Benton SWCD and NRCS Tour

SEPT 8
9:30AM

Welcome

14 2ND AVE W FOLEY, MN 56329 320-968-5300 EXT 3

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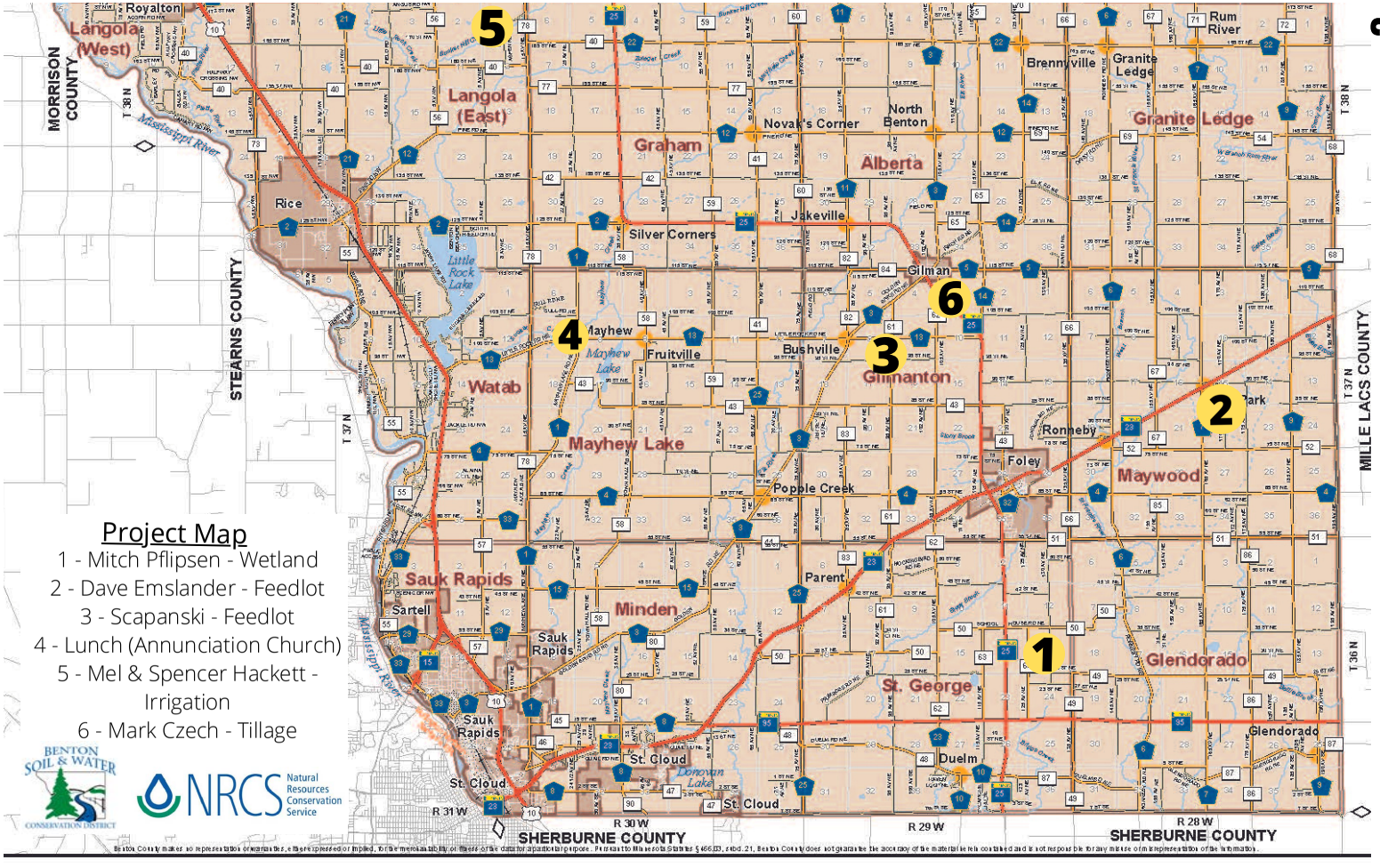


