SEPTEMBER 8TH, 2023

BENTON SWCD & NRCS TOUR



BENTON SWCD CELEBRATING 75 YEARS!

WWW.SOILANDWATER.ORG

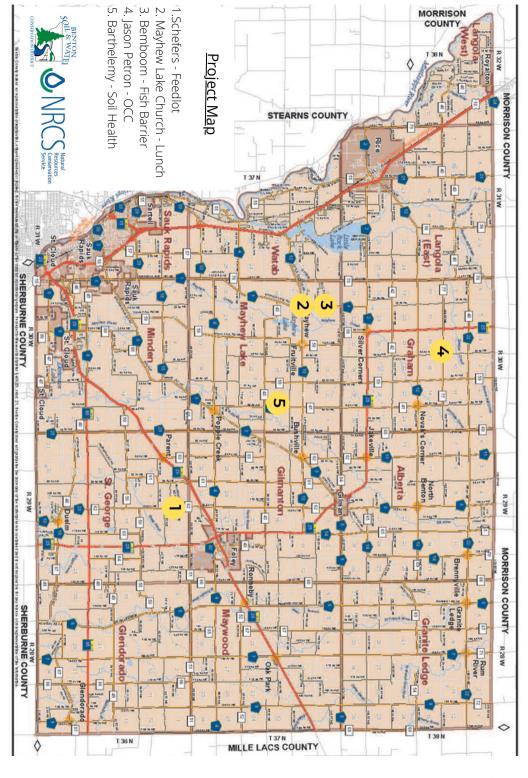






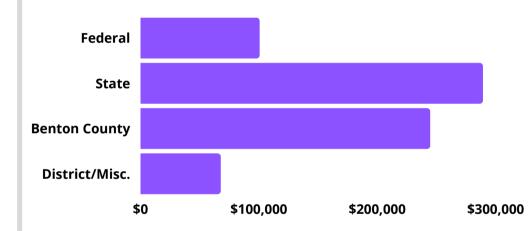
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OPERATIONAL REVENUE

\$701,559 OPERATIONAL REVENUE IN 2022

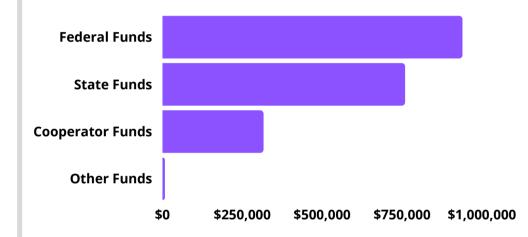


These funds are used for personnel salary and benefits, building rent, supplies, travel, tree program, environmental education programs and other related expenses.

FINANCIAL CONTRIBUTIONS FOR CONSERVATION PROJECTS

\$2,067,373

IN CONTRIBUTIONS FOR CONSERVATION PROJECTS IN 2022



Funds administered through the SWCD, NRCS, FSA and Benton County Program.
Landowner contributions for federal funded projects are not available so cooperator funds displayed are estimates.

GREENER - FEEDLOT

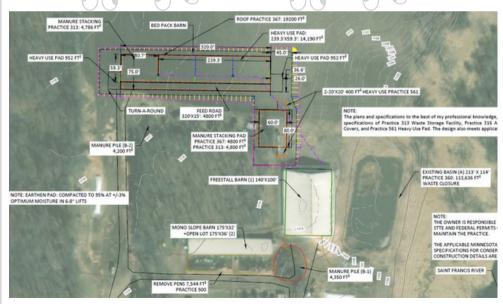
To eliminate feedlot and manure storage concerns on the farm, Greener's plan on installing 60' x 240' roof structure 2 - 60'x 80' stacking slabs to store solid manure, properly abandon the old manure pit built in 1980 and abandon the open lot.

Pollution concerns include surface water contamination from feedlot runoff, manure stockpile runoff and winter spreading. Possible ground water contamination from the stockpiles on highwater table soils and seepage from the manure pit.

Once the project has been completed all animals will be housed under roofs and increased manure storage will eliminate the need for stockpiling and winter spreading.

11 LBS
OF PHOSPHORUS
REDUCTIONS

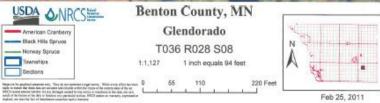
32 LBS
OF NITROGEN
REDUCTIONS



RAHM - SHELTERBELT

In 2011, John installed a shelterbelt with the help of Benton SWCD. The shelterbelt included: 150 American Cranberry bushes (totaling 820 feet) 50 Black Spruce (totaling 485 feet), and 50 Norway Spruce (totaling 470 feet).











