

Mississippi River Basin Initiative feeds Chisago Chain of Lakes improvements

Neighbors curious about the work in Byron Dahlheimer's field across the road from North Chisago Lake liked his explanation.

"I'd just tell them it's erosion control to help the lake water," Dahlheimer said.

The two water and sediment control basins in his Chisago Lakes Township fields are among 15 conservation practices that 12 Chisago County producers have installed since 2015 with nearly \$116,700 in targeted Mississippi River Basin Initiative funding. The balance of Green Lake watershed's \$460,000 allocation remains available.

Dahlheimer's farm near North Chisago Lake is part of the bigger Green Lake watershed. One of nine Minnesota watersheds funded through the MRBI, it includes Chisago County lakes in parts of six townships and four cities.

An initiative of the USDA's Natural Resources Conservation Service, MRBI centers on practices that improve water quality, restore wetlands, enhance wildlife habitat and sustain agricultural profitability in the Mississippi River basin. Water quality concerns, mostly related to nutrient-loading, prompted NRCS to make the Mississippi River a priority.

Green Lake watershed work was extended for 2019, NRCS District Conservationist Debra Hermel learned in late September. Conservation partners had requested \$120,000 in Farm Bill dollars.



Top: Byron and Judy Dahlheimer farm in Chisago County near North Center Lake. **Left:** Debra Hermel is the Natural Resources Conservation Service district conservationist based in North Branch. **Courtesy Photos**

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In the Green Lake watershed, there's a lot of recreational lakes. Everybody wants to enjoy a clean lake. ... Any of the farm fields that have direct drainage to the lake — we want to work with those producers to keep the soil on the field and minimize the runoff impacts.

— Debra Hermel, NRCS

Sign-up is continuous and voluntary. NRCS helps landowners correct resource concerns through both technical and financial assistance. NRCS sets a per-practice payment rate based on local costs; funds come from the Farm Bill's Environmental Quality

Incentives Program. With contributions from Chisago Soil & Water Conservation District sources and matching dollars, the cost often is 100 percent covered.

The first EQIP application cut-off deadline was Jan. 18. The second is April 19. The funds are earmarked for the Green Lake watershed. Qualified applicants are selected based on a ranking system.

Cumulatively, MRBI practices installed to date in the Green Lake watershed treat about 650 acres. On average, each practice has reduced phosphorus by 30 pounds per acre per year and sediment by 35 tons per acre per year.

Phosphorus feeds the algae that can turn lakes green.

"I've always had a real concern about water quality, trying to protect what goes into our lakes and streams," Dahlheimer said. "Erosion control is going to help keep the lake water cleaner and the Mississippi cleaner."

About 20 years ago, Dahlheimer, 58, moved from the Dayton farm where he grew up on the Mississippi River to 200 acres in Chisago Lakes Township, where he grows corn and beans with his brother and two sons. He'd like to do more farming when he retires from his job as a

lineman for a power company.

Dahlheimer described the land as gently rolling. The worst erosion he'd seen was a few years ago when a 6- or 7-inch rain cut a knee-deep gully into the just-worked field. When NRCS staff

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approached him, he wasn't sure if he wanted to get involved with a government program. They didn't pressure him. He thought about it.

"I had seen some other projects that they had done around the area, even closer to the lake. I was really impressed with what they were doing," Dahlheimer said.

Chisago SWCD Administrator Craig Mell said a lot of conversations with producers go like this:

"Well, I talked to so-and-so, and they did a project last year. It turned out pretty well, so I guess I'll come talk to you guys, too." What we've really found out with the ag sector is it takes multiple years of going out and meeting with people."

NRCS and SWCD staff showed Dahlheimer one erosion-prone area that appeared in aerial photos; he showed them a gully in the second field. Now after a hard rain, a berm holds the water on the field for a couple of days while sediment settles out in the basin. The water is then slowly released through a pipe.

"The gully won't turn into a big ditch. It controlled that. I'm not losing topsoil, and my topsoil isn't going into the lake. It's erosion

Collaboration & qualifying projects

Staff members from the Chisago Soil & Water Conservation District and the Natural Resources Conservation Service collaborate on Mississippi River Basin Initiative work.

"If we wear the NRCS or the SWCD hat, the producer doesn't know the difference. The partnership that we have in this county is really good," said Debra Hermel, NRCS district conservationist.

Chisago SWCD staff already had finished aerial surveys and modeling, identified resource concerns and targeted conservation priorities for the Green Lake watershed through its Chisago Lakes Chain of Lakes work.

Now, NRCS staff

completes initial site visits and other preliminary work. SWCD staff completes much of the design and engineering.

Qualifying practices include water and sediment control basins, grassed waterways, no-till or cover crops — "any of those types of projects that improve water quality and sediment reduction," Hermel said. Here, the main resource concerns are surface runoff and sediment- or nutrient-loading, plus sheet and rill erosion.

The landowner may agree to upland treatments — such as tillage practices — that support the project. (For example, NRCS won't fix a gully if the farmer is tilling the upstream field with a moldboard plow.

control," Dahlheimer said.

Work finished in May 2018, just in time for spring planting. One of the structures is a farm-over water and sediment control basin. The other, a grassed water and sediment control basin, tapers in width from 27 feet to 16 feet.

"We can all improve. We

can all do a little bit to make things a little better," Dahlheimer said.

The 36,350-acre Green Lake watershed lies within the 1.2 million-square-mile Mississippi River watershed.

"I think every little bit you do helps. This water — it's a big deal. There's a lot of things that have gone

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— Byron Dahlheimer, Chisago County landowner

on over the years. We can make things better," Dahlheimer said.

No one, Dahlheimer said, wants polluted water or gullies too deep to cross with a tractor.

"Our values of our property would go down if we ruined the lakes and ruined the land. If you don't take care of it, what are you going to have?" Dahlheimer said.

Landowners work with NRCS and its partners — Chisago SWCD, in this case — to identify conservation opportunities and implement practices. The focus, Hermel said, is on helping farmers get the best production from their land while addressing perennial problems such as erosion or runoff.

"Everybody wants clean water and to have the soil stay on their own farm," Hermel said.



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