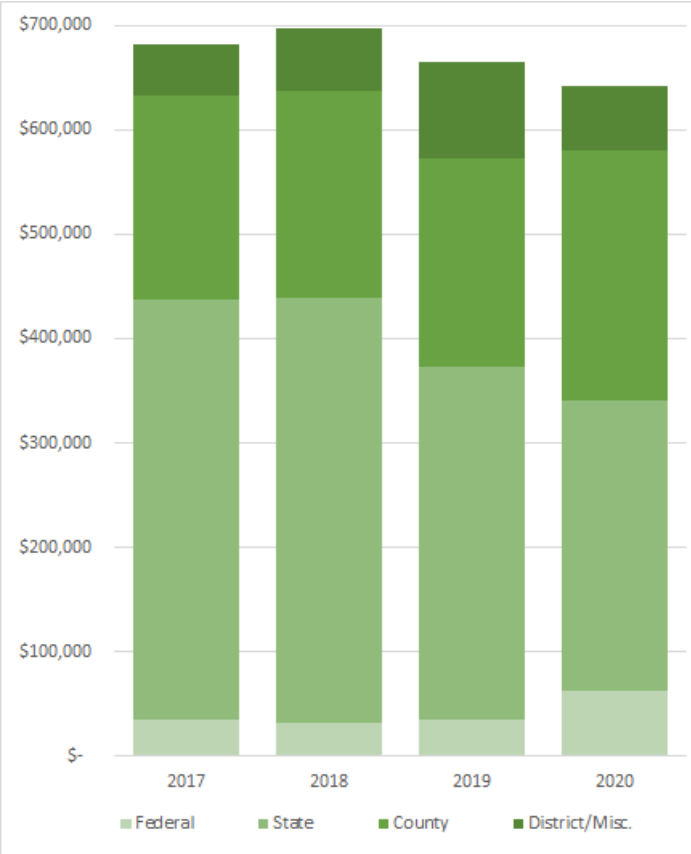
Project Map

1 - Mitch Pflipsen - Wetland
2 - Dave Emslander - Feedlot
3 - Scapanski - Feedlot
4 - Lunch (Annunciation Church)
5 - Mel & Spencer Hackett - Irrigation
6 - Mark Czech - Tillage

BENTON SOIL & WATER CONSERVATION DISTRICT

NRCS Natural Resources Conservation Service

Operational Revenue



This revenue is used for personnel salary and benefits, Supervisor and Water Resources Advisory Committee member expenses, rent, supplies, travel, tree program, environmental education programs and other related expenses

2020 Operational Revenue was $642,401

Financial Contributions for Conservation Projects

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

2020 Financial Contributions for Conservation Projects was $2,049,912

MITCH PFLIPSEN - WETLAND

Mitch Pflipsen owns property south of Foley in the Elk River Watershed. Mitch's property has a private ditch that flows through, and it was strategically plugged for a wetland restoration project that restored approximately 2 acres of ditched wetland habitat. This project is part of a larger scale effort to combat non-native aquatic invasive species such as reed canary grass and hybrid cattails in Benton County. The reasons for this effort are to improve wildlife habitat, improve floodwater retention, filter nutrients, improve water quality and increase beneficial native wetland plant species. The project will reduce an estimated 1.14 tons of sediment and 1.18 pounds of phosphorus. Partners in this effort include the U.S. Fish and Wildlife Service, Benton County Soil and Water Conservation District, and Benton County (Aquatic Invasive Species grant). Fish and Wildlife was the engineer and overseen construction for the project.

Objectives:

- *Create two earthen berms with sheet-pile water control structures*
- *Conduct two scrapes to eliminate non-native plants and sediment*
- *Plant native wetland seed following construction; and*
- *Manage the habitats following installation.*

DAVE EMSLANDER - FEEDLOT

David Emslander has around 400 beef finishing steers in operation on his farm located in the Francis River watershed just south of Oak Park. The farm site had a large dirt open lot with a concrete feed-lane. Manure was cleaned every two weeks and stockpiled until it could be spread. Due to high water tables soils and the flat topography, stock piling manure is not allowed. In 2019, David converted his once open feedlot into two roofed stacking slabs and feed-lanes to eliminate runoff. These 60' by 240' stacking slabs provide 6 months of manure storage. Phosphorus is reduced by 120 pounds annually and Nitrogen is reduced by 456 pounds annually. Secondary benefits due to both facilities having a roof, is the reduction in the amount of bedding used along with giving the cattle fresh air during the year. The stacking slabs are complimented by crop rotations and a nutrient management plan. Funding for this project was obtained through EQIP.

David is in the process to have his operation become certified through the Minnesota Agricultural Water Quality Certification Program (MAWQCP). The certification program works with landowners and operators through a holistic farm approach to land management and conservation practices being implemented that protect water quality. Once certified through the Minnesota Department of Agriculture, certified farms will receive a 10-year regulatory certainty of compliance as well as the opportunity to utilize up to $5,000 per year in cost-share on implementing additional conservation practices. Becoming certified through the MAWQCP is a great way to be recognized for the wonderful work that farmers and agricultural landowners do.

The University of Minnesota Extension Services partnered with David in 2020 and 2021 to conduct research on cover crops and forage on his farm site. Emslander assisted with the planting and spoke at the field day. The 2021 workshop focused on drought stressed forage and compared how mid-summer and late season planting dates could affect the biomass yields.

Before

After

MIKE JOHNSON - WELL SEALING

Mike Johnson had a unused dug well on his property that he wanted to get properly sealed because it was not in use and was becoming a safety concern. The dug well was 39' deep with a 3' diameter concrete casing. The area around the well casing was starting to collapse around the well casing making the well a big safety concern. Mike also has two other unused dug wells that he was interested in sealing on his mother's property. The one dug well was used for the barn, when it was active, and the well was 28' deep with a 3' diameter. The other dug well that was used for the house prior to a new drilled well that was installed. The dug was 51' deep with a 3' diameter. All three wells were sealed in 2020.

ERIC ZINTEC - GRAZING

Eric Zintek is doing prescribed grazing thru the Environmental Quality Incentive Program (EQIP). Prescribed grazing is a system of managing pastures that increases production and improves forage stands, which increases ground cover, reduces runoff, and improves soil health. This is done by splitting the pasture into smaller pastures, or "paddocks". This allows the producer to move the cattle to the next paddock before it gets overgrazed and provides "rest periods" for the paddocks when cattle are removed. Water is also planned to be piped into each paddock to provide easy access to water and eliminate the need to congregate and travel back to the building site.

