



## Memorandum

**To:** Bassett Creek Watershed Management Commission  
**From:** Barr Engineering Co.  
**Subject:** Item 5A – Consider Approval of 50% Design Plans for 2021 Main Stem Lagoon Dredging Project (2021 CIP Project BC-7) -- BCWMC December 16, 2021 Meeting Agenda  
**Date:** December 9, 2021  
**Project:** 23271860.00

### **5A Consider Approval of 50% Design Plans for 2021 Main Stem Lagoon Dredging Project, Golden Valley (2021 CIP Project BC-7)**

#### **Summary:**

**Proposed Work:** 2021 Main Stem Lagoon Dredging Project, Golden Valley (2021 CIP Project BC-7)

**Basis for Commission Review:** 50% Design Plans Review

**Change in Impervious Surface:** N.A.

#### **Recommendations:**

- 1) Consider approval of 50% drawings
- 2) Authorize Commission Engineer to continue design and permitting and bring 90% design plans to a future Commission meeting
- 3) Authorize Commission Attorney to work with MPRB on documentation regarding indemnification, liabilities, and necessary permissions for construction

The Bassett Creek Watershed Management Commission (BCWMC) is funding the \$2,759,000 "Dredge Accumulated Sediment in the Main Stem of Bassett Creek in Wirth Park Project" (Main Stem Lagoon Dredging Project) (2021 CIP Project BC-7):

- \$2,434,000 funded through a combination of CIP levies collected in tax years 2021 – 2024 and up to \$800,000 in BCWMC closed project account funds,
- Remaining \$325,000 funded through grants – \$250,000 Watershed Based Implementation Funding and \$75,000 Hennepin County Opportunity Grant funding.

Unlike most CIP projects where the BCWMC enters into an agreement with a member city to design and construct the project, the BCWMC is designing and constructing this project, in close coordination with the Minneapolis Park and Recreation Board, the City of Minneapolis, and the City of Golden Valley. At their November 2020 meeting, the Commission approved a timeline for implementation and directed the Commission Engineer to prepare a scope of work for project design and engineering. The Commission approved the engineering scope and budget at their January 2021 meeting.

The Commission Engineer completed the 50% design plans. Pursuant to the approved work scope, the Commission must review and approve the design plans.

## **Selected Project and Design features – 50% plans**

The Commission approved the Main Stem Lagoon Dredging Project Feasibility Study in May 2020 and selected implementation of Alternative 2-all (dredge all three lagoons to 6-foot depth).

This project will remove 39,600 cubic yards (CY) 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 of total phosphorus and 156,000 lbs/year of total suspended solids which currently flow downstream through the Bassett Creek Valley and into the Mississippi River.

Based on testing conducted during the feasibility study, the excavated sediment is considered contaminated and must be disposed at a landfill. Despite the higher sediment disposal costs, the project results in a relatively low cost per pound pollutant removal of only \$226/pound of total phosphorus.

The feasibility report for the project formed the basis for the project design, and there are no material differences from the feasibility level concepts. The feasibility report and further project information can be found online at <https://www.bassettcreekwmo.org/index.php?cID=506>.

The primary design features of the proposed work, as shown on the attached 50% plans, include:

