

# SAND HILL RIVER ECOSYSTEM RESTORATION PROJECT TEAM MEETING

Location: Sand Hill River Watershed District, Fertile, MN  
Date: March 27, 2025  
Time: 9:30AM – 12:00PM



## Participants

April Swenby (SHRWD), Don Andringa (SHRWD Manager), Paul Engelstad (Landowner), Moriya Rufer (HEI), Zach Herrmann (HEI/SHRWD), JJ Hamre (landowner), Jeremiah Gudvangen (Liberty Township), Emily Hutchins (DNR – Wildlife), Larry Puchalski (ACOE), Scott Schroeder (MPCA), Henry Van Offelen (BWSR), Nathan Olson (DNR – Fisheries)

## 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.). All members of the Project Team are expected to bring their thoughts and express concerns at each meeting.

The Project Team's goal is to provide interagency and stakeholder review to the flooding problems along the Sand Hill River and develop a recommended alternative for consideration of the SHRWD Board of Managers. With representation from a broad array of regulatory and local interests, the recommended alternative will be technically feasible, locally acceptable, and permittable. The Project Team process can take one to two years or longer depending on the complexity of the problems and solutions, to develop a project concept to present to the SHRWD.

The SHRWD Board of Managers can either accept the recommended alternative, send it back to the Project Team, or halt the Project Team. Assuming the recommended alternative is carried forward, the Project Team will continue to function through more detailed design to ensure technical feasibility, permit-ability and local acceptance, and provide input on grant funding opportunities.

### Objectives

Zach Herrmann provided a review of the Purpose and Need for the project, which was formally adopted by the SHRWD Board of Managers in May 2024. The project focuses on

reducing flood damages that include loss of private property due to bank failures, public safety risk along 440<sup>th</sup> Street (Sections 25 & 26, Reis Twp. And Section 30, Liberty Twp.), overland flooding of ag land, and roadway overtopping.

In addition to the problems the project aims to address, opportunities to other resource concerns will be considered, including water quality, habitat, and recreation opportunities. While not a focus of the project, design features that benefit these concerns may provide an opportunity for additional outside funding.

The goals of the project are defined in six stated objectives, listed as follows:

- 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

Objectives will be used as a measure of alternatives, as necessary, to evaluate adherence with the adopted Purpose and Need.

## Alternatives Discussion

Herrmann discussed the alternatives development process. Alternatives are evaluated on alignment with expected outcomes, technical feasibility, permit-ability, and local acceptance. Alternative evaluation began during the March 4, 2024, Project Team meeting, and was further refined during the September 4, 2024 and January 29, 2025, Project Team meetings. Alternatives will continue to be refined based on comments from this meeting. In total, we anticipate several additional meetings will be required before a recommended alternative can be presented to the SHRWD Board of Managers.

## Temporary Storage

The temporary storage sites presented to the Project Team in January 2025 were analyzed using the hydraulic model for the project extents. Herrmann stressed that the results are conceptual in nature and only identified based on storage potential derived from LiDAR data. No analysis of inlet/outlet feasibility, landowner acceptance, or environmental impacts was completed as part of the identification. The hydraulic analysis assumed a maximum regulated temporary storage volume of 3,080 acre-feet, and 3,940 acre-feet of unregulated temporary storage volume to provide five vertical feet of freeboard. The analysis targeted the 10-year spring flood scenario, which appears to correlate to the 2023 peak flow at the USGS gage near Climax, MN. The analysis “removed” 3,000 acre-feet of flood volume in the hydraulic model, timed around the peak flood flows to simulate “ideal” timing of temporary flood storage.

Herrmann showed the comparative hydrographs with current conditions and temporary flood storage hydraulic analysis. The Sand Hill River hydrograph with the addition of off-channel storage locations showed a significant decrease in peak flows and almost two feet lower water height (stage). The group acknowledged these are promising results. The operation of the storage sites would be important to make it work to reduce flooding while maximizing agricultural production. The preliminary draft cost for each storage site would be \$9-12 million but is largely dependent on costs for land rights. The group suggested doing less sites but larger, for the most efficient use of funds and operating ease.

The next things the Project Team would like to know are:

1. Can the temporary storage volume be increased and/or consolidated into one impoundment location?
2. How often would the storage sites flood? This will help determine if the sites could be farmed or pastured and what could be grown.
3. What would be the cost or reimbursement to landowners? Discuss easements versus land purchase and what the SHRWD Board would be most supportive of.

The Project Team would like to discuss these results at one more meeting (likely June 2025) and then if the team deems temporary storage as reasonable, landowner engagement would be the next step.

### **Measures West of MN Highway 9**

At the last meeting in January 2025, several landowners on the Project Team expressed concern that not enough was being done west of MN Highway 9 to address their issues specific to snow plugging during spring flooding. Herrmann presented an option to widen the channel geometry so it doesn't plug as easily. By widening the channel, snow plugging could be contained to below adjacent field elevations, whereas the current condition appears to have snow plugging above the adjacent field elevations.

Another potential solution suggested was a snow fence along the Sand Hill Ditch to prevent the snow from blowing into the ditch. This solution could have potential impacts to agricultural land as the large drifts could impact planting in the spring due to delayed snow-melt compared to current conditions.

Mechanically removing the snow with construction equipment was discussed by the Project Team. While the concept may have merit as a management tool, Herrmann cautioned on using it as a mitigatory feature of a larger project due to scenarios that may prevent removal prior to spring flooding. The outcomes from the Project Team would ideally stand on their own. If an operational requirement such as mechanically removing snow were a part of the recommended project, some questioned potential for liability on the SHRWD if removals are not able to be performed. Other Watershed District policy in northwest Minnesota on snow removal of ditch systems varies. As an example, the Wild Rice Watershed District does not do snow removal, however the Red Lake Watershed District will do removal if it is impacting houses, but not agricultural land.

The group decided to further explore the option to modify the geometry of the ditch. This will be discussed again at the next meeting.

### **Two-Stage Channel**

The two-stage channel alternatives were presented and discussed in January 2025, but not at this meeting. They are still a viable option that can be discussed in future meetings.

### **Funding**

Funding options were discussed. The SHRWD has FEMA Flood Hazard Mitigation funding from the disaster declared in 2022. This funding is earmarked for repair on specific sites that were damaged during the flood of 2022 that needs to be spent by May 2026. SHRWD are waiting to spend it to see if it can pay for a portion of this project.

The group discussed the importance of the Sand Hill River Watershed being a priority area for the Red River Watershed Management Board's (RRWMB) Reinvest in Minnesota (RIM)

program. This funding could be used for riparian easements. The Project Team can send a letter of support to the RRWMB for listing Sand Hill Watershed as a priority for funding.

## **Path Forward**

Next steps for the Project Team include the following:

- Further explore the off-site storage locations, feasibility, and cost.
- Further assess the benefit from channel geometry modifications west of MN Highway 9 to reduce snow plugging.
- Develop a revised two-stage channel floodplain width east of MN Highway 9 that balances anticipated earthwork required for flood storage.

Once results are compiled, the Project Team will meet to discuss. The next project team meeting is anticipated in June 2025. This meeting will have an on-site tour in the morning and meeting in the afternoon.

## **Additional Information**

To see Project Team information such as past meeting minutes and studies, visit [http://www.sandhillwatershed.org/Project\\_Team.html](http://www.sandhillwatershed.org/Project_Team.html)