Eric has South Devon (a breed of beef cattle) cow/calf pairs. He is a beginning farmer, meaning he has farmed less than 10 years, and is also a military veteran, which improved his chances of funding. He is currently in the process of installing the fence and will be staring the pipelines soon.

DARRYL BOSSHART - WETLAND

Darryl Bosshart owns property North of Foley in the Elk River Watershed. A wetland restoration project is schedule to take place this fall after harvest. The wetland restoration project will restore approximately 2.25 acres of drained seasonal wetland habitat. There will be 6.5 acres of upland prairie that will be enrolled into Conservation Reserve Program (CRP) and planted around the wetland basin in the spring of 2022. This project is part of a larger scale effort to combat non-native aquatic invasive species such as reed canary grass and hybrid cattails in Benton County. The reasons for this effort are to improve wildlife habitat, improve floodwater retention, filter nutrients, improve water quality and increase beneficial native wetland plant species. A berm and drainage pipe will be installed to the proper pool elevation for the project. Additional scraping of non-native cattails and reed canary will take place in the pool area to create more open water. The project will reduce an estimated 0.435 tons of sediment and 0.11 pounds of phosphorus. Partners in this effort include the U.S. Fish and Wildlife Service, Benton County Soil and Water Conservation District, and Benton County (Aquatic Invasive Species grant). Fish and Wildlife was the engineer and overseen construction for the project.

Objectives:

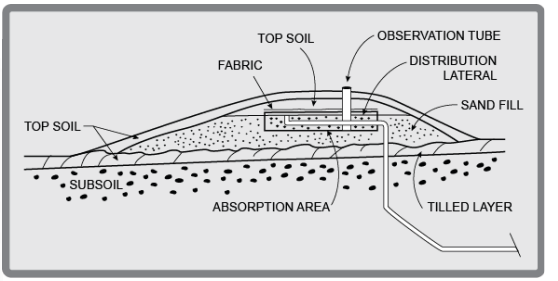
- *Create one earthen berm with pipe to updated standards*
- *Conduct one scrape to restore historical wetland profile*
- *Plant native wetland seed following construction*
- *Plant Upland Buffer following construction through CRP; and*
- *Manage the habitats following installation.*

LORRAINE JANSON - SEPTIC

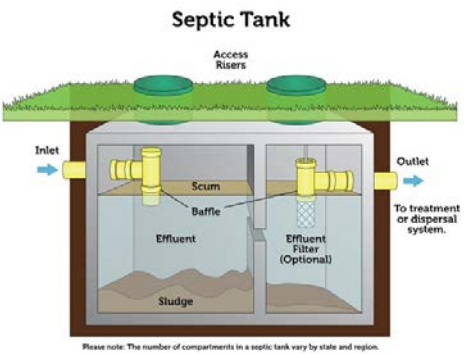
Lorraine's family approached the SWCD about replacing her septic system this spring. She was having issues with sewage backing up into the house and had outlet pipe in the pasture discharging untreated sewage to the surface. After an inspection it was found that the tank's bottom was not intact and was leaking, causing a threat to groundwater.

Through the FY2020 Elk River/Mayhew Lake Clean Water Fund Grant the SWCD was able to provide financial assistance to replace the non-compliant septic system with a new system. The system was completed and certified by Benton County in July.

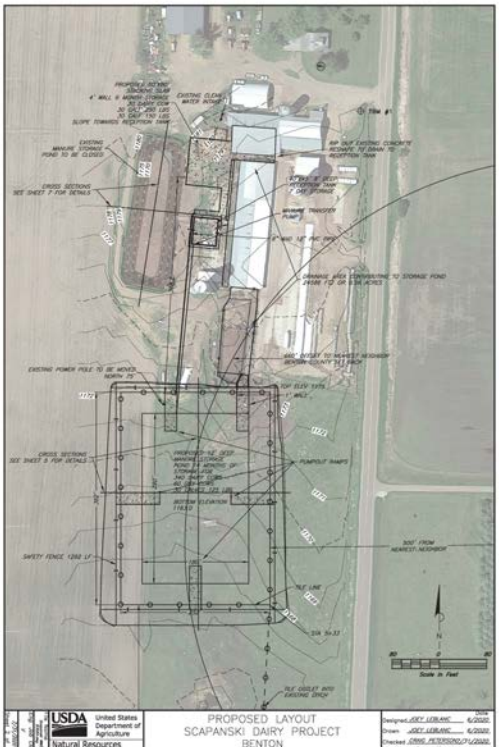
Below: Outlet Downstream



Above: Outlet Pipe Drainage



SCAPANSKI - FEEDLOT



The Scapanski's (Gary, Tom, and Patrick) are in the process of installing an ag-waste storage system. The project consists of a waste storage pond, stacking slab, and closure of an existing non-compliant waste storage pond. The new storage pond has a High Density Polyethylene (HDPE) liner and is 12' deep x 246' wide x 356' long. It will hold 5.2 million gallons and provide 14 months of storage. The stacking slab will be 60' x 80' and will provide 6 months of storage. Runoff from the stacking slab will collected and drain to the storage pond. An existing 12' deep earthen lined pond will be properly closed according to MPCA requirements.

