

Memorandum

To: RPBCWD Board of Managers
From: Scott Sobiech, Chris Lenhart and Brianna Drake
Subject: Bluff Creek Reach 5 Stabilization Feasibility Study– Request for additional budget for expanded watershed assessment
Date: December 29, 2021
Project: 23/27-0053.14 036

Requested Board Action

Barr requests that the RPBCWD Board of Managers consider authorizing Barr Engineering to spend an additional budget of \$9,200 for watershed analysis related to the Bluff Creek Reach 5 Stabilization Feasibility Study.

1.0 Background

RPBCWD has documented erosion and related phosphorus loading from Upper Bluff Creek, Reach B5C, between Galpin Ave. and Highway 5. The reach was placed in the highest priority category in the Creek Restoration Action Strategy (CRAS), a tool developed by RPBCWD to compare erosion and potential ecological benefits of doing a project in a given reach. The CRAS score for this reach (24 or 28 in 2015 and 22 of 28 in 2020) ranked 3rd amongst all sites throughout the district when considering only the tier 1 criteria (infrastructure risk, erosion and channel stability, ecological benefits, and water quality).

In an earlier 2021, the RPBCWD Board of Managers authorized Task Order 36A for the Bluff Creek Reach 5 Stabilization Feasibility study which focused on assessing alternatives to stabilize Reach B5C, the portion of Bluff Creek between Galpin Avenue and Highway 5.

2.0 Changes in Scope of Services

The original feasibility study task order was for \$19,600 was authorized by the Board on February 3, 2021. Barr completed the draft feasibility study in late-2021 which includes the identification of stream restoration options focused on reach B5C. Additional discussion with Interim Administrator Jeffery suggested that the study would benefit from a broader watershed assessment to provide additional insight into the restoration of stream corridor relative to its watershed, aid in prioritizing the restoration work, and improve use limited district resources. More specifically the reasons for a watershed assessment and enhanced assessment of stream restoration options are described below:

- The authorized scope of feasibility study focused solely on the reach between Galpin Boulevard and Hwy 5 and doesn't consider areas above or below the reach B5C in the watershed.

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- Need to compare estimated watershed inputs of phosphorus and sediment in addition to channel-derived estimates.
- Need to better understand hydrologic storage in the upstream wetland complex (i.e., reach B5A) and benefits of enhancing storage and ecological function within the partially drained wetland
- Need to better quantify geomorphic, hydrologic and ecological benefits of each of the 3 restoration options listed in the feasibility study using the recently published Stream Quantification Tool (SQT)

The expanded watershed assessment components would include the following:

1. Within reach B5C, do an abbreviated version of the SQT to compare benefits of the three different proposed restoration options
2. Compare benefits of stream restoration in reach B5C to benefits in other reaches using the CRAS and Bank Erosion Hazard Index (BEHI) estimates of sediment load
3. Assess feasibility of upstream restoration of wetland and possible benefits
4. Run the different options through the RPBCWDs prioritization tool to assess the priority of the proposed projects relative to others in the District.

The following table summarizes the approved budget, the amount spent as of December 17th, and anticipated additional budget to expand the scope of the feasibility study to include the items described above.

Task Order 036A	Approved Budget	Amount Spent Through 12/17/21	Estimated Additional Work	Comment
Expanded feasibility study	\$19,600	\$19,600	\$9,200	
Budget Remaining		\$0		As of December 17, 2021
Budget Increase Request			\$9,200	