



Memorandum

To: Bassett Creek Watershed Management Commission
From: Barr Engineering Co.
Subject: Item 6Dii – Consider Approval of Proposal to Prepare Feasibility Study for Westwood Lake Water Quality Improvement Project (2019 CIP Project WST-2)
BCWMC September 21, 2017 Meeting Agenda
Date: September 13, 2017

6Dii. Consider Approval of Proposal to Prepare Feasibility Study for Westwood Lake Water Quality Improvement Project (2019 CIP Project WST-2)

Recommendations:

1. Consider approving the scope of work and \$40,500 budget presented in this memorandum and direct the Engineer to complete the feasibility study for the Westwood Lake Water Quality Improvement Project (2019 CIP Project WST-2) to be constructed in 2019.
2. Direct the Engineer to consult with the U.S. Army Corps of Engineers (USACE) to determine whether the Resources Management Plan Pre-application Consultation Protocols may apply for this project.
3. Direct the Engineer to prepare a feasibility study that complies with the requirements of the USACE and BCWMC criteria.

Background

The proposed Westwood Lake Water Quality Improvement Project is in the BCWMC's current CIP (Table 5-3, as amended in July 2017), listed as project WST-2 with a total estimated cost of \$300,000. At its March 16, 2017 meeting, the Commission approved the 5-year (working) CIP, which included project WST-2, scheduled for construction in 2019.

The Westwood Lake Water Quality Improvement Project is part of a much larger project at the Westwood Hills Nature Center (WHNC), a 160-acre park located in St. Louis Park. WHNC is in the planning phase of a complete reconstruction of its facilities in 2019. A master plan for the reconstruction project was completed in May 2016 for the City of St. Louis Park. The proposed improvements in the master plan include trail circulation and wayfinding, additional parking, expanded outdoor classroom area and water garden, expanded natural play and outdoor education area, improved canoe and kayak launch, interpretive features, and new interpretive center building. As part of this project, the City of St. Louis Park is proposing to construct additional water quality improvements to treat stormwater runoff that would otherwise flow untreated to Westwood Lake. The improvements may include pervious pavers or other best management practices at the parking lot or trails, improvements to the existing stormwater pond, or

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vegetation management. The BCWMC's WST-2 CIP project would go towards the portions of the water quality improvements that go "above and beyond" the BCWMC requirements for the WHNC project.

As is required for BCWMC CIP Projects, a feasibility study must be completed prior to BCWMC holding a hearing and ordering the project. The feasibility study will develop conceptual designs of the water quality improvement project, review the permitting requirements, and develop concept plans and cost estimates for the project.

This project is consistent with the goals (Section 4.1) and policies (Sections 4.2.1, 4.2.2, and 4.2.10) in the 2015 – 2025 BCWMC Watershed Management Plan.

The BCWMC completed a Resource Management Plan (RMP) in 2009 through which the USACE 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 USACE review/approval process. Although this water quality project was not included in the RMP, the USACE has allowed the RMP protocols to be applied to other projects not specifically included in the RMP. With the completion of the protocols, we expect the USACE application process to move more quickly than it would otherwise. 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 BCWMC feasibility study. In general, the protocols require compliance with Section 106 of the National Historic Preservation Act, compliance with Section 404 of the Clean Water Act, and Clean Water Act Section 401 Water Quality Certification. Compliance with Section 106 typically requires a cultural resources inventory.

We understand that the City of St. Louis Park will perform the necessary wetland delineations, soil borings, a topographic survey, tree survey, and a Phase 1 environmental site assessment, as part of the larger WHNC project. The city will also perform an EAW for the WHNC project, if needed. We will perform the Section 106 cultural resources review as part of the feasibility study. We assume the city's WHNC field investigations will be completed by the end of October so the results can be used for the feasibility study.

Content and Scope of Feasibility Study

The feasibility study will address and include the feasibility study criteria adopted by the BCWMC in October 2013:

- Analysis of multiple alternatives with the context of Commission objectives, including the following for each alternative:
 - Pros and cons analysis
 - Cost estimate for construction and a "30-year cost"
 - Analysis of life expectancy
 - Summarize each alternative for the Commission to judge its merits
 - Cost estimate for annualized cost per pound of pollutant removal
- Evaluation of new and/or innovative approaches

- Identification of permitting requirements

As noted earlier, most of the RMP protocols must be addressed as part of the feasibility study. In addition to the tasks above, the feasibility study will include the identification of wetland impacts to meet the RMP pre-application protocols.

In addition to the RMP protocols and specific criteria adopted by the BCMWC, it is important to gather stakeholder input. The BCWMC Engineer will work with the BCWMC Administrator, and City of St. Louis Park staff to identify the most-effective means to gather input from the public and other affected stakeholders.

Figure 1 shows the project area covered by this feasibility study.

Below is a summary of the work scope components for this feasibility study:

1) Project Meetings

- a) Project kick-off meeting with BCWMC staff, commissioners, and City of St. Louis Park staff (including WHNC staff) and preparation of meeting notes.
- b) Meeting with BCWMC staff, City staff, USACE, MnDNR and MPCA to discuss concept alternatives and review permit requirements for project, and prepare meeting minutes to confirm regulatory agencies' discussion results.