- 1) Pond dredging. As noted above, the project will remove 39,600 CY of accumulated sediment to deepen Lagoons D, E, and F to a depth of 6 feet. The project will re-establish an aesthetic and function similar to the original design. Based on concentrations of polycyclic aromatic hydrocarbons (PAH) (as BaP equivalents) and diesel range organics (DRO), sediment in all three lagoons does not meet MPCA guidelines for Unregulated Fill (MPCA, 2012), indicating it is not suitable for unrestricted offsite reuse. In addition, BaP equivalents are above the MPCA Industrial Soil Reference Values (SRV), indicating the sediments are not suitable for reuse at other commercial or industrial properties. Based on the sediment sampling results and MPCA guidelines, the dredged material will require landfill disposal. Pond side slopes will be 4H:1V starting approximately at the normal water level. The intent is to avoid disturbing the existing banks. The design does not incorporate a bench.
- 2) Streambank erosion repairs. The minor erosion on the streambanks identified in the feasibility study at the upstream end of Lagoon E (riprap repair) and along the left bank of Lagoon D (live stakes) are relatively small and will be repaired as part of the larger dredging project.
- 3) Construction access for Lagoons E and F will be from Theodore Wirth Parkway, and for Lagoon D will be along the Grand Rounds Trail between Theodore Wirth Parkway and a location just south of the Plymouth Avenue bridge. A trail closure is anticipated during dredging of Lagoon D.
- 4) Restoration. Construction access points would be restored with existing vegetation (primarily turf grass). There is a narrow strip around the lagoon perimeters that would be seeded with a wetland mix

(or other appropriate native seed mix) and covered with erosion control blanket. With the exception of construction access, construction will not disturb the existing vegetative buffer around the ponds, so the design does not include buffer restoration.

- 5) Previous BCWMC Main Stem stream restoration project. The construction will avoid the previous stream restoration project in this area. The design plans will be modified to show the location(s) of the stream restoration area, with direction to the contractor to avoid the area(s) during construction.

## Opinion of cost

The table below summarizes our opinion of costs, based on the 50% design plans:

**Table 1 Opinion of Cost Summary – Deepen ALL Lagoons to 6 Feet**

Description	Unit	Estimated Quantity	Unit Price	Extension
Mobilization / Demobilization	LS	1	\$160,000.00	\$160,000.00
Erosion & Sediment Control	LS	1	\$20,000.00	\$20,000.00
Control of Water / Dewatering	LS	1	\$45,000.00	\$45,000.00
Remove and Dispose Dredged Material at Landfill	CY	39,600	\$50.00	\$1,980,000.00
Natural Bank Stabilization	LF	100	\$56.00	\$5,600.00
Riprap Bank Stabilization	CY	20	\$150.00	\$3,000.00
Restoration	LS	1	\$5,000.00	\$5,000.00
Parkway Paving/Mitigation	SY	2500	\$10.00	\$25,000.00
Subtotal				\$2,244,000.00
Construction Contingency (10%)				\$225,000.00
<b>Total w/Construction Contingency</b>				<b>\$2,469,000.00</b>
Engineering				\$238,000.00
<b>Total w/ Engineering</b>				<b>\$2,707,000.00</b>
<b>ESTIMATED ACCURACY RANGE</b>	-15%			<b>\$2,301,000.00</b>
	25%			<b>\$2,877,000.00</b>

The total estimated project costs including design and engineering are within the overall project budget.

## Schedule

Dredging of all three lagoons (D, E, and F) is planned for winter 2022-2023. The table below summarizes the anticipated schedule.

Tasks and milestones	Estimated Schedule
Design – complete 50% plans and opinion of cost for Commission review and approval and agency permitting	December 2021 Commission meeting
Permitting	Ongoing through Spring/Summer 2022
Public engagement (Inform)	January 2022 through construction
Design – complete 90% plans, specifications, and opinion of cost for Commission review and approval	June/July 2022 Commission meeting
Design – complete 100% plans specifications, and opinion of cost for Commission review and approval/authorize project to go out for bids	August 2022
Bidding	September/October 2022
Commission meeting to award the bid	October 2022 Commission meeting
Construction	Winter 2022 – 2023
Record drawings, final restoration, project closeout	Spring/Summer 2023

## Stakeholder Engagement

We will reach out to two main groups during design and construction of this project:

1. Project stakeholders: BCWMC Commissioners, BCWMC staff, Minneapolis Park and Recreation Board, City of Golden Valley and City of Minneapolis.

We held our first project stakeholder meeting on December 7, 2021 and received many helpful comments and suggestions as a result of the meeting. We will continue to coordinate with the stakeholders, and plan to hold at least one more meeting with the group (prior to 90% plan approval by the Commission).

