for contingencies.
- Constructed by City.
- Periodically completed by City.
- This project includes dredging of accumulated sediment and was completed in 2006.
- Mn/DOT sound wall construction in New Hope will require relocation and resizing of storm sewer in this watershed.
- Treatment completed by the City of Plymouth in 2005, 2006, and 2008.
- Completed in 2006.
- Project authorized in 2006. Issues regarding participation by Mn/DOT and future maintenance have delayed construction, no current schedule.
- Project authorized in 2006. Issues regarding site contamination and right-of-way have delayed construction, no current schedule.
- Project completed in 2006.
- 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.
- The City of New Hope constructed NB-28A and B. NB-36A, NB-37A and NB-38A were completed in 2006.
- This project was completed as part of the Boone Ave and Brookview Golf Course improvement projects in 2004.
- Project approved for construction in 2006, to be completed as part of street repaving project.
- Minor Plan Amendment approved April 2007. Project to be completed in 2010.
- Minor Plan Amendment approved September 2007. Project completed in 2009.
- Minor Plan Amendment approved August 2007. Project completed in 2008.
- Not feasible per city of Minnetonka in 2008.
- Minor Plan Amendment approved June 2009. Project PC-1 to be completed in 2011.
- Minor Plan Amendment approved June 2009.
- Project construction proposed to start in 2011 using CIP reserve funds.

12.6.4. 2011 Major Plan Amendments

In August and September 2011, 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): the Main Stem of Bassett Creek from Irving Avenue North to Golden Valley Road Restoration Project (2012), the Wirth Lake Outlet Modification Project (2012), and the Lakeview Park Water Quality Pond (2013).

Main Stem Bassett Creek Channel Restoration Project Description

The channel restoration project for the Main Stem of Branch Bassett Creek from Irving Avenue North to Golden Valley Road extends for approximately 2.5 miles in the cities of Minneapolis and Golden Valley. This reach flows through the Theodore Wirth Regional Park and Theodore Wirth Golf Course. The stream is relatively shallow in most places except for occasional deep pools. The riparian vegetation is a mixture of native and non-native trees and shrubs.

This reach of Bassett Creek has numerous problem areas, as identified in the Minneapolis Park & Recreation Board (MPRB) Erosion Site Survey. The problems include degraded vegetative diversity and invasive species, steeply incised banks, areas of active bank erosion, and deposition of sediments. A feasibility study will further define these problem areas, identify new problem areas, define the restoration work needed at each site and the corresponding costs, identify and delineate wetlands, and scope the existence of archaeological sites in preparation for construction permitting.

Through the BCWMC's Resource Management Plan (RMP) process, the Corps of Engineers (COE) and the BCWMC agreed on a series of steps, work items, deliverables (called "protocols") that must be accomplished and submitted to complete the RMP process and COE review/approval process. Most of the protocols must be addressed as part of the feasibility study, in addition to the usual tasks that would be performed as part of a feasibility study. While this project is not included in the RMP, it is expected that the COE will require these protocols for this work as well.

The Bassett Creek Main Stem channel restoration project added to the CIP will consist of a variety of erosion control measures including:

- Rock vanes to direct flow away from eroding stream banks
- Check dams to prevent erosion of the stream bottom
- Realigning portions of the stream
- Armoring the banks
- Removing accumulated sediment
- Redirecting runoff that is contributing to slope failures

- Regrading, stabilizing and revegetating slopes and shoreline

This project is on the BCWMC CIP for 2012 with an estimated cost of \$600,000.

Wirth Lake Outlet Modification Project Description

The Implementation Plan for the Wirth Lake TMDL includes modifying the Wirth Lake outlet structure to prevent the flow of water from the creek to the lake during high-water flood periods. Based on analysis of historic data, the modification of the Wirth Lake outlet will be required to achieve the annual load reductions prescribed in the TMDL allocations. The modifications would include replacing the existing bulkhead, or stationary head wall, with a fabricated steel lift gate. The lift gate would be raised with an electric motor and controls, to block back flow of the creek into Wirth Lake. This would prevent water from the creek from entering the lake during flood flows. The reductions in phosphorus that would be achieved are estimated to be sufficient to meet the water quality goals for the lake.

The total preliminary estimate of capital construction cost to modify the Wirth Lake outlet and install a gate and controls is \$250,000 including permitting and administration. BWSR has awarded this project a grant for \$75,000. This grant funding must be spent within two years.

The feasibility study will evaluate available options to provide a structure that will prevent flood waters from the creek from entering the lake. Alternatives to be examined in the study will include:

- Automated gate
- Tide valve or pinch valve
- Rubber inflatable dam
- Others as identified

This project is on the BCWMC CIP for 2012.

Lakeview Park Water Quality Pond Project Description

The Lakeview Park Water Quality Pond will be located in Lakeview Park in western Golden Valley, northwest of the intersection of Winsdale Street and Gettysburg Avenue. It will receive part of the runoff from a 160-acre watershed that drains to Medicine Lake. A portion of the runoff in the watershed is treated in a pond in East Medicine Lake Park that was constructed cooperatively by the City of Plymouth and the BCWMC in 2005. The construction of Lakeview Park Pond will improve the TSS and nutrient removal capabilities of the East Medicine Lake Park Pond.

This project is on the BCWMC CIP for 2013 with an estimated cost of \$196,000.