HENRY - EROSION CONTROL

Jon Henry installed a waterway to resolve an erosion issue that he has been experiencing on one of his fields. There are around 100 acres of water that is coming into the culvert and washes out of the field. A 32' x 930' waterway was installed to help support and maintain the main waterway.



34 TONS

OF SEDIMENT REDUCTIONS

142 TONS

OF SOIL REDUCTIONS

29 LBS

OF PHOSPHORUS REDUCTIONS





SCHEFERS - FEEDLOT





18 LBS
OF NITROGEN
REDUCTIONS/
YEAR

119
LBS
OF PHOSPHORUS
REDUCTIONS/ YEAR

Drew and Renee currently have 160 cows, a mixture of milk cows, dry cows, and heifers. The farm had an 80' x 304' manure pack barn for the milk cows, with a stacking slab. They doubled the milk cow shed to 172' x 60' to house the dry cows and heifers. There was also a roof put on over the heifer feedlot and a stacking slab installed to hold manure from the dry cow/bred heifer barn. Milk house waste will be stored in septic tanks for four weeks (7,000 gal. capacity).









BAUERLY - EROSION CONTROL

Jake Bauerly had conversion tile installed in one of his fields during 2021 for water control.









PFLIPSEN - WETLAND

Terry Pflipsen has partnered with Benton SWCD and US Fish and Wildlife to install five wetland basins on his property totaling approximately 13.5 acres. Multiple berm structures will be installed to maximize pool areas for the project. Scraping of hybrid cattails will take place in the pool areas to create more open water.

30 TONS

OF SEDIMENT REDUCTION

185
LBS
OF NITROGEN

REDUCTION

41
LBS
OF PHOSPHORUS
REDUCTION













HELGESON - WETLAND

Mark Helgeson partnered with the USFWS for a wetland on his property. This wetland restoration will restore approximately five acres of drained seasonal wetland habitat. There was an existing sheet piling that was failing, a new structure was installed to the proper pool elevation. The existing structure had damage from muskrats, that was fixed and a chain-link fence was installed to protect from any future rodent damage.

44 LBS

OF PHOSPORUS REDUCTION

OF NITROGEN REDUCTION

185 LBS 31 TONS

OF SEDIMENT REDUCTION









KRUGER - EROSION CONTROL

In 1997 Sylvester came into the office with concerns of gully erosion in his field. In December of 1997 Gerry Maciej, Mike Mayer, and Steve Girard went out to survey his field. After that was complete, they started on the design for the grassed water way. Funding for this project came from state cost share and the contract was approved on the May board meeting in 1998 (Robert Gall, Loris Vanhooser, Tom Bemboom, and Joe Jordan). In the Fall of 1998, the water way was completed and certified.





BEMBOOM -FISH BARRIER



Ken Bemboom has an agreement with the US Fish and Wildlife Service (USFWS) to block the human made connection between Mayhew Creek and Sucker Creek on his property. The project will also assist the MN DNR's efforts to create a fish barrier between the two watersheds. Currently, carp have the ability to travel up Sucker Creek during high water and enter into Mayhew Creek above Mayhew Lake.















CROWLEY - EROSION CONTROL

In 1984, Kevin Adelman (a former SCS employee) went out to assess some erosion and drainage issues on Francis' property. After the site visit, it was determined that due to the drainage issue, constructing a basin, diversion, and a waterway were the best three options for his property.

Installation happened in August of 1985. The waterway and diversion are still in place today and can be seen driving by the property.









2023 OUTSTANDING CONSERVATIONIST





The Petron Family have been selected by the Benton Soil and Water Conservation District as the 2023 Outstanding Conservation Cooperators. The Petron's have been working with the SWCD over the last 20 years in both federal and state programs.

In 2015, they were funded through EQIP for an erosion control project (water and sediment control basins). This included 1,673 ft. of earthen diversions, 614 ft. of waterways, and 1,673 ft. of tile. This project eliminated over ten classic and ephemeral gullies on the thirty-acre field. In 2016. they re-enrolled 2,085 ft. of field windbreak, 1,255 ft. of living snowfence, and 2,169 ft. of shelterbelt in CRP.