2. Public – we will coordinate with the project stakeholders (especially MPRB) to reach out to two subsets of the public to inform them about the project:
  - a. Neighborhood residents – This will include outreach to nearby neighborhood associations (Harrison, Bryn Mawr, Northside Residents Redevelopment Council) and articles in neighborhood newsletters and local newspapers about the project and links to the MRPB webpage, which will include an option to sign up for automatic email updates.
  - b. Park users, including winter (skier) users and users during other seasons - This will include coordination with the Loppet Foundation and signage in the park with QR codes directing the public to webpages. Both BCWMC and MPRB will maintain a project webpage with timely updates, especially during construction. As noted above, the MRPB webpage will include an option to sign up for automatic email updates.

## Approvals/permit requirements

In addition to BCWMC approval of the plans, the following permitting and approvals are required for the project.

- 1) 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.

- 2) 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.
  - a) 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.
- 3) Minnesota Department of Natural Resources (MDNR) public waters work permit – Bassett Creek is a public watercourse and Lagoon E is a public water (MDNR #27065100P), so the proposed work will require a MDNR public waters work permit. We will prepare and submit this permit application.
- 4) 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.” Based on these requirements, an EAW is required for the project. The City of Golden Valley is the Regional Government Unit (RGU) for preparing the EAW. The Commission Engineer prepared the EAW, the Commission approved the EAW at their October 2021 meeting, and the City of Golden Valley subsequently approved the EAW. As the RGU, the city publicly noticed the EAW and the Commission Engineer submitted the EAW (on behalf of the RGU) to the Minnesota Environmental Quality Board (EQB) for a 30-day comment period on November 24, 2021. Comments on the EAW will be received through December 30, 2021. After completion of the 30-day comment period, responses to comments will be prepared and the RGU will make a final determination on the need for an EIS.
- 5) Minnesota Pollution Control Agency (MPCA) permitting – as currently designed, this project does not disturb more than one (1) acre of upland and therefore would not require a permit or a stormwater pollution prevention plan (SWPPP). However, we are following MPCA guidelines for erosion and sediment control in the project design. If the scope of construction changes and the one-acre threshold of upland disturbance is exceeded, we would prepare the SWPPP and the contractor would apply for this permit.

- 6) Minneapolis Park and Recreation Board (MPRB) construction permit & type IV parkway permit – The MPRB requires a Construction Permit and Parkway Permit for construction related activities on parkland/parkway; the MPRB Planning Services Division administers the permit process after approval of the 90% plans. The contractor will prepare and submit these permit applications after the Notice of Award.

In addition to permitting, we will continue to coordinate with the MPRB regarding the details of construction access, parking, and use/restoration of the parkway and trails. We will also coordinate with the BCWMC attorney regarding the contractual/legal relationship with MPRB, including insurance, indemnification, and contractor qualifications.

- 7) 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. The city requires preservation or maintenance of native or natural vegetation buffers along streams and around wetlands. We will coordinate with the city and MPRB on how and where existing non-native buffers may need to be restored to native vegetation. (NOTE: Buffer restoration is not currently included in the project budget as it was not identified as a project activity in the feasibility study.)

We anticipate submitting the joint permit application (for WCA and USACE/SHPO) and the MDNR permit application in January 2022, following Commission approval of 50% design plans. The MPRB and Golden Valley permits will be applied for a month or two before the start of construction.



## **Recommendations**

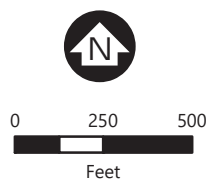
- A) Consider approval of 50% design plans
- B) Authorize the Commission Engineer to continue design and bring 90% design plans to a future Commission meeting.
- C) Authorize Commission Attorney to work with MPRB on documentation regarding indemnification, liabilities, and necessary permissions for construction.





Aerial Imagery: April 2019; NearMap

-  Project Area
-  Theodore Wirth Regional Park



SITE LOCATION MAP

Golden Valley, Minnesota

FIGURE 1-1