Capital Improvement Project
Ravenna Township: Ravenna Trail Ravine Stabilization

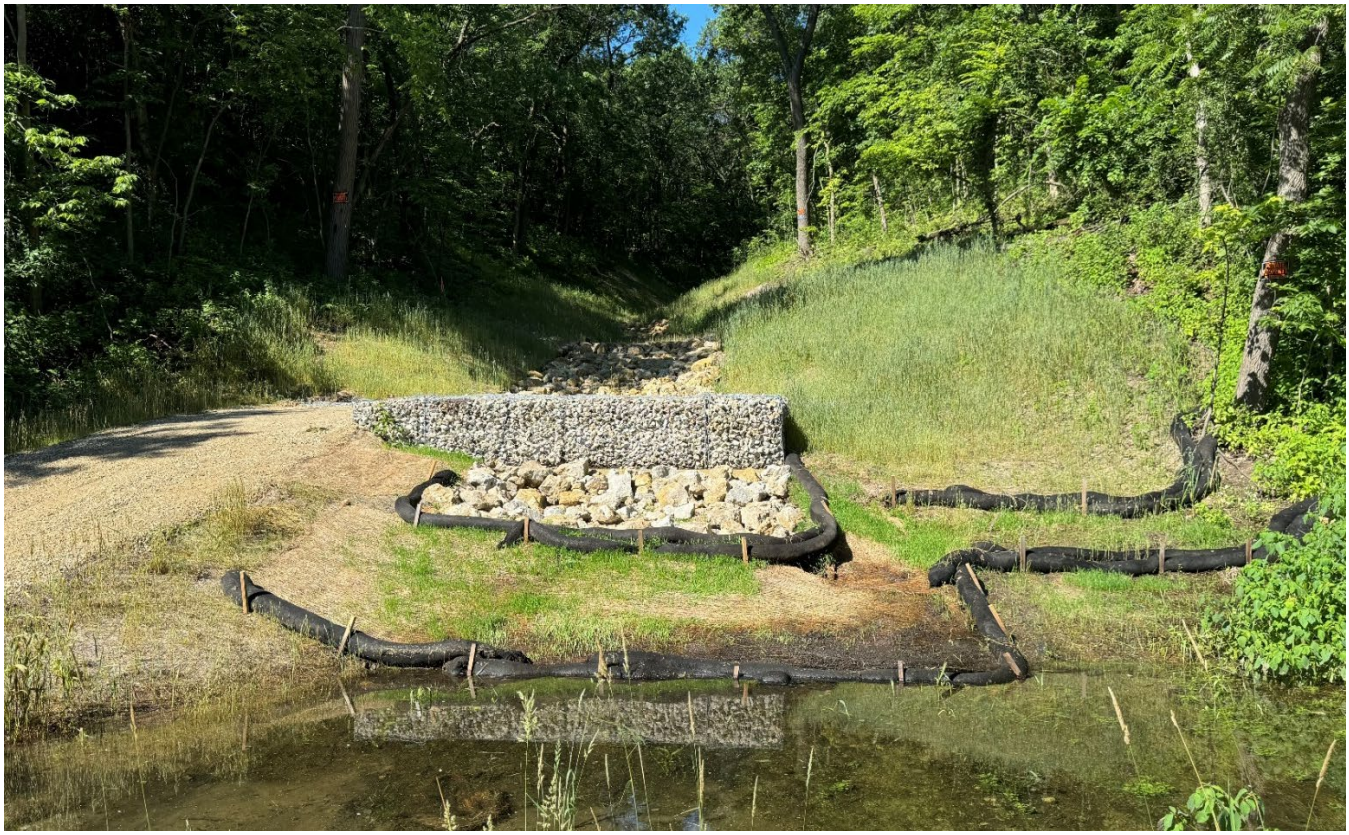

Figure 1. Base of the hill where ravine stabilization was completed, following a major rain event in summer 2024.

Portions of the lower Vermillion River abut steep hillsides and bluffs near Ravenna Trail (Dakota County Road 54). During rain events, eroded ravines on these hillsides washed sediment across Ravenna Trail and deposited the material into the Vermillion River, which created a total suspended solid (TSS) impairment. The Dakota County Soil & Water Conservation District (SWCD) identified erosion issues in these ravines in the late 1990s and completed water control projects above the ravines as recently as 2012. However, channel degradation persisted in the highly erodible soil downstream.

