

“ I can’t help but think that (by) controlling the speed of the water, we’re not going to put all the sediment into the river. So that was a clear choice. ”

— Brian Jergenson,
Pope County farmer

Cooperation, collaboration drive Pope, Swift county conservation

BWSR Clean Water Funds, NRCS assistance support East Branch Chippewa River watershed work



Natural Resources Conservation Service website: www.nrcs.usda.gov

GLENWOOD — Cooperation between neighbors and collaboration between neighboring soil and water conservation districts has resulted in more effective erosion control within the East Branch Chippewa River watershed in Pope and Swift counties. Water-quality benefits extend to the Minnesota River.

A \$345,000 Clean Water Fund grant the Minnesota Board of Water and Soil Resources awarded to the Pope Soil & Water Conservation District in 2021 targeted erosion and sediment



control within the watershed. An agreement between Pope SWCD and Swift County SWCD expanded the projects’ scope to Swift County.

Construction on the last of 40 projects involving 11 landowners was on pace to finish this fall. Four of the Pope County projects leveraged \$96,475 in Environmental Quality

Incentives Program (EQIP) assistance from the USDA’s Natural Resources Conservation Service.

Completed projects included 38 water and sediment control basins; one grassed waterway; and one lined waterway with turf-reinforced matting, seeded with grass. Landowners’ share was 25%.

Top: An August 2023 drone image shows part of the Pope County project that involved eight water and sediment control basins, starting upstream on the Jergenson farm (the home site is pictured) and extending to the Rick Davidson farm. **Photo Credit:** Andy Albertsen, Swift County SWCD

Bottom: From left: Pope SWCD Manager Holly Kovarik worked with Davidson and brothers Brian Jergenson and Kim Jergenson to install projects that will help to improve water quality in the East Branch Chippewa River. **Photo Credit:** Ann Wessel, BWSR

EQIP assistance also supported non-structural practices such as cover crops, reduced tillage and no-till.

In Pope County's Rolling Forks Township south of Glenwood, Rick Davidson was seeking a solution to field erosion when he approached the Pope SWCD staff.

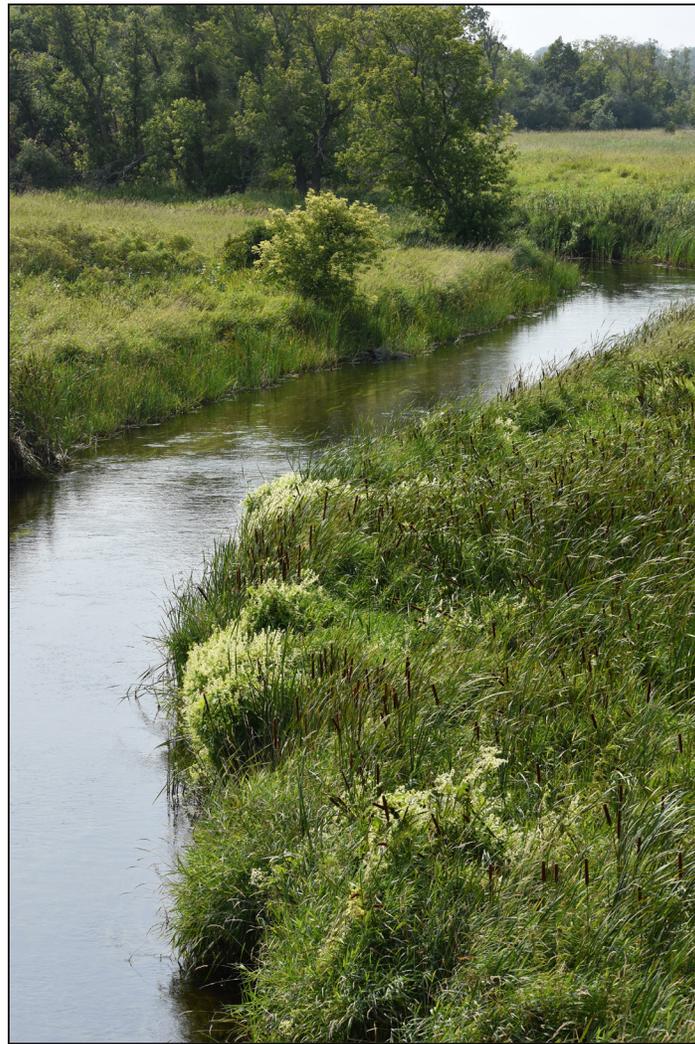
"The river runs right through my farm. When we get big rains or snowmelt, there's a lot of water that moves through here," Davidson said. "(The SWCD's) suggestion was if we could work with the whole watershed, which would include the neighbor's land, that this whole project would work better."