Construction for the project started in May, the liner was installed in early July, and completion is expected by September. Financial assistance for the project is provided by the USDA Environmental Quality Incentive Program (EQIP).

JOE KNAPEK - COVER CROP

Joe is trying 3 different cover crop mixes this year.

Mix 1 *– Grazing mix inter-seeded into corn – 5 acres*
This was inter-seeded into standing corn around V5 (late June early July) with fertilizer and even with the dry conditions is coming in well. After the corn is chopped the field will be given some more time to grown then grazes later this fall, with the hope it can be grazed in the spring again. Mix includes winter rye, winter wheat, red clover and kale.

Mix 2 *– N producing mix following oats – 15 acres*
This was seeded after the oats was taken off with the goal of scavenging and producing N for next years corn crop. The cover crop should winter kill and release N as it breaks down next spring/summer. Mix includes oats, peas, radish and crimson clover.

Mix 3 *– N producing mix following corn silage – 15 acres*
After corn silage is chopped a mix of winter wheat and hairy vetch will be seeded to capture and produce N for next years oats crop. Cover crop will over winter and be terminated by tillage in the spring.

Joe also tried this mix in 2020 that was disked under before planting oats. The tillage wasn't enough to kill all the winter wheat and had about a 50/50 mix of wheat and oats come in spring. Joe ended up combining the wheat/oats mix and is using it for feed for his animals. The mixture tests very similar to the feed he would have bought for the animals.

Pollution reductions include 210 lbs. of nitrogen and 7 lbs. of phosphorus. Project is funded through the FY2020 Elk River Mayhew Lake Water Quality Grant.

Mix 1

Mix 2

Mix 3

Wheat oats and straight oats

RICE SPORTSMEN'S - 2021 OUTSTANDING CONSERVATIONIST

Rice Area
SPORTSMEN'S CLUB
P.O. Box 21
Rice, Minnesota 56367

The Minnesota Association of Soil and Water Conservation Districts (MASWCD), with support from The Farmer magazine, offers the MASWCD Outstanding Conservationist Award to recognize individuals, conservation organizations, and others for outstanding accomplishments with implementing conservation practices and improving Minnesota's natural resources. The Rice Area Sportsmen's Club was nominated as Benton SWCD's Outstanding Conservationist Award winner for 2021! Listed below are some of the many best management activities the Club has been involved with.

Benton Property - "Acres of Paradise"

2015

- Purchased 76.6 acres

2016

- Enrolled 16.6 acres in CCRP – Wetland Restoration to be planted to the historic vegetation (trees)
- Planted 4,200 trees in 2017

2017

- Enrolled 16.1 acres along Mayhew Creek in CCRP – Riparian Buffer to be planted into trees.
- Planted 1,000 trees in 2018
- Re-enrolled 9.0 acres in CCRP – Field Windbreak
- Planted 600 replacement trees in 2018
- Installed two parking lot for public

CONTINUED ON NEXT PAGE

RICE SPORTSMEN'S - 2021 OUTSTANDING CONSERVATIONIST

Morrison Properties – "Blue Dog Ridge & Fairbrother's"

2008

- Enrolled 25.60 acres into CRP SAFE – tall grass prairie

2010 & 2020

- Re-enrolled 145.76 acres in CRP – Wildlife Habitat and Pollinator Habitat
- 13.1 acres of pollinator habitat scheduled to be planted in 2021

Little Rock Lake/Mississippi River Drawdown

2019

- Mississippi River - Little Rock Lake drawdown financial sponsor

Annually

- Farm Bill Assistance Program financial sponsor
- Soil and Water Stewardship Week financial sponsor

Equipment

- Donated two tree planters to Benton SWCD
- Donated a plot master to Benton SWCD

Rice Area
SPORTSMEN'S CLUB
P.O. Box 21
Rice, Minnesota 56367

MARK SKROCH - EROSION

In 2013 Mark started having issues with heavy rains eroding a ditch through his property. The problems started when the area received 5"+ of rain in one night combined with sandy soils, poor vegetation and 12' – 13' of drop along the ditch. Mark had tried to fix the issue on his own a few times over the years without success and in 2020 Mark was finally able to install a permanent fix with the assistance from NRCS and Benton SWCD. The project included reshaping the banks, pulling the slopes back from 1:1 and steeper to 3:1, lining the channel with rock, some minor straightening, replacing some of the crossings and reseeding with a mixture on introduced and native grasses. Project was funded through the NRCS Environmental Quality Incentive Program and a FY2019 Little Rock Lake grant from the state of Minnesota. Pollution reductions for the project include 60 tons of sediment and soil per year and 50 lbs. of phosphorus per year.

A - Crossing before
B - Crossing after
C - Drone before
D - Drone after
E - Drone during

MEL & SPENCER HACKETT - IRRIGATION

The Hackett's (Mel and Darlene, Spencer and Stacey) have installed several conservation practices in the past few years, but the most notable is one of the center pivot's they replaced in the spring of 2020 with assistance from the Environmental Quality Incentive Program (EQIP). The field, which had been irrigated with a conventional center pivot system, is now irrigated with a variable rate system. This allows them to use a "prescription" to apply varying amounts of water to different parts of the field. To the best of our knowledge this is the first and only one in the county.

