Restored wetland abates flooding, aids wildlife

A Freeborn County wetland restoration on a MN CREP easement reduces pressure on the county ditch system while providing water storage and wildlife habitat. Partners include landowners, the Freeborn County SWCD, BWSR, the Turtle Creek Watershed District, FSA and NRCS.

During heavy rains, floodwater from County Drainage Ditch 30 (CD 30) enters the wetland restoration's northwest corner, is stored within the site, and then is slowly released back into CD 30 through the primary, lower capacity outlet **(above)** *in the project's southeast corner.* **Photo Credits:** Freeborn County SWCD

HOLLANDALE — A wetland restoration on a Minnesota Conservation Reserve Enhancement Program (MN CREP) easement in Freeborn County provides water storage, flood mitigation and wildlife habitat in a frequently flooded area of the state.

In 2017, Robert and Darlane Muilenburg enrolled 147 acres near the southwest corner of Lake Geneva in MN CREP — a voluntary, state-federal program administered by the Minnesota Board of Water and Soil Resources (BWSR) that targets high priority, environmentally sensitive land across 54 counties in southern and western Minnesota.

That parcel was frequently flooded and costly to drain and farm. A minimum maintenance township road bordering the east edge of the site was also affected by flooding within the site and created access issues for a neighboring landowner.

The MN CREP enrollment is the largest of three adjoining easements on the couple's property: they enrolled 22 acres in the federal Wetland Reserve program in 2003 and 19 acres in the Reinvest in Minnesota (RIM) program administered by BWSR in 2010.

Byron-based DeCook Excavating completed construction in 2020. The restoration disabled a 2,000-foot private ditch and about 16 miles of subsurface tile that drained the 147-acre site, and replaced three drainage lift stations with inlet and outlet structures at the project's northwest and southeast corners. Project costs totaled about $180,000 including construction, seeding and site preparation.

BWSR engineering staff surveyed the site, performed geotechnical investigations, and planned and designed the project. BWSR Senior Water Resources Engineer

Tom Wenzel said the primary design goal for the project was to provide flood storage detention benefits for County Drainage Ditch 30 (CD 30), which runs along the west and south edges of the site.

The project restored three large, shallow wetland pools. During heavy rains, floodwater from high stage flows within CD 30 can quickly enter the project's northwest corner, be stored within the site, and then slowly be released back into CD 30 through the primary, lower capacity outlet in the project's southeast corner.

"The wetland's natural filtration and evapotranspiration process will enable additional storage retention and further improve flood damage reduction benefits," Wenzel said.

"Overall, the project reduces pressure on the adjoining CD 30 drainage system, improves water quality, reduces potential flood damage to surrounding properties and enhances the aesthetic quality of the landscape," he said.

The project also will establish native vegetation for wildlife habitat.

Freeborn County Soil and Water Conservation District (SWCD) Private Lands Biologist Chad Billat said it will likely take several years for vegetation to become established. Last season's drought was tough on plants, and follow-up vegetation work may be required.

Construction was completed by Byron-based DeCook Excavating in 2020 and includes three large shallow wetland pools, an inlet structure **(above)** *and an outlet structure* **(below).**

MN CREP Details

MN CREP is a voluntary, state-federal program that targets environmentally sensitive land in 54 southern and western Minnesota counties. Landowners simultaneously enroll in a 14- to 15-year federal Conservation Reserve program (CRP) contract administered by the USDA's Farm Service Agency, and a perpetual RIM conservation easement administered by BWSR. Landowners retain private ownership of MN CREP easements.

The Freeborn County SWCD handled easement sign-up, project oversight and ongoing vegetation establishment and maintenance. BWSR provided engineering work and MN CREP funding to secure the perpetual conservation easement and establish conservation practices. The Turtle Creek Watershed District issued a permit for the project and, along with county staff, helped with project planning. The USDA's Natural Resources Conservation Service (NRCS) and Farm Service Agency (FSA) provided both technical and administrative program support.

Billat said the most important partners are the landowners, and that the Muilenburgs' commitment made the project a success.

"You need a landowner that's willing to do the work, and Bob (Muilenburg) is definitely one of those," Billat said. "He wasn't just thinking about getting a payment on the easement and walking away. Before even putting in an application, he was talking about habitat management and wanting to make this a wildlife area."

The Muilenburgs are responsible for managing the restoration. Freeborn County SWCD will provide annual monitoring and technical assistance as needed.

The site was featured during BWSR's 2021 annual Board Tour.