



## Memorandum

**To:** Bassett Creek Watershed Management Commission  
**From:** Barr Engineering Co.  
**Subject:** Item 5A – Consider Approval of Proposal for Engineering Services for the Main Stem Lagoon Dredging Project (2021 CIP Project BC-7)  
BCWMC January 21, 2021 Meeting Agenda  
**Date:** January 13, 2021

### **5A. Consider Approval of Proposal for Engineering Services for the Main Stem Lagoon Dredging Project (2021 CIP Project BC-7)**

#### **Recommendations:**

1. Consider approving the scope of work and \$238,000 budget presented in this memorandum and direct the Engineer to prepare final design, develop plans and specifications, and provide permitting assistance, bidding assistance and construction services for the Main Stem Lagoon Dredging Project (2021 CIP Project BC-7), scheduled for construction in winter 2022 – 2023.

#### **Background**

At the July 16, 2020 meeting, the Commission approved a plan to fund the “Dredge Accumulated Sediment in the Main Stem of Bassett Creek in Wirth Park Project” (Main Stem Lagoon Dredging Project) with CIP levies in tax years 2021 – 2024, up to \$1.2M in Closed Project Account funds, and grant funds, if awarded. At the September 17, 2020 meeting, the Commission passed resolution 20-06 officially ordering the Project. Unlike most CIP projects where the Commission has an agreement with a member city to design and construct the project, the Commission will design and construct this project on its own, in close coordination with the MPRB, Minneapolis, and Golden Valley.

At their November 18, 2020 meeting, the Commission approved the project timing – begin project design and permitting in summer 2021 and dredge Lagoons D, E, and F in winter 2022 – 2023 – and to receive a scope of work from the Commission Engineer to provide project engineering for an amount not to exceed \$300,000.

This project will remove almost 40,000 cubic yards of accumulated sediment from three of seven “lagoons” created along the Main Stem of Bassett Creek in Theodore Wirth Regional Park, between Golden Valley Road and Highway 55 (Figure 1). These lagoons were originally created in the mid-1930s by Civilian Conservation Corps crews. The project will improve flow capacity, floodplain storage, and habitat, and will result in significant water quality improvements by removing an estimated 600 lbs/year total phosphorus and 156,000 lbs/year total suspended solids which currently flow downstream through the Bassett Creek Valley and into the Mississippi River.

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The estimated project cost is higher than a typical sediment removal project due to the landfill disposal of contaminated sediment. Despite these challenges, the project results in a relatively low cost per pound pollutant removal of only \$270/pound of total phosphorus.

The feasibility report for the project (Main Stem Lagoon Dredging Project Feasibility Study, June 2020, Barr) will form the basis for the project design. The feasibility report and further project information can be found online at [www.bassettcreekwmo.org/projects/all-projects/bassett-creek-main-stem-lagoon-dredging-project](http://www.bassettcreekwmo.org/projects/all-projects/bassett-creek-main-stem-lagoon-dredging-project).

## Proposed Scope of Work

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

### 1) Project Coordination and Project Meetings

- a) Project coordination meeting with BCWMC staff, commissioners, Minneapolis staff, Golden Valley staff and MPRB staff and preparation of meeting notes. This meeting would take place after 50% draft plans are developed.
- b) BCWMC Meeting #1: Commission meeting to present 50% design plans including memo
- c) BCWMC Meeting #2: Commission meeting to present 90% design plans including memo
- d) BCWMC Meeting #3: Commission meeting to present final report upon project completion
- e) Other coordination meetings

Meetings related to bidding and construction are incorporated under other tasks.

### 2) Public Engagement

- a) Coordinate with BCWMC Administrator, Minneapolis staff, Golden Valley staff, and MPRB staff to determine the best means to gather public input on project plans and keep the public informed on impacts to the park during construction. Primary group for public engagement will be the park users, nearby residents, and property owners. The budget for this task includes time to prepare for and attend one public meeting including preparing handouts, boards, and/or presentation. This task also includes assisting with updates to the project partners through MPRB and BCWMC website project page and responding to public questions and comments. We assume that meeting coordination, expenses, and set-up will be largely completed by the BCWMC Administrator with assistance from the City and MPRB.

### 2) Permitting

Below is a list of anticipated permitting and approvals required for the project. We will pay all permitting fees and submit invoices to obtain reimbursement.