To understand the importance of variable rate, especially for this field, a brief look at the soils is helpful. The United States Department of Agriculture (USDA) has a rating system that classifies soils based on their drainage, which ranges from "very poorly drained" to "excessively drained". In this irrigated field there are soils from both ends of the drainage class, with parts of the field that are under the pivot having standing water most of the growing season to sandy soils that are susceptible to drought, and soils in between. The majority of the field is excessively drained.

Under the old conventional center pivot, the wet areas received the same amount of irrigation water as the dry areas. The end result is either the dry areas were underwatered, the wet areas were overwatered, or both. With the new system the overall amount of water used is reduced and it's applied in a more productive pattern. In addition to the water savings, Hackett's are also seeing a reduction in energy use. This is partly due to the reduced water usage, and partly due to other changes. When the new irrigation system was installed they also replaced the old diesel-powered irrigation pump with a new electric pump with a variable frequency drive to reduce energy consumption.

The picture below shows how the water is applied under the new system. Each color represents a percentage of the full application rate. For example, if 1" of water is needed, the dark blue areas would receive an inch of water, light blue 0.7", green 0.5" to 0.6", lime 0.4", orange 0.3", dark orange 0.2", and red 0.5". With this pivot the new end also has the ability to "swing" and can avoid going through and applying water in the wet area in the upper left side of the aerial image. In the past, this area would have received the same amount of irrigation water as the rest of the field.

Picture of control panel showing the irrigation pattern

RANDY HACKETT - EROSION

After each chicken barn was built Randy had some significant erosion issues from the excess water. He tried grading and seeding the area several times, but nothing was able to help with the erosion.

The first water and sediment basin was completed in 2016 with FY2015 Little Rock Lake and EQIP funds and the 2nd project was completed in June of 2021 with FY2019 Little Rock Lake funds. This project consisted of 2 water and sediment basins and a water way.

Pollution reductions for the 2016 project included 343 tons of sediment and soil and 293 lbs. of phosphorus and the reductions for the 2021 project included 36.8 tons of sediment, 103.75 tons of soil and 32 lbs. of phosphorus per year.

BRENT SEPPELT - FEEDLOT

Brent operates 2 feedlots 1 mile apart. He milks around 300 cows and keeps steer and dry cows on the home farm and raises his heifers on the 2nd farm. We have been working with Brent on trying to improve manure storage and eliminate feedlot and silage runoff on the home farm but have had tough time because of site restrictions, sand bedding and Brent not being sure on how he wants the farm site set up.

In the meantime, we are looking at what can be done to improve the 2nd farm. Brent raises 300+ heifers on site that have access to large dirt lots and several buildings. The lots drain to a large meadow/wetland before entering an intermittent stream then forms Zuleger Creek.

Due to several factors list below, the preliminary plan is to abandon this site and installed a roofed feedlot and stacking slab at another site.

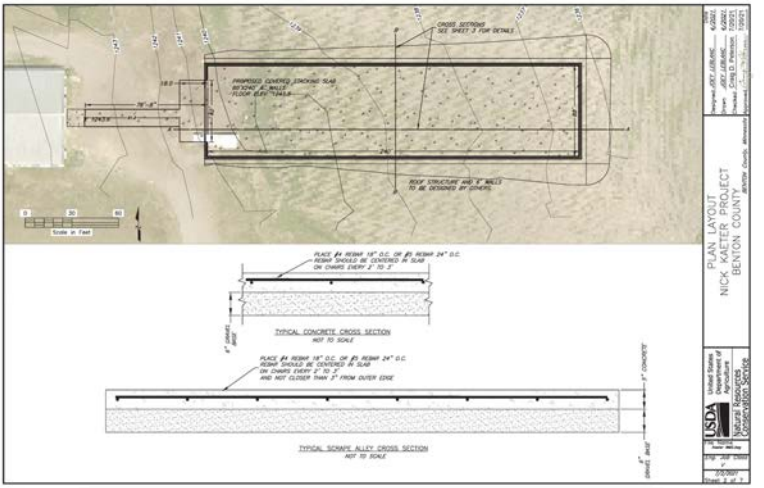
- *Soil conditions do not meet Vegetated Treatment Area requirements, which would mean installing liquid storage.*
- *Liquid storage would be expensive due to site conditions*
- *Number of animals on site*
- *Condition of the buildings*
- *Complexity of potential on site fixes*

By abandoning the site and putting all animals and manure storage under roof it would eliminate all feedlot runoff and allow for better management and care of the animals. If completed pollution reductions for the project 103 lbs. of Phosphorus and 225 lbs. of Nitrogen per year.

NICK KAETER - FEEDLOT

Nick Kaeter has around 700 finishing steers that is in the Little Rock Watershed. Nick's barn is an old poultry barn that was converted to house cattle. The manure was being stockpile on the soil east of the barn and do to the high-water table it did not meet stock piling requirements. A 60'x240' Covered stacking slab with 6' walls was proposed to store the manure for 6 months so it could be hauled to the fields and spread at recommend rates.

Construction of the project started in August of 2021 with the concrete getting poured for the floor and walls. The roof is scheduled to be completed in the fall of 2021. Financial assistance for the project is provided by the USDA Environmental Quality Incentive Program (EQIP).

