



Capital Improvement Project Sediment Basins on Almquist Property (Ravenna Township)



Figure 1. The locations of the sediment control basins on the Almquist property, in southern Ravenna Township.

The Almquist family farm in Ravenna Township has sediment control basins on their property designed to keep sediment out of the Vermillion River. These basins were designed and constructed in the late 1960s and have filled with sediment to a level where they have limited function. Vermillion River Watershed Joint Powers Organization (VRWJPO) and Dakota County Soil and Water Conservation District (SWCD) staff agreed that a cleanout of both basins would be beneficial to their overall efforts, as some capacity in the basins can be restored to capture sediment and slow higher runoff flows that could cause erosion of the channels downstream.

The repair project will consist of some tree removal to access the sites, excavating the basin pools, repairing an emergency spillway to the downstream channel, and seeding native vegetation for continued erosion control. This would complement VRWJPO's other efforts in Ravenna Township to decrease turbidity in the lower Vermillion River.

Partners:

- Vermillion River Watershed Joint Powers Organization
- Dakota County Soil & Water Conservation District
- Almquist Family
- Minnesota Board of Water & Soil Resources

Project completion (anticipated):

- 2022

Location:

- Ravenna Township

Watershed:

- Vermillion River

Costs and Contributions:

- Watershed-Based Implementation Funding: \$59,000
- VRWJPO: \$14,533 and project management/bidding
- Dakota County SWCD: project design and technical assistance
- Almquist Family: Tree removal prior to basin work

Benefits:

- The estimated pollution reduction is 5.5 tons/year of total suspended solids and 6.2 acre-feet/year volume reduction.
- The basins were cleaned out to a practical level to allow for future sediment capture during runoff events.
- Restoration of emergency overflows and restoring volume in the basin means that water only bypasses the basin in heavier rain events, dampening erosion from most flow events.



Figure 2. Dakota County SWCD staff member Todd Matzke observes deposited sediment and volunteer tree growth in the downstream basin.



Figure 3. Eastern basin during the sediment cleanout process.

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