Brian Jergenson agreed. He and his brother, Kim, farm immediately upstream.

"Most of it (the erosion) starts on our side of the line fence. It's very hilly, and the ravines are deep," said Brian Jergenson, who returned to work on the family farm in 1984. The elevation drops 30 feet in the first quarter mile north of the property line. "Sometimes in the spring the erosion on the steepest part was so bad that we couldn't cross it. ... As we were harvesting, we tried to work it shut a little bit so we could cross the ravines."

Kim Jergenson, who returned five years ago after a 39-year engineering career with the city of Marshall, described the improvement: "Erosion became almost nonexistent — the first year, anyway."

The eight water and sediment control basins installed in fall 2022 — four



The East Branch Chippewa River flowed under Pope County Road 19 on Aug. 18, 2023, in Rolling Forks Township south of Glenwood. The watershed is the focus of a Clean Water Fund grant from BWSR, which is supporting Pope SWCD and Swift County SWCD's work with landowners to install projects that curb erosion and sediment. The East Branch flows to the Chippewa River in Swift County, a Minnesota River tributary. **Photo Credit:** Ann Wessel, BWSR

on each farm — withstood their first test this spring.

"We had a lot of snow this last winter, and when it warmed up all of a sudden to 75, 80 degrees this spring, the snow all melted in just two or three days. So the project really had a test this spring. Every afternoon all the sediment control basins would be completely full of water, and by morning they'd be all empty again," Davidson said.



Linow



Hellermann

Three of the structures on his farm abutted the property line.

West Central Technical Service Area

civil engineering technician Steve Linow said the basins were designed to handle a 10-year, 24-hour rainfall event — about 4 inches of rain in 24 hours — and then draw down within 48 hours. TSAs provide technical assistance to SWCDs.

"I've watched this water

AUGUST 2023 VIDEO: "Conservation Collaboration"

over the years come down to the river, and it's just brown. It's got a lot of soil coming with it, whereas I watched the water come out of the tile this spring after the snowmelt and then during the summer a couple of times, and it's coming out of the tile nice and clean. So it's telling me that it's really working," Davidson said.

A downstream stretch of the East Branch Chippewa River is impaired for turbidity. Pope County-based NRCS District Conservationist Jeff Hellermann elaborated on the benefits of conservation practices installed in the watershed.

"(With) the erosion control, you're saving the soil on the farm, keeping it on the field so it remains productive — because that's where it belongs. When it gets into the water body, it is a pollutant, and the large amounts of nutrients and other chemicals that may be entering the water system can critically reduce the water quality and reduce habitat for wildlife and sometimes aquatic species," Hellermann said.

From Lake Amelia near Villard, the East Branch Chippewa River flows through a series of lakes and a couple of waterfowl production areas before it reaches a popular swimming and camping spot at Swift Falls County Park. In Benson, the East Branch joins the Chippewa River, which flows south to the Minnesota River at Montevideo.

"By keeping that soil in place and where it should be and preventing it from getting into the water, that's just going to have that cascading effect of

(decreasing) sedimentation and turbidity,” Swift County SWCD Manager Andy Albertsen said of the Davidson-Jergenson project. “This is just upstream of Swift Falls Park and the Swift Falls Dam, so obviously anything ... upstream of that is going to have a direct benefit on the recreational value of the park itself.”

