

BENTON SWCD

Mark Czech explains planned feedlot improvements on the Benton County dairy farm where he milks 400 Holsteins. Czech also installed a water and sediment basin in 2017 using a Clean Water Fund grant.

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Field work: Basin projected to save 110 tons of topsoil

Mark Czech speculates that the high quality of Benton County’s agricultural land may have kept some farmers from installing erosion and drainage controls sooner. He’s among those catching up – with help from Clean Water Fund grants available through the Benton Soil & Water Conservation District.

“Just the way the ground lays, we had a lot of water to the northwest – from other land we don’t own or operate, but it was all flowing through there. When we would get heavy rains, it would create a washout through our field just from the volume of the water,” said Czech, whose family farming operation works about 4,700 acres and milks 400 Holsteins.

A basin designed to stop the flow on that 23-acre problem field in Gilmanton Township is one of 18 water and sediment control structures Benton County farmers installed with help from nearly \$580,000 in CWF grants the Minnesota Board of Water and Soil Resources awarded to Benton SWCD.

The grants – \$79,276 in 2013 followed by \$300,000 in 2016 and \$200,000 in 2017 – seek to curb soil erosion and cut the amount of phosphorous entering Mayhew and Big Elk lakes. The Minnesota





Work on Czech's 23-acre field included construction of a water and sediment control basin, using Clean Water Fund dollars. It was built in conjunction with a tiling project that Czech paid for himself.

Pollution Control Agency deemed both lakes impaired in 2010. Excess phosphorous has fed algae blooms, turning the lakes green.

Within the watershed, other funded projects included feedlots and cover crops.

Natural Resource Conservation

Service staff designed the \$12,000 project on Czech's land. Because the side slopes are too steep to farm, most of the basin will be seeded to grass. A flatter side slope on a 120-foot stretch will allow machinery to cross the basin, which abuts the property line. The project was paid for through NRCS' Environmental Quality Incentive Program, the SWCD's Clean Water Fund grant, and a landowner match.

The SWCD estimates it will result in annual reductions of 110.3 tons each of total suspended solids and sediment, and 126.8 pounds of phosphorous.

The basin was constructed in conjunction with a \$20,000 tiling project that was not covered by grant funds.

The water that collects in the basin will drain through a 10-inch plastic pipe to the tile. Czech said the system would prevent the heavy clay soil from becoming saturated and washing away with the next heavy rain.

"Being farmers, we're supposed to leave the place better than we found it," Czech said. "It's way more rewarding to harvest a nice crop every year and to be able to get in and plant it."

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Some years on some tracts of land, he said he's only had a four-day window when the soil was dry enough to plant corn. Czeck said he's tilled about 30 percent of the 2,000 acres he owns. The Czechs raise mostly corn and soybeans, some alfalfa and wheat for the cattle.

His daughter manages their 400-cow dairy. With a planned expansion to 500 cows comes a new barn, one of the stops on the Benton SWCD conservation tour in June 2017. A concrete feed storage slab was being designed so any seepage would flow into a catch-basin and then into a manure pit.

Czech said he planned to apply for a grant that, if approved, would allow the farm in 2018 to expand its manure storage capacity from two months' to one year's worth. That would make it possible to spread manure only in the spring when it could be incorporated into the soil.

"Our winter spreading is causing a lot of problems. When the snow melts, it probably carries some of that manure where we don't want it to go," Czech said.

He'd also like to install rain gutters, which would keep clean water clean; and would like to pump manure from pit to pit, which would allow the sand to settle to the bottom. Long-term, he envisions a system where the sand used as bedding material could be cleaned and reused.

Meanwhile, as of June 2017 one more Benton County feedlot project was underway and three more were being planned using the 2017 Clean Water Fund grants from BWSR.

"Your average feedlot will come in no less than \$50,000, so feedlots are one of the big remedy contributors," said Jason Weinerman, Waite Park-based BSWR board conservationist. "If you fix a feedlot, you're going to have a pretty good remedy in the project. Helping those folks reduce the runoff and treat the water is a good expenditure of funds but a high-dollar item."

McMillin said the grants, which cover 75 percent of the costs, make it possible for farmers to consider feedlot projects.

"When you look at the feedlot projects in general, those reductions don't seem like a lot for the amount of money put into the project. But it is the ability to store the manure and put it on when needed – that's the big reduction," said Mike McMillin, Benton SWCD technician.

"Instead of spreading (manure) in January on top of the snow or in March on top of the snow, they're able to store it until May and work it in right away."

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

