

Memorandum

To: Bassett Creek Water Management Commission
From: Barr Engineering Company
Subject: Items on the Commission November 18, 2004 Meeting Agenda
Date: November 12, 2004
Project: 23/27 051

1. 2004 Flood Control Project Inspection

See attached memorandum

Recommendation:

- a. Letters shall be mailed to communities and to Corps of Engineers regarding results of inspection and recommended action.
- b. Letter shall be mailed to Mn/DOT regarding inspection of Highway 100 culvert.
- c. Authorize staff to prepare bid documents and solicit bids for patching concrete areas noted in inspection report. Staff should also contact Minneapolis construction group regarding its potential involvement to complete repairs.

2. DNR Permit Application: Wirth Lake Basin Improvements (CIP WTH-1)

Summary

Proposed Work: Wirth Lake Improvements

Basis for Commission Review: 2005 Capital Improvement Project

Recommendation: Conditional Approval

The city of Golden Valley and Minneapolis Park and Recreation Board (MPRB) has requested review of a DNR permit application. The project includes trail improvements, sediment removal and replacement of a damaged outlet control structure near the southwest corner of Wirth Lake. Water quality enhancement will be provided by removing accumulated sediment deposited in the wetland and by repairing the eroded berm adjacent to the outlet structure. Construction is anticipated during 2005. The project is consistent with the Wirth Lake Watershed and Lake Management Plan prepared by the BCWMC during 1996. The project is included as "WTH-1" in the BCWMC's Capital Improvement Plan (CIP) for 2005. The MPRB is moving ahead with the plans and will request reimbursement from the BCWMC.

Recommendation: Conditional Approval

- Final construction plans must be provided to BCWMC's engineer for review and approval.

3. 2004 Channel Maintenance Fund – Reimbursement

An invoice was received from the city of Golden Valley for completion of the streambank stabilization project located at 215 King Road in Golden Valley. The project and use of the 2004 channel maintenance fund was approved at the BCWMC's June 17, 2004 meeting. Based on the August 19, 2004 agreement between the BCWMC and city of Golden Valley, the BCWMC shall reimburse the city \$2,640 (50% of \$5,280). See attached invoice.

Recommendation: BCWMC shall reimburse the City \$2,640 within 45 days per the agreement.

4. 2005 Channel Maintenance Fund

Requests for the BCWMC 2005 channel maintenance funds have been received by the city of Golden Valley and the city of Plymouth. In accordance to the BCWMC policies, these municipalities have completed and provided inventories of streambank erosion and sedimentation sites. Channel maintenance fund requests will be provided to the Technical Advisory Committee for its review and recommendation. Following is a brief description of each request:

- **4820 & 4840 Markay Ridge: Golden Valley**

The residential streambank stabilization project is located along the south side of Bassett Creek (Main Stem), about 500 feet upstream of Noble Avenue. The project includes placement of riprap and filter along two erosion sites. Filter fabric will be placed beneath the riprap. These erosion sites are identified in Golden Valley's creek inventory. The estimated cost to repair the streambank along 4820 Markay Ridge and 4840 Markay Ridge is approximately \$5,000 and \$4,000 respectively (total cost approximately \$9,000). The project was reviewed and approved at the BCWMC's September 16, 2004 meeting. Performance of the project is contingent on obtaining channel maintenance funds

- **Section 1: Plymouth**

Nineteen projects were identified along Plymouth Creek in "Section 1" between Medicine Lake and 26th Avenue for repair during 2005. The city of Plymouth estimates that repairing the 19 sites will require stabilizing approximately 3,350 feet of creek shoreline for total cost of \$435,500. Plymouth staff will prepare additional information regarding specific projects for the TAC review.

5. Twin Lake Pond Expansion (CIP TW-1)

The Twin Lake CIP project was discussed during the September 16, 2004 BCWMC meeting. The scope and cost of the Twin Lake project increased significantly exceeding the cost shown on the CIP by more than 20%. A minor plan amendment is therefore necessary in order to request funding of the project. Mr. LeFevre said the CIP states the project cost to be \$52,000 and that number is now refined since the CIP was developed and the cost is now about \$140,000. The original project estimate plus the cost of living adjustments and the 20% will not bring the project cost to the level it is now estimated. Since the project is in the CIP, it is not necessary to go through a major plan amendment. The minor plan amendment process will take about six months.

The project originally included creating a water quality pond, identified in the Twin Lake plan, immediately south of the railroad track by modifying a pipe and installing an inlet to provide dead storage in a depression area by the railroad. In the past, working with the railroad proved difficult and time-consuming in getting approval. The City therefore decided to move the pond further south to avoid being located on railroad right-of-way. The additional excavation and control structure increased the costs.

Recommendation:

If the BCWMC would like to start the minor plan amendment process, the BCWMC will need to direct staff to prepare the minor plan amendment notices to start the process. (Note: the BCWMC should discuss the proposed Lakeview Park pond project before providing staff direction).

6. Lakeview Park Pond: Golden Valley: 2007 CIP Request

This proposed project was briefly mentioned during the September meeting. A letter was received from the city of Golden Valley requesting the BCWMC to consider including the City's proposed Lakeview Park pond project in its capital improvement plan (CIP). Specifically the City is requesting the BCWMC to budget \$417,000 in year 2007 for the project. Early drafts of the CIP listed construction of the Boone Avenue Pond (BC-1) during 2007 for a cost of \$215,300. This project was moved to 2004 by the City and is currently under construction. The current CIP identifies the Boone Avenue pond project for 2005.