They restored 3.8 acres of wetland with the help of Benton SWCD and U.S.F.W Service in 2020. This project also removed invasive species out of the wetland area.

Their most recent project, conducted in 2021 through EQIP, was a 60' x 172' roofed stacking slab and concrete heavy use protection areas that were installed for the two chicken barns to help with manure management. They also converted 6.2 acres of field to wildlife habitat, including a 2,158 ft. windbreak and 2.6 acres of upland wildlife habitat.



JIM PETRON - EROSION CONTROL

Jim came into the office in December of 1993 concerned about his field washing out. After surveying was complete, Jim had a couple options, strip cropping or contour farming. Both options were declined by Jim due to the way he farmed. He opted to install graded terraces instead. Construction for the terraces began in November of 1994 and were completed on May 15th, 1995. After a couple heavy rains, Jim reported that the terraces were working very well and that he was happy with them.







BILL MOULZOF -EROSION CONTROL

Bill came in the office in 2019 interested in fixing some erosion issues on a couple of his fields. On the north end of the field due to years of farming, the field was lower than the road ditch forcing the water to run along the field edge. The south side of the field had a terrace installed in the late fifties or early sixties that was starting to fail. There were several spots where the terraces had over topped and gullies forming below the terrace. In 2020, the south terrace was rebuilt to today's standard and now outlets to a waterway on the west side on the field. A new terrace was installed on the north side of the field that outlets to the reshaped road ditch that flows to the north.











Funding was provided by Federal EQIP Program, Clean Water Legacy Program and Benton SWCD. Pollution reductions include 267 tons of sediment year, 294 tons of soil per year and 227 lbs. of phosphorus per year.





CZECH - EROSION CONTROL

Mark was having an erosion issue on one of his fields and had a terrace installed to resolve the problem. The terrace installed is 900', has 450' of outlet tile and 900' of support tile.

26
LBS
OF PHOSPORUS
REDUCTION

170
TONS
OF SOIL
REDUCTION

26
TONS
OF SEDIMENT
REDUCTION







BARTHELEMY - SOIL HEALTH



Troy is planning on no-tilling a cover crop into the oat stubble and no-tilling soybeans into the cover crop next spring to help control erosion, increase organic matter and control weeds. The seeding mixture will be winter rye, annual ryegrass and winter peas.





COVER CROP REDUCTIONS

9 LBS of phosporus reduction

8
TONS
OF SEDIMENT
REDUCTION

122 LBS OF NITROGEN REDUCTION

NO-TILL REDUCTIONS

21 LBS OF PHOSPORUS REDUCTION

8
TONS
OF SEDIMENT
REDUCTION

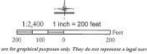
42 LBS OF SEDIMENT REDUCTION

SVIHEL - RIM

Emil Svihel came in to the office back in 1987 looking to enroll 5.3 acres of land into RIM. 0.3 acres were donated and the other 5 acres were used to establish trees and native grasses. The goal for the land was to have permanent vegetative cover to improve and create wildlife habitat.



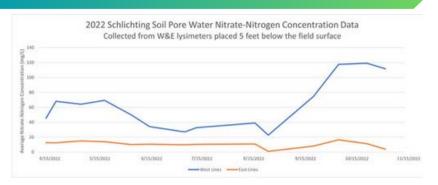








SCHLICHTING LYSIMETERS



Schlichting Farms partnered with the Minnesota Department of Agriculture (MDA) and the Benton Soil and Water Conservation District (SWCD) in 2011 for the installation of 12 Suction Lysimeters which holds water for nitrate analysis.

This study looks at the amounts of nitrates found 5 feet below the soil. These nitrates can come from the nitrogen management above ground but also occur naturally within the soils. Nitrates move through the soil profile and could

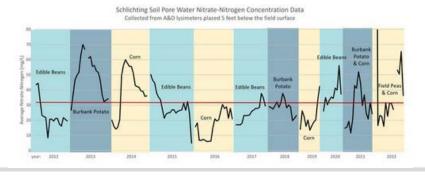
potentially leach into groundwater.

There was an expansion in the fall of 2021 with updates and an install of new lysimeters. There is now a total of 16 lysimeters in the monitoring project. Lysimeters are placed with the top 3 feet below the field surface and collecting water in the ceramic porous tip at 5 feet below ground. This depth is to protect the lines from

farm field tillage.