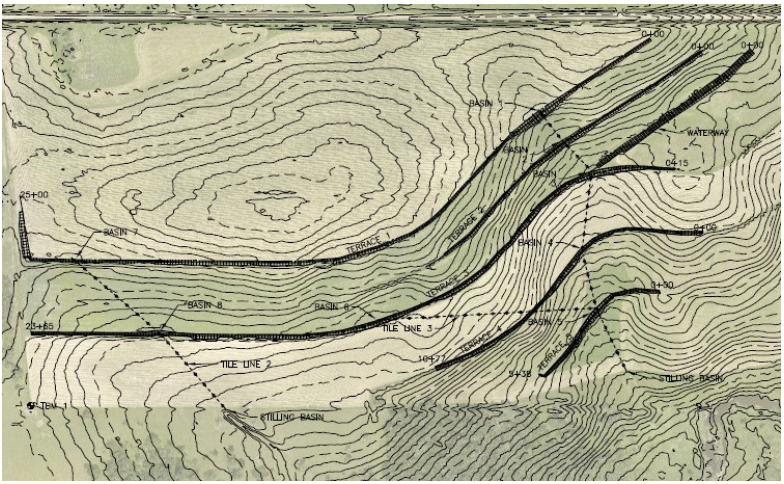


ROGER RUDNITSKI - TERRACE

Roger called the office last year at the request of his renter about getting his terraces reshaped. The terraces were built sometime between the late 60's to late 70's and are starting to fail. Terrace channels are full of sediment forcing water to find new paths, tile and tile inlets are plugged with sediment and/or broken, basins have over topped and holes in the basins from burrowing animals and trees have compromised other basins.

The plan is to reshape the terraces, install new tile and inlets and reshape the waterway. Possible pollution reductions include 15.6 tons of sediment, 53.2 tons of soil and 13 lbs. of phosphorus per year.

Potential funding sources include the FY2020 Elk River-Mayhew Lake Grant and EQIP funding.



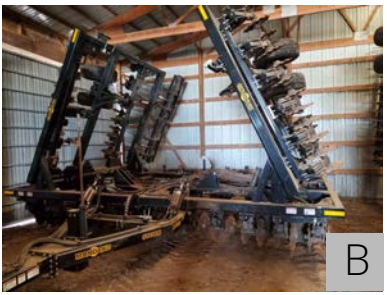
MARK CZECH - TILLAGE

Mark recently purchased a Mandanko Storm Vertical Tillage tool to eventually replace his other tillage equipment. All cropland would receive one pass in the spring before planting and corn would also receive a pass in the fall to help breakdown and incorporate residue. Soybean fields that receive fall manure will also receive one pass to corporate the manure.

Vertical tillage is a tool that enters and exits the soil on a vertical plane. That means concave blades or any other blades that do not maintain a straight line of travel through the soil are not true vertical tillage because they move soil horizontally, which can create negative effects like hardpan and smearing. Additionally, true vertical tillage can "score" the soil, similar to cutting glass, to naturally fracture the soil. This fracturing helps eliminate soil layers so that roots can explore the soil profile more freely to access nutrients and moisture. It also provides a path for moisture to enter the soil.

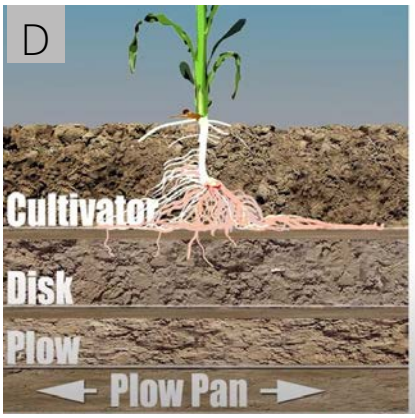
Benefits from this can include fewer passes which means less time, money, fuel, labor and equipment to prepare the soil for planting, may increase yield, reduce soil erosion, does not create a hard pan, eliminate hard pan, even seed bed for the next crop and increase soil health.

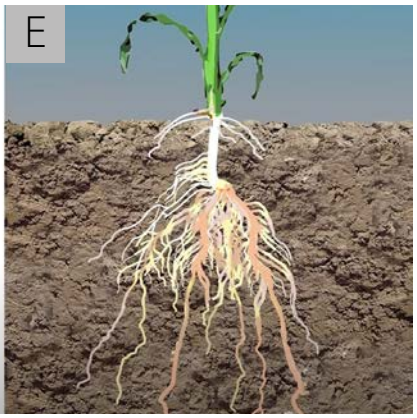

A


B

A - soil inversion from a tandem disk
B - vertical tillage tool
C - wavy coulters slicing through the soil
D - compaction layers that normal tillage can cause and how it affect roots
E - What roots can do without compaction layers


C

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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.