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- a) *Minnesota Wetland Conservation Act (WCA) Approval* - The City of Golden Valley is the LGU for the project location. The Minnesota Board of Water and Soil Resources (BWSR) oversees administration of the WCA statewide. A permit related to wetland impacts will likely be required. Although it is also likely the project will be covered under WCA no-loss criteria 8420.0415 (B), the LGU will make the final determination. We will complete the joint application form and submit for approval.
- b) *US Army Corps of Engineers permit (Section 404 Permit and Section 401 Certification)* – We will submit the joint permit applications to both the LGU and the USACE. It is likely the proposed project would fall under a USACE Nationwide Permit from the USACE if the project can be performed through excavation only (i.e., no grading or filling). However, it is ultimately up to the discretion of the USACE. USACE decisions on Nationwide permits typically happen within 60 days of submittal.
  - i) *State Historic Preservation Office (SHPO)* - Any determination by USACE would be subject to SHPO review and concurrence. During the feasibility study USACE indicated this project could likely receive a “no adverse effect” determination, so long as the applicant provides adequate documentation showing that the proposed dredging activities are adhering to the original park plans from the 1930s, and temporary impacts associated with project are minimized as much as practicable. However, coordination with SHPO could result in a different determination and delay the permitting process. Because the project area was completely impacted during construction in the 1930s, and that dredging would only occur within the limits of the original design, it is not anticipated that there would be any significant cultural resources impacted by this project.
- c) *Minnesota Department of Natural Resources (MDNR) public waters work permit* – Bassett Creek is a public watercourse and Lagoon E is a public water, so the proposed work will require a MDNR public waters work permit. We will prepare and submit this permit application.
- d) *Environmental Assessment Worksheet (EAW)* – Minnesota Rules Section 4410.4300, Mandatory EAW Categories, Subp. 27A require preparation of an EAW for “projects that will change or diminish the course, current, or cross-section of one acre or more of any public water or public waters wetland.” The rule further states that in this situation, “the local government unit shall be the RGU.” Based on these requirements, an EAW is required for the Main Stem Lagoon Dredging Project and the City of Golden Valley is the Regional Government Unit (RGU) for preparing the EAW. We will prepare and submit the EAW to the City of Golden Valley for review and approval.
- e) *Minnesota Pollution Control Agency (MPCA) permitting* – this project is not anticipated to disturb more than one (1) acre of upland and therefore would not require a construction stormwater general permit or a stormwater pollution prevention plan (SWPPP). However, we are including some budget to make sure the design follows MPCA guidelines. If the scope of construction

changes and the one-acre threshold of upland disturbance is exceeded this task would need to be re-evaluated.

- f) *Minneapolis Park and Recreation Board (MPRB) construction permit* - MPRB Construction Permits are required for construction related activities on parkland and are administered by the MPRB Planning Services Division. We will prepare and submit this permit application.
- g) *City of Golden Valley stormwater management permit* - The City of Golden Valley requires a Stormwater Management Permit for land-disturbing activities that remove soils or vegetation, including but not limited to clearing, digging, dredging, draining, or filling. This project exceeds the thresholds that trigger this permit. We will prepare and submit this permit application.

#### 4) Design

We will build upon the feasibility study concept design to develop the project design. We will prepare documents to be used for bidding and construction.

- a) *Construction Drawings:* We will develop the following and provide to Cities of Golden Valley and Minneapolis and the MPRB for review and comment:
  - i. 50% plans and memo to BCWMC
  - ii. 90% plans and memo to BCWMC
  - iii. 100% plans for bidding and construction
  - iv. Following each submittal, we will edit the plans based on reviews from City of Golden Valley, City of Minneapolis, MPRB, and BCWMC.

Anticipated drawings include:

- Cover sheet
  - Existing conditions, removals, and erosion control plan
  - Site access & traffic control plan
  - Grading plan (each Lagoon)
  - Grading sections (each Lagoon)
  - Project details
  - Restoration plan(s)
- b) *Specifications:* We will develop front-end documents (EJCDC format including instructions to bidders, bid form, contract (form of agreement), performance and payment bonds, general and supplementary conditions, prevailing wages, etc.) and technical specifications for the 90% & 100% submittals. We will coordinate with the Commission attorney regarding the front-end documents.
  - c) *Engineer's opinion of cost:* We will prepare an engineer's opinion of probable construction costs for the 50%, 90% & 100% submittals. We will report the opinion of costs to the Commission in a unit price format.

- d) *Water quality modeling updates:* The scope includes additional refinements to the water quality modeling as the design components are finalized and incorporation of the constructed improvements into the model after completion of the project. We will incorporate the modeling results into the 50% & 90% design submittal memos to the Commission.