Water samples are collected bi-weekly and analyzed for nitrate levels by the Benton SWCD staff. Water samples are collected during the growing season which can vary in length from year to year. Typically, it begins in April and ends around freeze up in early November. This demonstration site shows how nitrate levels may leach through the soil profile in real farm applications. It also shows how different crops, weather, and cover crops with operational management

can reduce the available nitrate levels within the soil profile.



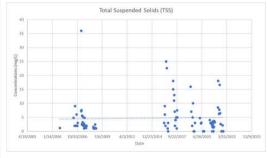
WATER MONITORING

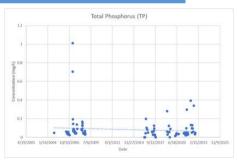
Water is essential in Minnesota. Not only the quantity but the quality. Therefore, the Minnesota Pollution Control Agency (MPCA), Minnesota DNR and Benton SWCD put funds together for stream monitoring in Benton County. The main objective is to assess the lake and stream's health and determine what actions are necessary for restoration or protection. Though the initial grant funds are no longer available the outcome of the partnerships between the agencies continued. Local groups such as the Sauk Rapids and Rice Sportsman's Club have donated funds recently to assist in the longevity of data collection. Benton SWCD monitors at a reach of Sucker Creek, Bunker Hill, and Little Rock Creek.

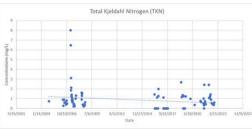
District staff are conducting the field work and MPCA staff analyze the data. During the season water samples are taken after a rain event and/ or on a 15-day schedule. The samples are collected in a bottle and shipped to a licensed laboratory to test for phosphorus levels, nitrates, total suspended solids, and a few more parameters.

It is important to continue the monitoring of these locations because the data has been essential for understanding how the watershed is reacting to implementation of conservation practices upstream. It also shows how the streams are impacting Little Rock Lake, where the streams outlet into.

Little Rock Creek Pollutant Loads













RUM RIVER REINVEST IN MINNESOTA (RIM)

The Rum River watershed covers 1,013,760 acres of the Upper Mississippi River Basin, flowing 151 miles from Lake Mille Lacs in the north to the confluence with the Mississippi River in the City of Anoka. The watershed covers large portions of Aitkin, Mille Lacs, Isanti, and Anoka Counties and covers smaller areas of Crow Wing, Morrison, Benton, Kanabec, Chisago, and Sherburne counties as well as portions of the Mille Lacs Band of Ojibwe's Reservation.

The Rum River is one of seven State Scenic and Recreational rivers, a State Outstanding Resource Value Water, and a State Water Trail. The river is home to countless aquatic species that depend on the river's habitat. The river supports local fishing guides, canoeing, and camping businesses.

The Rum River is also an important drinking water source for millions of Minnesotans. It empties into the Mississippi River just upstream of drinking water intakes for the Twin Cities. In 2020 the Minnesota Legislature approved \$3 million for Reinvest in Minnesota (RIM) to make permanent conservation easements an option for willing landowners within the nine-county watershed

which includes a small portion of Benton County.

The first \$3 million was encumbered in about a year and in 2021 the Minnesota Legislature approved an additional \$2.5 million for RIM easements in the Rum River Watershed.

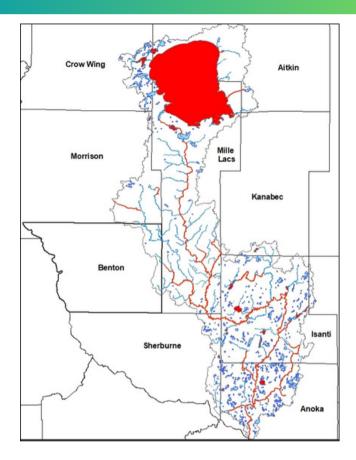
A conservation easement is a voluntary and legally binding agreement between the landowner, and the Minnesota Board of Water and Soil Resources. It limits the use and development of the land in order to preserve your land's unique natural features that have important water quality and wildlife habitat value.

In Benton County there was a total of 33 landowners that were identified along the West Branch Rum River, which was identified as a high priority tributary to the Rum River, that were eligible for the RIM program.