IN 2020, **BENTON COUNTY HAD 20 CONTRACTS** FOR $1,393,080. THE COUNTY WAS 4TH IN THE STATE IN BOTH NUMBER OF CONTRACTS AND DOLLARS ALLOCATED.
FROM 2013 - 2020, EQIP HAS BROUGHT IN A TOTAL OF **$8,964,329** IN CONSERVATION FUNDS

PICTURE ABOVE OF AN EROSION PROJECT COMPLETED FOR LORIS VANHOOSER IN 2020

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

SUMMARY OF 2020 PRACTICES

155 ACRES CONSERVATION TILLAGE
1,083 ACRES NUTRIENT MANAGEMENT
3 CONSERVATION ACTIVITY PLANS
1 WELL SEALING
28 ACRES HAYLAND PLANTING
4 MANURE STORAGE STACKING SLABS
2 MANURE PITS/MANURE STORAGE FACILITIES
2,158 FEET SHELTERBELT/WINDBREAK
3 ACRES UPLAND WILDLIFE HABITAT
9 WATER AND SEDIMENT BASINS
5 TERRACES/DIVERSIONS
1 GRASSED WATERWAY
1 MANURE PIT CLOSURE
186 ACRES IRRIGATION WATER MANAGEMENT
1,304 FEET IRRIGATION CONVERSION
3 ROOF STRUCTURES
1,166 ACRES COVER CROPS
1 STREAM CROSSING
1 COMPOST FACILITY
1 ENERGY PLAN IMPLEMENTATION
13,944 SQ FT LINED WATERWAYS

NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS TECHNICAL ASSISTANCE GRANT

2020 marks the third year of the National Association of Conservation Districts (NACD) technical assistance grant program. This program was created with funds from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) for the purpose of increasing staffing at the field level and providing conservation services to farmers, ranchers and local communities across the U.S. “Since 2018, NACD and NRCS have worked together to increase staffing at the field level for conservation districts,” NACD President Tim
Palmer said. “This increased technical capacity helps to improve conservation services to farmers, ranchers and local communities across the nation.”
To date in 2020, NACD and NRCS have awarded $15 million in technical assistance
grants. Since the program’s inception, NACD has funded technical assistance in all 50 states and three U.S. territories. “Even in this time of a national emergency,
farmers and ranchers have conservation concerns that need to be addressed,” Palmer said. “NACD is proud to provide funding to America’s conservation districts and allow for more boots on the ground, providing our growers with support for their individual landscapes and resource concerns.”
On July 21st, 2020 NACD awarded $6.5 million in technical assistance grants to nearly 400 conservation districts, including a $50,000 grant to Benton SWCD. The SWCD will utilize these funds for planning and designing activities associated with Environmental Quality Incentives Program (EQIP). Benton County is a very high workload area for EQIP and from
2013 to 2019 has received the highest contract allocation per square mile in Minnesota at just over $15,000 per square mile. Benton is processing and ranking approximately $3.0 million in 2020 applications, equal to over $7,000 per square mile. This technical assistance grant will allow the SWCD to hire staff to plan,
design, oversee installation and implementation of nutrient management, soil erosion, irrigation and other EQIP projects.

2020 ACCOMPLISHMENTS

EQ IP

NUMBER OF ASSISTED CONTRACTS: 14
PRACTICES DESIGNED: 2 NUTRIENT MGMT (590)
CONTRACT ACRES BENEFITTED: 773.0 ACRES

COTA

CONSERVATION OPERATION TECHNICAL ASSISTANCE
NUMBER OF CONTACTS: 20
NUMBER OF PLANS WORKED ON: 10
PLANS INCLUDE: PRESCRIBED GRAZING, IRRIGATION WATER MANAGEMENT, NUTRIENT MANAGEMENT

National Association of Conservation Districts

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

CONSERVATION RESERVE PROGRAM

This program aims to re-establish valuable land cover to help improve water quality, prevent soil erosion and reduce loss of wildlife habitat. Since signed into law by President Ronald Reagan in 1985, the program has become one of the largest private lands conservation programs in the United States. Thanks to the voluntary participation by farmers and landowners, over 20 million acres are being protected across the country.

CRP GENERAL SIGNUP:

WORK COMPLETED IN 2020
CONTRACTS: 20
ACRES: 282.14

SUMMARY OF 2020

CRP CONTINUOUS SIGNUP:

CONTRACTS: 1
ACRES: 4.22

The Conservation Reserve Program (CRP) is a land conservation program where, in exchange for a yearly rental payment, farmers/landowners who voluntarily enrolled in the CRP program agree to remove environmentally sensitive land from agricultural production and instead plant species that will improve environmental health and quality. Contracts for land enrolled in CRP are 10-15 years in length. Practices range from native prairie plantings to cool season grass plantings, tree plantings for wildlife habitat, pollinator habitat restorations, and wetland restorations. Thanks to voluntary participation by farmers and landowners, CRP has improved water quality, reduced soil erosion, and increased habitat for endangered and threatened species.

CONSERVATION STEWARDSHIP PROGRAM

This program looks at conservation practices currently being implemented on farms or woodlots and offers incentive payments to enhance these practices. Since 2010, 18,936 acres have been enrolled and over $1,619,000 has been brought into Benton County for conservation through this program with 32 different enhancements in place.