Two ravine stabilization projects consisting of rock check dams, slope stabilization, and grade control were completed to alleviate chronic erosion and sediment deposits in the Vermillion River. Improvements to the ravines will help re-establish downstream water quality to restore popular fishing and recreation areas for local communities, a goal of the Vermillion River Watershed Joint Powers Organization (VRWJPO).

A competitive Clean Water Fund grant from the Minnesota Board of Water & Soil Resources (BWSR) supported this project.

3/2025

Partners

- VRWJPO
- Dakota County Environmental Resources & Transportation Departments
- Dakota County SWCD
- BWSR

Installation

- 2024

Location

- Ravenna Township

Subwatershed

- Mississippi Direct

Costs and Contributions

- VRWJPO: $12,046 for in-kind grant administration/coordination, $27,634 in cash match for engineering, permitting, and construction
- Dakota County: $56,106 for construction and project management
- Dakota County SWCD: Technical assistance
- BWSR: $334,959 competitive Clean Water Fund grant for technical engineering/assistance and construction

Benefits:

- It is estimated that the project will reduce TSS pollution by 130 tons/year and TP pollution by 78 pounds/year.
- The project will help restore the lower Vermillion River, a popular reach for fishing, paddle-sports, and other aquatic recreation, and benefit fish and macroinvertebrate habitat that have been inundated by sediment.

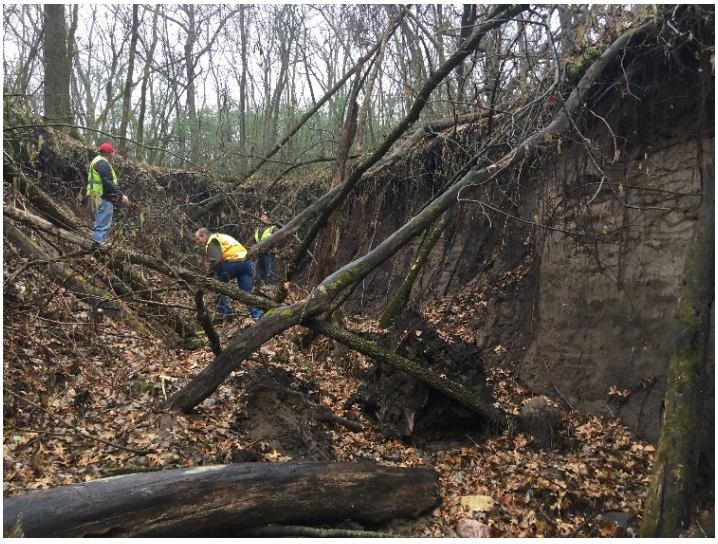

Figure 2. Pre-project, a heavily eroded section of the ravines.

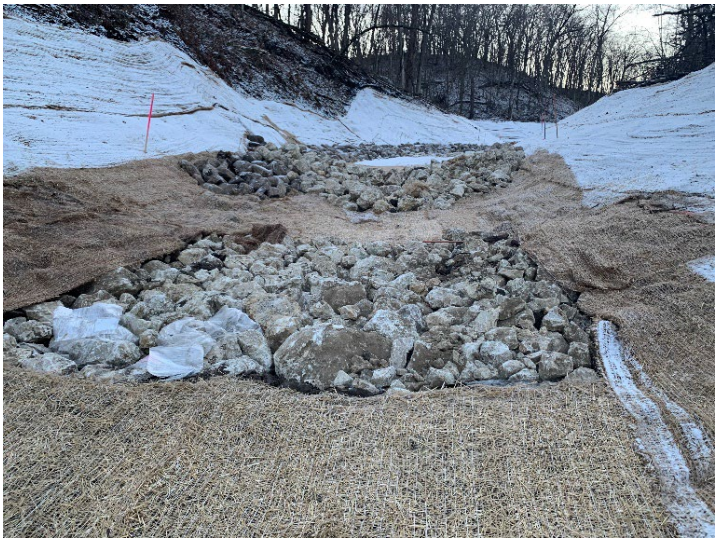

Figure 3. Stabilized area of one of the ravines, December 2023.

A grant from the Clean Water Fund, one of four funds established by the Clean Water, Land & Legacy Amendment, supported this project. Clean Water Stories can be found on the Minnesota Board of Water and Soil Resources website.

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