

SAND HILL ECOSYSTEM RESTORATION PROJECT TEAM MEETING

Location: Sand Hill River Watershed District, Fertile, MN

Date: September 4, 2024

Time: 9:00AM – 11:00AM



Participants

April Swenby (SHRWD), Karl Tollefson (Scandia Township Supervisor), Paul Engelstad (Farmer), Mark Stola (Farmer), Moriya Rufer (HEI), Zach Herrmann (HEI/SHRWD), John Voz (BWSR), Alex Engelstad (Liberty Township Landowner), Nicole Bernd (West Polk SWCD), Scott Schroeder (MPCA), Henry Van Offelen (BWSR), Brett Arne (BWSR), Nathan Olson (DNR – Fisheries), Stephanie Klamm (DNR – Hydrologist), Emily Hutchins (DNR – Wildlife)

Meeting Summary

Project Team Process

The meeting began with an overview of the Project Team process. Moriya Rufer, the facilitator, presented that the Project Team is advisory to the Project Sponsor (Sand Hill River Watershed District). The Project Team can contain anyone who is a stakeholder, permitter, or potential funder of the project (state and federal agencies, townships, local governments, local landowners, etc). A handout was provided highlighting the role of the Project Sponsor (Sand Hill River Watershed District) and the role delegated to the Project Team.

Purpose and Need

The Purpose and Need Statement is needed to define the problem and evaluate alternatives against. The Purpose and Need Statement was approved by the Sand Hill River Watershed District board on May 2, 2024. Zach Herrmann reviewed it with meeting attendees.

Problems to Address

- Flood Damages
 - Loss of private property due to encroachment from failing channel
 - Public safety concerns along 440th Street in Sections 25 & 26, Reis Township and Section 30, Liberty Township
 - Flooding of agricultural lands
 - Roadway overtopping

Opportunities

- Not a direct objective of the project, but an opportunity may be available to improve resource conditions.
- Water Quality – Sand Hill River is listed for turbidity impairments downstream of the study reach.
- Riparian Habitat – The study reach is currently an incised channel with limited natural riparian floodplain function.

- Recreation – Large, contiguous tracts of land available for general public recreation are limited despite strong local interest in outdoor activities.

Objectives – Goals of the Project

- Objective 1: Minimize Loss of Adjacent Private Property
- Objective 2: Enhanced Public Safety Along 440th Street SW
- Objective 3: Reduce Roadway Overtopping During Spring Flooding
- Objective 4: Reduce Breakout Flows During Spring Flooding
- Objective 5: Mitigate Downstream Adverse Flood Impacts
- Objective 6: Incorporate Other Resource Opportunities Where Applicable

Preliminary Alternatives Discussion

Preliminary project alternatives were evaluated using a matrix with the project objectives. Participants discussed and agreed with the preliminary evaluation. Zach Herrman presented on previous studies that evaluated upper watershed storage. It was concluded that upper watershed storage does not meet the objectives of this project.

Zach Herrman presented details about a two-stage channel. Preliminary geomorphic assessment indicates a type “E” channel with a 330 foot wide flood plain.

Conceptual earthwork/design analysis shows:

- Provide ideal geomorphic floodplain (330’ width)
- Existing bank-full channel/ditch remains on current alignment
- Avoidance measures assumed to minimize road and structure impacts
- Completed along entire Sand Hill Ditch
- Estimated 7.8 cubic yards of excavation

This alternative was discussed by participants. Questions centered around the spoil from excavating the two-stage channel including where the spoil was going and how high it would be and the cost to do the full ditched portion of the Sand Hill River. Other questions included how the two-stage ditch would affect road crossings and roads.

A landowner brought up the idea of some off channel storage to take the edge off the peak flow. This and other mitigation methods could be used to reduce the length of the two-stage channel and reduce costs.

The group decided on the following modeling modifications to be completed for presentation at the next Project Team meeting.

1. Complete existing and prior conditions modeling
 - a. Current conditions (with riffles and fish passage)
 - b. Current conditions (no riffles and concrete drop structures)
 - c. Design conditions (1956 as-builts)
2. Two stage channel revisions
 - a. Focus on areas with worst erosion (approximately east of Highway 9)
 - b. Investigate options of varying floodplain widths to reduce excavation.

3. Flood storage revisions
 - a. Identify potential holding cells adjacent to the two-stage channel.
 - b. Consider required embankment material relative to two-stage channel excavation.
4. Snow plugging consideration (Scandia/Hubbard Township)
 - a. Estimate snow plugging potential of current channel.
 - b. Channel modifications to reduce snow plugging.
5. Develop cost estimates for design features.

Path Forward

The next meeting will be scheduled in 1-2 months.

Additional information

To see Project Team information such as past meeting minutes and studies, visit http://www.sandhillwatershed.org/Project_Team.html