LOWER MINNESOTA RIVER WATERSHED DISTRICT

Spring Creek Site 3 Design Feasibility Study

Workplan—December 1, 2022

Site 3 on Spring Creek was identified during the Spring Creek Hydrology Review and is prioritized as a top at-risk site for erosion due to the near vertical bank; however, a stabilization design has not been developed. The Lower Minnesota River Watershed District (LMRWD) will work with the landowner and the Carver Soil and Water Conservation District (SWCD) to conduct a feasibility study and conceptual design to determine the best approach to stabilize the area.

Summary

Outcome:	Complete a feasibility study to inform the design and stabilization measures for Site 3 on Spring Creek.
Project Partners:	Site 3 Landowner; Carver Soil and Water Conservation District
Timeline for Completion:	January 2023–December 2023
Total Fees:	$33,704
Total Expenses:	$21,000
Total Project Budget:	$54,704

Objective 1. Project Management

Task 1-1: Project plan development and project management. Finalize the workplan; assign project tasks, determine whether additional resources are needed; set dates for deliverables; generate and maintain project schedule; conduct monthly invoicing.

Task 1-2: Project kickoff meeting. Young Environmental will host a project kickoff meeting with the Carver SWCD and LMRWD to introduce the project team, reaffirm or modify the scope of work and schedule, and review the preliminary data needs. This task includes developing a meeting agenda and summary.

Task 1-3: Coordination with project partners. Young Environmental will host and facilitate monthly meetings with the Carver SWCD to communicate project progress, discuss issues encountered, develop potential solutions, and share any new information. This task includes developing meeting agendas and summaries.

Task 1-4: Board updates. Young Environmental will provide two update memos to the LMRWD board summarizing project progress and recommendations as necessary.

Timeline for Completion: August–December 2023

Deliverables: Project approach and schedule, meeting agendas and summaries, invoices, board updates

Estimated Budget: $11,044

Objective 2. Data Collection and Review

Task 2-1: Data collection and review. Use available background resource information and modeling developed as part of the Spring Creek Hydrology Review in January 2022. This task also includes reviewing and verifying the data used in the original study and updating data where needed. Young Environmental will contact public resources such as the City of Carver, the Minnesota Department of Natural Resources, the US Army Corps of Engineers, and the Carver SWCD to collect additional background information if necessary. The data used will be summarized in a data matrix.

Timeline for Completion: August 2023

Deliverables: Data matrix

Estimated Budget: $2,984

Objective 3. Field Work

Task 3-1: Field condition assessment. Following the same methodology developed for Site 1 and Site 2, conduct a site visit at Site 3. Young Environmental will collect photographs, waypoint locations, and notes detailing the conditions of the area using field collection sheets. During the site visit, locate and stake important geomorphic characteristics, including bank-full elevation, pool and riffle cross sections, and low banks so the SWCD can collect topographic survey at the applicable locations. Conduct a pebble count at the riffle and reach-wide.

Task 3-2: Topographic survey. Complete a topographic survey of the project reach to aid in the concept design of the project. Collect geomorphic characteristics of the river, including longitudinal profile as well as riffle and pool cross sections.

Timeline for Completion: September–October 2023

Deliverables: maps, photographs, field notes and collection sheets, survey staking, survey data, topographic map

Estimated Budget: $1,752

Objective 4. Engineering Design

Task 4-1: Conceptual engineering design. Prepare concept drawings with proposed stabilization measures for Site 3. Young Environmental will provide technical review of the design. This task includes coordination and meetings to develop and review conceptual designs.

Timeline for Completion: October–November 2023

Deliverables: proposed stabilization measures, concept design drawings

Estimated Budget: $4,202

Objective 5. Documentation

Task 5-1: Draft technical memorandum. Develop a draft technical memorandum that will document the data collected, methods and software used, results from the analysis, and recommendations for stabilization based on the concept drawings. The draft memo will be submitted to the District and project partners for consideration and written feedback.

Task 5-2: Final technical memorandum. Submit the final technical memorandum and findings to the District and project partners incorporating the written feedback from Task 5-1.

Timeline for Completion: October–December 2023

Deliverables: draft technical memorandum, final technical memorandum

Estimated Budget: $13,722