



Bassett Creek Watershed Management Commission

Plymouth Creek Restoration Project (2017CR-P) Feasibility Study Scope and Budget

BCWMC Approval August 20, 2015

Background

This project would address needed restoration between Annapolis Lane and approximately 2,500 feet upstream of Annapolis Lane in Plymouth. The project is in the Bassett Creek Watershed Management Commission's (BCWMC) current CIP (2017CR-P) and scheduled to be constructed in 2017. A portion of the project reach is included in the BCWMC's 2009 Resource Management Plan (RMP).

A feasibility study must be completed that includes a preliminary analysis and design for the project along with construction cost estimates; and the study must be completed prior to BCWMC holding a hearing as preface to ordering the project. Since a portion of the reach is included in the RMP, it is expected that the USACE will require this feasibility study to meet the pre-application protocols laid out for the RMP restoration projects. The protocols include review of cultural resources, wetland delineations, wetland functional assessment, and wetland impacts, which are beyond the typical scope of feasibility studies.

Content and Scope for a Feasibility Study for Plymouth Creek Restoration Project

Through the BCWMC's RMP process, the US Army Corps of Engineers (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. 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. The feasibility study will also address criteria adopted by the BCWMC in October 2013, including:

- Analysis of multiple alternatives, 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

In addition to the RMP protocols and specific criteria adopted by the BCMWC, it is important to gather public input early and often in the process. The Engineer will work with the BCWMC Administrator and City of Plymouth staff to identify the means that are likely to be most effective in gathering public input and begin the public involvement process. Prior to finishing a draft feasibility report, we will seek ways to communicate to impacted landowners and users of adjacent public lands what has been identified as a problem and discuss with them means that are being considered to address the issue.

Below is a summary of the required feasibility study content for of this project:

Discuss project requirements with the USACE / MN DNR

- Hold two meetings with USACE, MN DNR, City staff and BCWMC Administrator to discuss initial and refined concept alternatives and likely permit requirements for this project.
- Obtain written confirmation of discussion results.

Discuss project impacts with public

- Coordinate with BCWMC Administrator and City staff to determine best means to gather public input, such as mailings, newspaper articles, open houses, etc.
- Assist with public involvement process as necessary.

Reach Evaluation and Concept Plans

- Field work and site visits of the reach to evaluate the reach and identify potential project features
- Review available hydraulic modeling for this reach
- Estimate pollution reduction potential
- Analysis of multiple alternatives for addressing identified issues within the reach.
- Develop draft concept plans and cost estimates for stream restoration for this reach
- Refine concept plans and cost estimates based on input from City, USACE, MN DNR, and BCWMC

Wetland Impacts Evaluation

- Collect base data (GIS air photos, soil survey, NWI maps, etc.) for field wetland assessments that were not included in the areas covered by the RMP. If wetlands are found on site, full delineation and assessment will occur during design phase.

Archeological Evaluation

- Perform Phase 1A desktop cultural resource reconnaissance surveys for areas not covered by the RMP that will scope potential issues that may factor into the USACE permit conditions and cost estimate.

Feasibility Report

- Draft report for review by City and BCWMC
- Present draft feasibility study findings at BCWMC meeting
- Final report for project hearing

Optional Scope Item

The stream restoration project will include excavation and grading activities which may have the potential to encounter legacy contamination issues associated with historical land uses at properties adjoining the creek. Environmental investigations should be conducted to further address that concern. The Engineer recommends completing a limited Phase I Environmental Site Assessment (Phase I) either during the feasibility study or early in the design to review available records for properties in the project area (regulatory databases, historical air photos, interviews with people knowledgeable about the historical land use, etc.).

If the potential for contamination is discovered during the Phase I process, then a Phase II investigation may be necessary and would include collection of environmental samples from the project area for laboratory analysis to determine if contamination is present. If a Phase II investigation is necessary, then the cost and scope of a Phase II investigation would be guided by the results of the Phase I. In general, the Phase II would focus on areas where historical contamination is suspected and where data is not already available, with emphasis on locations where excavation is planned for the stream restoration project.

Based on current knowledge of the project area, it is assumed that a Phase II investigation will not be necessary, so it is not included in this scope of work. If the Phase I investigation finds areas of potential contamination, then the alternatives analysis will consider the impacts of disturbing areas where contamination may be present and whether a Phase II will be necessary to complete feasibility or if it should be completed during final design.

Cost Estimate

Task	Estimated Cost
Meetings with USACE, MN DNR, City, and BCMWC	\$2,500
Public involvement	\$2,500
Reach evaluation, alternatives analysis, pollution reduction estimates, and cost estimates	\$19,600
Wetland delineation¹	\$7,900 ¹
Archeological evaluation	\$3,700
Feasibility Report and presentation to BCWMC	\$19,800
Total	\$56,000
Optional: Phase I soil contamination investigation	\$7,000
Total with Optional Phase I soil investigation	\$63,000

¹ Discussions with City of Plymouth indicate that wetlands are likely present within the project area and that a delineation will be necessary.

Estimated Schedule

Tasks and milestones	Estimated Completion Date
Kick-off meeting with City of Plymouth	September 1, 2015
Information review and initial reach evaluation	September 7, 2015
Complete wetland assessment	September 25, 2015
Complete archeological investigation	September 25, 2015
Phase I soil contamination investigation	September 25, 2015
Develop initial concept alternatives; develop preliminary cost estimates	October 9, 2015
Hold initial meeting with USACE, MN DNR, City and BCWMC	October 23, 2015
Revise and refine concept alternatives and cost estimates	November 6, 2015
Draft Feasibility Report for City review	December 11, 2015
Draft Feasibility Report for BCWMC review	January 13, 2016,
Present draft feasibility report findings at January 2016 BCMWC meeting	January 21, 2016
Final Feasibility Report for March 17, 2016 BCWMC meeting	March 9, 2016