RUM RIVER RIM







RUM RIVER RIM



🟂 513.2 TOTAL ACRES



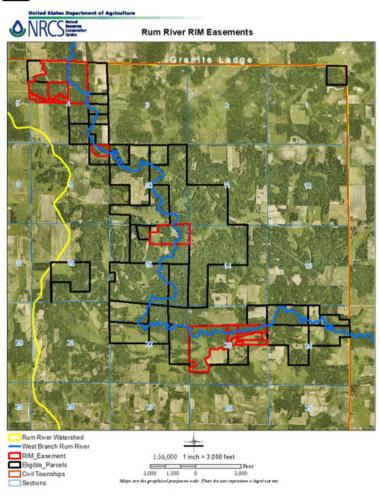
6.35 MILES OF SHORELINE



\$505,556 ALLOCATED



8 TOTAL EASEMENTS



ENVIRONMENTAL QUALITY INCENTIVES PROGRAM (EQIP)

EQIP provides federal conservation program funds to address local resource concerns. The program provides financial assistance, either to off-set the cost of implementation or as an incentive, to assist crop, livestock, and other operations.

\$757,382

IN CONTRACTS IN 2022

11

CONTRACTS IN BENTON
COUNTY FOR 2022











United States Department of Agriculture
Natural Resources Conservation Service



NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS TECHNICAL ASSISTANCE GRANT

Benton SWCD was awarded funding again from the National Association of Conservation Districts (NACD) Technical Assistance Grant.

We use these funds to focus on Conservation Operations Technical Assistance (COTA) Planning.

Farmers and agricultural landowners in Benton County have shown a very high interest in conservation, especially over the last several years. Benton SWCD technicians are able to conduct one on one consultations and planning with these landowners through this grant.

NACD Highlights for 2022-2023

- 130 landowners assisted
- 8 Conservation Plans
- 138 EQIP contracts assisted

3,977 TOTAL ACRES

BENEFITTED IN BENTON
COUNTY 2022-2023

\$60,000 AWARDED TO BENTON SWCD FOR 2022-2023





Conservation Reserve Program (CRP) and The Continuous Conservation Reserve Program (CCRP)

CRP aims to re-establish valuable land cover to help improve water quality, prevent soil erosion and reduce loss of wildlife habitat. It's become one of the largest private-lands conservation programs in the U.S.

10

CRP CONTRACTS IN BENTON COUNTY IN 2022

\$190,053
PAID TO
LANDOWNERS IN CRP

138

ACRES ENROLLED IN
CRP 2022

2,627
TOTAL ACTIVE ACRES
IN CRP



CCRP is a voluntary program that focuses on using grasses and trees to protect and improve soil, air, water, and enhance fish and wildlife habitat using various conservation practices.

4

CCRP CONTRACTS IN BENTON COUNTY IN 2022

31

ACRES ENROLLED IN



Minnesota Agriculture Water Quality Certification (MAWQCP)

A voluntary program for farmers and landowners that protects Minnesota's water resources. MAWQCP recognizes producers for their work in protecting water quality. It puts farmers in touch with local conservation district experts to identify and mitigate any risks their farm poses to water quality.

Once certified, each farm is deemed in compliance with water quality laws and regulations for 10 years. Farmers can use their certification status to promote and market their operations as protector of water quality.

Highlights of 2022

- 3 Farm certified with a total of 1,062 acres
- 176,831 acres of the 800,915 acres

253

WEST CENTRAL AREA (OUR AREA) OF CERTIFIED FARMS 10,624

ACRES CERTIFIED N
BENTON COUNTY SINCE
PROGRAM INCEPTION

16

FARMS CERTIFIED IN
BENTON COUNTY
SINCE PROJECT
INCEPTION







Clean Water Fund Well Sealing Program

This program is funded under the Clean Water Fund. The goal is to seal unused, abandoned wells in Benton County to protect groundwater quality, human health, and safety.

An unused well is an open access point straight to our groundwater, allowing surface water runoff, contaminated water, pollutants, or any waste material a direct link to our drinking water sources. This threatens the quality and safety of everyone's water – neighbor's water, your water, and even surrounding water.

\$24,000 OF FUNDING FOR 2023

5 WELLS

SEALED IN 2022

\$8,417

COST-SHARE









Clean Water Fund Septic System Upgrade Program

The MPCA offer grants to counties for SSTS programs and to assist low-income homeowners with needed SSTS upgrades. The SSTS base grant is \$18,600 per county for counties that administer the SSTS program.