2) Field Investigations

- a) Soil Borings – For this work scope, we assume that others are coordinating the collection of soil borings in the parking lot and BMP area. We recommend collecting borings that extend to groundwater. If groundwater is not encountered, we recommend borings are 12 to 15 feet in depth. We need to know soil types groundwater elevations and blow counts to complete the feasibility study.
- b) Environmental investigations – For this work scope, we assume that an Environmental Assessment Worksheet (EAW) or a Phase 1 environmental investigation, if necessary, will be completed by others. We recommend that a Phase 1 environmental investigation take place prior to completion of the feasibility study as the Phase 1 results will affect project design and construction costs. An EAW may not be possible to complete until after the feasibility study is complete, as typically you need project drawings that are further along in design.
- c) Wetland delineations – We understand wetland delineations are being completed by others. Barr needs to know the wetland type classifications and descriptions, along with boundary locations in AutoCAD, to complete the feasibility study.
- d) Topographic and utility location survey – We understand a topographic and utility location survey for the project area is being completed by others. We need this information in an AutoCAD format to complete the feasibility study.

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- e) Tree location, diameter, species, and condition survey – We understand a tree survey is being completed by others. We need this information in an AutoCAD format to help with estimating project design and costs. A tree survey will also help determine if the trees within the project area could provide habitat for the northern long eared bat, which is an endangered species.
- f) Threatened and endangered species desktop review – In anticipation of a future environmental review, we will perform a desktop review of the available databases to determine the potential for adverse impacts to state and federally-listed species and will summarize the information in the feasibility report.
- g) Cultural resources desktop review - In anticipation of a future environmental review, Barr will request review of the existing database from the State Historic Preservation Office (SHPO) for information related to known historic and archaeological resources in the project vicinity, and will summarize any available information in the feasibility report.

3) Evaluation and Concept Plans

- a) Development of up to 3 concepts for water quality treatment around the Westwood Hills Nature Center proposed parking lot and building.
- b) Use of the BCWMC P8 model to estimate impacts to pollutant removals as a result of the project concepts.
- c) Identify permitting requirements for the concepts, based on wetland delineations and other compiled data, and one (1) meeting with USACE, MnDNR and MPCA staff (see task 1b).
- d) Develop cost estimates for the project, including a "30-year cost," analysis of life expectancy, and annualized cost per pound of pollutant removal.

4) Public Engagement

- a) Coordinate with BCWMC Administrator and City staff to determine best means to gather public input, such as mailings, newspaper articles, open houses, etc. Primary group for public discussions will be the nearby residents and property owners, and the Westwood Hills Nature Center patrons. The budget for this task includes time to prepare for and attend one public meeting, and it is assumed that meeting coordination, expenses, and set-up will be largely completed by the BCWMC Administrator with assistance from the City.
- b) Assist with public involvement process as necessary – prepare handouts, boards or presentation.

5) Feasibility Report

- a) Prepare draft report for review by City staff and BCWMC staff/interested commissioners; revise report based upon review comments.
- b) Present draft feasibility study findings at BCWMC meeting.

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- c) Prepare final report for approval at BCWMC meeting and use at future project hearing.
- d) Present final feasibility study findings at BCWMC meeting.

Cost Estimate

Table 1 summarizes our cost estimate for the scope of work outlined above.

Table 1. Westwood Hills Nature Center Water Quality Improvement Project Feasibility Study Costs

Tasks	Estimated Cost
1) Project Meetings	\$5,100
2) Field Investigations	\$3,500
3) Evaluation and Concept Plans	\$15,700
4) Discuss project impacts with public	\$4,400
5) Feasibility Report	\$11,800
Total	\$40,500

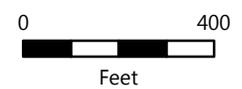
Schedule

We will complete the tasks and milestones outlined in the scope of work on the following schedule.

Tasks and milestones	Estimated Schedule
Kick-off meeting with BCWMC and City of St. Louis Park staff	September 2017
Wetland delineations & TEP review	September/October 2017
Topographic, utility, and tree survey	September/October 2017
Desktop Reviews – Threatened and Endangered Species, Cultural Resources	October 2017
Meeting with BCWMC, City, USACE, MN DNR, and MPCA	November 2017
Develop concept alternatives and cost estimates	December 2017/January 2018
Public meeting	February 2018
Submit draft feasibility report for City and BCWMC staff review	March 9, 2018
City and BCWMC staff complete review	March 23, 2018
Submit draft feasibility report for BCWMC review at Commission meeting	April 11, 2018
BCWMC completes review at Commission meeting	April 19, 2018
Submit final feasibility report for BCWMC review at Commission meeting	May 9, 2018
Final Feasibility Report – BCWMC approval at Commission meeting	May 17, 2018



-  Feasibility Study Area
-  Hennepin County Parcels
-  10-Foot Contour
-  2-Foot Contour



Westwood Lake
Water Quality
Improvement Project

FIGURE 1