## 5) Bidding Services

The scope includes the following bidding services:

- a) Prepare bidding documents and issue addenda (if necessary)
- b) Hold a pre-bid meeting
- c) Post the bid via QuestCDN online bidding and administer the bidding process, including responding to questions from bidders and preparing any required addenda
- d) Prepare bid tabulation, review bids and assist the BCWMC with selection of Contractor

## 6) Construction Services

The scope includes the following construction services:

- a) *Pre-construction meeting:* We will hold a pre-construction meeting. Invitees to include contractor, MPRB, City of Golden Valley, City of Minneapolis, and Commission administrator.
- b) *Construction Observation:* The scope includes budget for up to 280 hours of project observation during the construction phase of the project. The budget assumes full-time observation at the start of construction for (2) weeks and reduces to part time (2-4 hours daily) thereafter. Construction is assumed to take (12) weeks.
- c) *Construction Administration:* We will provide the following services:
  - i. *Submittals:* We will manage all submittals (any products or documentation requiring the engineer's review and/or approval) including tracking, review, resubmittals and approvals.
  - ii. *Pay Applications:* We will manage and review pay applications, including verification of pay quantities.
  - iii. *Change Orders:* We will review contractor's change order requests and prepare all change orders.
  - iv. *Updates and Modifications:* We will prepare and distribute updated construction documents for any changes made during construction. This assumes the changes are small adjustments to the design and not substantial changes in construction scope or duration.
  - v. *Contractor Communication:* We will communicate with the contractor to clarify plans and specifications and answer questions that arise during construction.
- d) *Record drawings:* We will provide record drawings showing locations and elevations of project features, following completion of the project. These drawings will also serve as a reference point for future projects.

- e) *Environmental Observation:* Based on the sampling and testing performed during the feasibility study, we will perform limited environmental services during construction, including coordinating with the contractor and landfill, reviewing site conditions, and performing limited field screening of dredged material. Additional lab testing is not assumed as part of this task. This task does not include the additional work that would be needed should contamination be uncovered that varies significantly from sampling and testing performed during the feasibility study.
- f) *Contingency Environmental Soil Testing:* In the event dredging operations uncover material that appears contaminated, but inconsistent with the contamination found during the feasibility study, this task provides some additional budget for sampling, testing, data analysis, and coordination with the contractor and/or landfill. We assume that if other contamination is found, it would ultimately be disposed of at the landfill with the rest of the dredged material, but would require additional testing for the landfill to accept it.

## **7) Project Management**

We will manage project scheduling and budgeting, in close coordination with the Commission Administrator, provide grant administration assistance and reporting, and prepare and send project email updates (bi-weekly during design, weekly during construction) that briefly summarize:

- a) Work completed since the previous updates
- b) Upcoming work
- c) Information, data or actions we need from others

## **8) Deliverables**

We will provide the Commission with the following deliverables during the proposed work:

- a) 50%, 90% & 100% construction drawings
- b) 90% & 100% specifications
- c) 50%, 90% & 100% opinion of cost
- d) Memos accompanying the 50% & 90% construction plans. The memos will describe the project, how the project follows or departs from the feasibility study, and the water quality impacts
- e) Record drawings
- f) Project meetings, pre-bid meeting, and pre-construction meeting
- g) Project email updates

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## Cost Estimate

The table below summarizes our cost estimate for the scope of work outlined above.

Tasks	Estimated Total
1) Project Coordination and Project Meetings	\$15,000
2) Public Engagement	\$5,600
3) Permitting	\$52,800
4) Design	\$35,700
5) Bidding Services	\$7,700
6) Construction Services	\$97,300
7) Project Management	\$23,900
<b>Total</b>	<b>\$238,000</b>

## Schedule

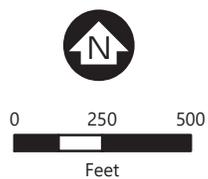
We will complete the tasks and milestones outlined in the scope of work on the following schedule.

Tasks and milestones	Estimated Schedule
Design – complete 50% plans for review and permitting	Spring/Summer 2021
Permitting	Summer/Fall/Winter 2021
Design – complete 90% plans for review	Winter 2021/2022
Design – complete 100% plans for review	Winter 2022
Bidding	By Fall 2022
Construction	Winter 2022/2023
Record drawings, final restoration, project closeout	Spring/Summer 2023



Aerial Imagery: April 2019; NearMap

-  Project Area
-  Theodore Wirth Regional Park



**SITE LOCATION MAP**  
 Golden Valley, Minnesota

FIGURE 1