In 2021, there was a total of \$1.5 million available to counties. Funds distributed to counties through the Board of Water and Soil Resources (BWSR) Natural Resources Block Grants (NRBG).

3 SEPTIC SYSTEMS

FIXED IN 2022

\$18,600
AWARDED TO BENTON
COUNTY IN 2022.

\$12,614
AWARDED TO BENTON
COUNTY FOR 2023







Elk River Watershed Grant Program Highlight

Benton SWCD has installed 36 BMPs since 2016 in this watershed with 2 Clean Water Fund grants totaling \$500,000. This 613-square-mile watershed spans across Benton and Sherburne county.

This grant will aid in reducing the frequency and severity of the algae blooms and enhance aquatic life and recreation for users of both Mayhew Lake and Big Elk Lake. Recent monitoring data shows decreasing trends in bacteria levels, phosphorous and chlorophyll-a levels. More data results coming in 2023.

The 2020 Big Elk & Mayhew Lakes Phosphorus Reduction Program grant of \$350,000, helped complete projects in 2020 and 2021.

2022 HIGHLIGHTS

- 2 Erosion Control projects
- 1 Stream Bank Protection
- 7 Wetland Restorations
- 9 Cover Crops

\$122,073
COST SHARE IN 2022

145 LBS
PHOSPHOROUS REDUCED

49.7 TONS
SEDIMENT REDUCED

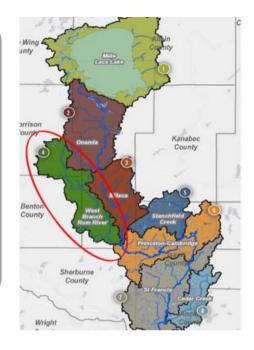




Rum River Watershed "One Watershed One Plan"

WBIF Grant Funding Received

- Cover crops \$7,500
- Erosion control structure - \$50,000
- Project development -\$15,000









Before installation of erosion control structures on John Schafer's fields. Photos taken Spring of 2023. Project should be finished by end 2024.



Mississippi River - St. Cloud Watershed "One Watershed One Plan"

In 2021, The Mississippi River - St. Cloud watershed partnership was established to submit an application to BWSR for the One Watershed, One Plan grant. The partnership received funding to start the planning process in 2021. The Comprehensive Watershed Management Plan (CWMP) will be done by 2024.







The Mississippi River - St. Cloud watershed contains a large area in Benton County. Total watershed is 691,200 acres and includes Benton County, Meeker County, Mille Lacs County, Morrison County, Stearns County, Sherburne County, and Wright County. The watershed has 907 total river miles, and has 374 lakes with a total acreage covering 23,728 acres. The Mississippi River serves a multitude of uses. St. Cloud is the first city along the Mississippi River to obtain its drinking water from this resource. The river is also used by two of Minnesota's most important power plants (Becker and Monticello) as a non-contact cooling water source.

BENTON SWCD 75TH ANNIVERSARY













THANK YOU FOR ATTENDING THE 2023 TOUR OF PRACTICES!



SWCD Staff
(Back row, front row)

Nathan Sanoski Mike McMillin Jessica Hoheisel Megan Tritz Gerry Maciej Emily Forbord Renee Thell



NRCS Staff (Left to right) Bonnie Haubenschild

Joey LeBlanc
Josh Bork





SWCD Supervisors (Left to right)

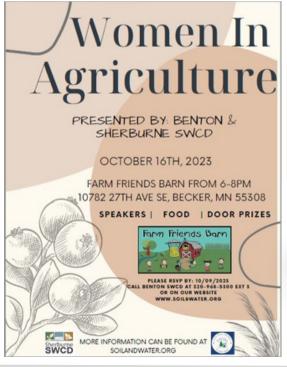
Bernie Thole Wade Bastian Joe Jordan Chuck Rau Mike Winkelman

Upcoming Events

Soil Health Event: September 12th 9am-2pm







Women In Ag Event:

October 16th 6-8pm



BENTON SWCD & NRCS

"Our mission is to protect and enhance Benton County's soil, water & other natural resources; to nurture a conservation ethic by educating county residents on conservation & environmental issues."

Benton Soil & Water Conservation District
Natural Resources Conservation Service
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Foley, MN 56329
(320) 968-5300 Ext. 3
www.soilandwater.org











Serving Benton County since 1948