Project Summary: Lakeview Park is located in western Golden Valley generally northwest of the intersection of Winnsdale Street and Gettysburg Avenue. This area of Golden Valley is fully developed and drains directly to Medicine Lake. The project includes excavation of the water quality pond, park restoration and utility improvements. The estimated cost for excavating the

pond and restoring the park is \$146,000 including contingencies, engineering and administration. The project may also require utility improvements to replace an asbestos pipe and relocate other sewer pipes. If costs are incurred to remove the asbestos pipe and remove and relocate the sanitary sewer pipe along with construction, the total project cost is estimated to be \$417,000. The recently completed Pond BC-107 located at East Medicine Lake Park in Plymouth will provide some “first-flush” treatment for this watershed. However, due to limited space, Pond BC-107 was not designed to treat all of the runoff from its tributary area. A diversion manhole has been constructed that will divert smaller storms through Pond BC-107, larger storms will bypass the pond and discharge directly to Medicine Lake. Construction of the Lakeview Park pond will provide treatment consistent with BCWMC’s Level 1 water quality requirements for the area tributary to Lakeview Park. Based on modeling results provided by the City, the following table demonstrates the following project impacts:

Scenario	TSS to Medicine Lake (Lbs/Yr)	% Removed	TP to Medicine Lake (lbs/Yr)	% Removed
Existing	47,100	0%	171	0%
Pond BC-107 Only (Completed 2004)	29,000	38%	132	23%
Pond BC-107 and Lakeview Park Pond	23,200	51%	117	32%

TSS-Total Suspended Solids

TP- Total Phosphorus

Comments:

- Project benefits include treating runoff from an industrial area that currently does not have in-place water quality treatment that meet “level 1” water quality requirements; project will reduce sediment load to Medicine Lake, which has been a concern of the citizens, municipalities and BCWMC.
- Overall benefits to Medicine Lake are marginal. The project will remove significantly less than 1% of overall TP and TSS loads to Medicine Lake. Water clarity and phosphorus concentration will not change due to this individual project. Some “first flush” treatment will be provided by Pond BC-107.
- Cost may be better allocated elsewhere that would result in greater nutrient removal for less than \$417,000. However, if feasible, eliminating the utility improvements would decrease the cost to \$146,000.
- Approval of the project would require a major plan amendment because it is not on the current CIP. The project was not originally included in the CIP because the site was not

previously identified by the BCWMC and City and because the overall effectiveness did not significantly improve Medicine Lake.

Recommendation:

- a. BCWMC should discuss whether to proceed with a major plan amendment to include this project in the CIP. If the major plan amendment process begins now, the process should be complete by mid-summer in 2005. The Twin Lake project and the Lakeview project could both be included in the same plan amendment to reduce the time and administrative overhead.
- b. BCWMC should discuss whether to reimburse Golden Valley using the assessment process in the Joint Powers Agreement for the Boone Ave. Pond as indicated in the approved CIP. The CIP includes \$215,300 for Boone Ave. Pond in 2005.

7. Status - Medicine Lake Ponds: Plymouth

The city of Plymouth and Bassett Creek Watershed Management Commission constructed two water quality ponds during 2004 as part of the BCWMC capital improvement plan. The projects were included in the BCWMC's capital improvement plan by approval of a minor plan amendment. The majority of the construction costs will be provided by the BCWMC. Funds were obtained for the capital improvement project by the Ad Valorem Tax collected for the BCWMC by Hennepin County. MN/DOT also participated in the project by excavating and removing the sediment delta located downstream of the storm sewer that conveys runoff from TH 169.

Following is the construction status of the two ponds:

- Pond BC-98: north pond located along Medicine Lake Blvd. at Lancaster Lane; construction including excavation, earthwork and structures is 100% complete; some reseeding and planting will be necessary during 2005.
- Pond BC-107: south pond located at East Medicine Lake Park; construction including excavation, earthwork and structures is 95% complete; seeding and plantings will be completed this week; bituminous parking lot at the park will be replaced during 2005; some reseeding and planting will be necessary during 2005. Mn/DOT removed the sediment delta on October 28, 2004.

Recommendation: the BCWMC chair, on behalf of Plymouth and the BCWMC, should send a letter to MN/DOT thanking them for participating with this water quality project.

8. For Information Only

a. Central Water Treatment Plant

A revised grading, drainage, and erosion control plan was reviewed for the proposed site expansion. A letter of approval was sent to the city of Plymouth.

b. Zachary Water Treatment Plant

A revised grading, drainage, and erosion control plan was reviewed for the proposed site expansion. A letter of approval was sent to the city of Plymouth.

c. Plymouth City Center - Public Safety Building Addition

A revised grading, drainage, and erosion control plan was reviewed for the proposed site expansion. A letter of approval was sent to the city of Plymouth.

d. Ridgedale Regional Center Library

A grading, drainage, and erosion control plan was reviewed for the proposed site improvements. A letter of approval was sent to the city of Minnetonka.

e. Shelter Corporation

A grading, drainage, and erosion control plan was reviewed for the proposed site development. A letter of recommendation was sent to the city of Minnetonka.

f. Plymouth Office Plaza

A grading, drainage, and erosion control plan was reviewed for the proposed site expansion. A letter of recommendation was sent to the city of Plymouth. A revised plan was reviewed and a letter of approval was sent to the City.

g. Erosion Control Inspection Report

A copy of the October 20, 2004 inspection report is included.