The East Branch Chippewa River is impaired for turbidity starting at Mud Creek, a few miles northeast of Benson; the work completed here, within view of the river, will help to improve water quality downstream.

Pope SWCD Manager Holly Kovarik said work affecting the southern reaches of the East Branch started with a modeling effort to identify where projects would have the greatest effect. Pope and Swift County SWCDs pooled Clean Water Fund local capacity dollars from BWSR, hiring Houston Engineering as a consultant to target and prioritize erosion-prone sites within the subwatershed. That report guided implementation efforts.

“It’s been a really good partnership between Pope and Swift SWCDs on this project. Holly was the one that reached out to us to see about partnering,” Albertsen said. “It seemed like the natural fit to try to partner together and see what we could do about trying to solve some of the steep erosion issues that we were seeing on the Swift County side, similar to what Holly was seeing on the Pope County side.”

The county line doubles as the property line where a township road separates the fields Mike Thompson and Scott Nelson farm northeast of Benson near Swift Falls. Both had seen the



After a sudden warmup followed heavy snows, a water and sediment control basin worked as designed in spring 2023 in a field Mark Thompson farms in the East Branch Chippewa River watershed. Before the basin was installed, a sudden spring melt would have carved gullies into the field. **Photo Credit:** Andy Albertsen, Swift County SWCD

“ It seemed like the natural fit to try to partner together and see what we could do about trying to solve some of the steep erosion issues that we were seeing on the Swift County side, similar to what Holly was seeing on the Pope County side.

— Andy Albertsen, Swift County SWCD manager



”

results of previous projects with their county’s SWCD, which had curbed erosion and sediment on land they farmed — Thompson, on his brother’s field where a grassed waterway with three rock check dams was installed in 2022, fixing 5-foot-deep gullies; Nelson, who farms with his brothers and their sons, on 120 acres where 21 berms were installed.

“If we hadn’t done this four or five years ago and seen how good it worked, we probably

wouldn’t have done it. But we were sold on it,” Nelson said. The tile that eliminated overland runoff also fixed the spots that were sometimes too wet to farm. And the berms slowed the water, allowing the sediment to settle out. “There’s not one washout in that field now, spring or fall.”

So when Thompson mentioned he was planning an erosion control project on 105 acres in Swift County, Nelson agreed to look at the

numbers, ultimately signing on to a similar project on the 80 acres across the road in Pope County.

“I was getting a lot of water from the north coming through there and making gullies and kind of creating a mess,” Thompson said.

Both worked with the Swift County SWCD. The resulting projects — four water and sediment control basins constructed in spring 2023 on either side of the township road that divided them — drew from the Clean Water Fund grant, and Pope and Swift County SWCDs’ local cost-share funds. Thompson initially raised the resource concern; preliminary plans revealed the project’s success hinged on capturing and slowing water from the north. Tying the two projects together made it possible to treat water from a larger area. The basins and related tile will also alleviate flooding on the township road, where a culvert was replaced this spring.

Thompson also noted the water-quality benefits of routing the water through an underground tile:

“It goes all the way down to a ditch that goes into the river, so it’ll help clean up the water so you’re not getting all the sediment going down to the river,” Thompson said.

With pollution reduction estimates on one of the projects pending, initial post-construction numbers showed that the grant-supported projects involving 11 landowners will keep an estimated 2,576 tons of sediment and 2,304 pounds of phosphorus out of the East Branch — exceeding the reduction goals of 1,462 tons of sediment and 1,260 pounds of phosphorus.



USDA is an equal opportunity provider, employer and lender.



The Minnesota Board of Water and Soil Resources’ mission is to improve and protect the state’s water and soil resources by working in partnership with local organizations and private landowners. www.bwsr.state.mn.us