CAPACITY FUNDING IMPACT REPORT BENTON SWCD

STATE FUNDING AT WORK FOR SOIL AND WATER

RESOURCE CONCERNS ADDRESSED

Implementation Activities	Resource Area			
	Excess Nutrients	Water Storage & Treatment	Soil Erosion	Riparian Zone Mgmt
Project Development	✓		✓	
Technical/Engineering Assistance	✓		✓	

OPERATIONAL NEEDS

MAKING A DIFFERENCE IN BENTON COUNTY

Benton SWCD works with farmers and landowners providing advice and resources on best management practices (BMPs) to protect and enhance our natural resources. Recognizing how effective SWCDs are at being the "Boots on the Ground" for conservation, State Legislation has dedicated Clean Water Funding to invest in building district capacities to target four resource concern areas: soil erosion, riparian zone management, water storage and treatment, and excess nutrients. Our communities greatest need included professional advice for water quality BMPs that target reducing excess nutrients and soil erosion. Benton SWCD allocated these funds to employ additional staff to assist Benton County landowners with conservation planning for various water quality projects. Assistance was provided for site assessments to help identify and treat potential resource concerns. Staff assisted landowners with designing and implementing conservation practices including – Erosion control practices on agricultural fields, Comprehensive Nutrient Management Plans for livestock operators, Grazing Management Plans, implementing cover crops to diversify crop rotations, and animal waste storage facilities to properly store livestock manure until field conditions are suitable for applying manure at agronomic rates for cash crops. These activities all keep excess nutrients and soil out of our lakes, streams, and groundwater. These funds have been critical for Benton SWCD to meet the high demand for providing technical assistance to Benton County Landowners. Benton SWCD has made a conscious effort to increase our education and outreach to the community - education leads to land and water stewardship. A portion of the Local Capacity Services Clean Water Funding was dedicated to creating an Education and Outreach Plan for the District. The plan provides a framework to direct our efforts and ensures we are reaching a wide range of audience including local students, County residents, city and township officials, local businesses, and our watershed partners. Some highlights from this effort has been creating a social media platform for the District to help promote land and water stewardship projects being done. We have also been working closely with local newspaper writers and editors providing them with local conservation topics and projects, so they can take the lead in writing articles to enlighten the community on land and water stewardship. During this time, the District has also participated in over 26 different education and outreach activities and events within the community.

2020 DRINKING WATER PROTECTION INITIATIVE

Groundwater protection has been a consistent priority in the County Water Plan. Sealing abandoned or unused wells is one way to protect groundwater from contamination as an unsealed or improperly sealed well can act as a drain, allowing surface water runoff, polluted water and improperly disposed of solid or other waste to reach and contaminate groundwater resources. These unused wells also pose a significant safety hazard. Sometimes the exact location of the well is lost through ownership changes or other ways and large diameter wells can be large enough to trap children, adults, and animals.

The SWCD operates under Clean Water Fund grants to seal unused wells in Benton County. The SWCD received $39,300.00 in 2020. Accomplishments for 2020 include sealing a total of 11 unused wells, 9 dug wells and 2 drilled. The SWCD sealed an additional two wells with three more scheduled for 2021 so far. The goal is to seal 30 unused/abandoned wells through the grant period.

2020- 2021 CLEAN WATER FUND (CWF) LOW INCOME SSTS UPGRADES

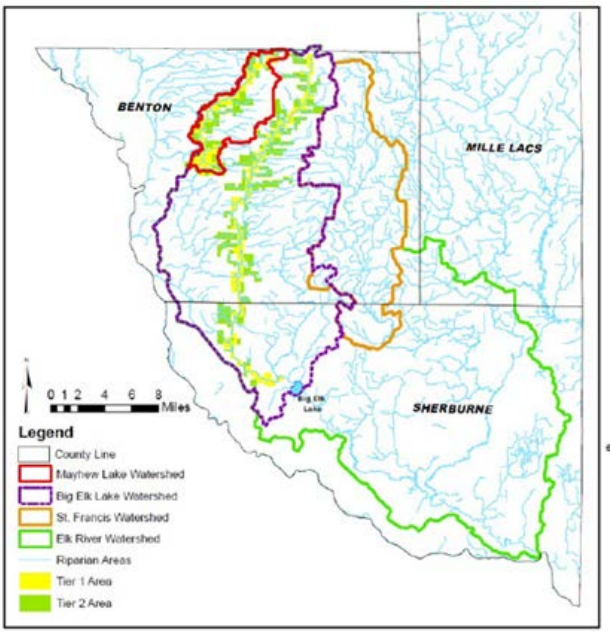
This grant was established by the MPCA to support work of the Clean Water Legacy Act. It helps low-income single-family households who have a failing Subsurface Sewage Treatment System (SSTS). Families who have a failing septic system and meet the income requirements of the program are eligible to receive financial assistance up to 75% of the bill to replace their failing system. The purpose of this grant is to promote public health and welfare by preventing, reducing, and eliminating water pollution and disease-causing bacteria.
Benton SWCD is administering this program on behalf of Benton County. Some examples of failing septic systems that pose an Imminent Threat to Public Health are: a system with discharge of sewage or sewage effluent to the ground surface, drainage systems, ditches, or storm water drains, or directly to lakes and stream; systems that cause a reoccurring sewage backup into a dwelling or other establishment; systems electrical hazards; or sewage tanks with unsecured, damaged, or weak maintenance hole covers.
In 2018, three SSTS Upgrade projects were completed. In 2019 Benton SWCD was awarded another grant for $26,796.00 with 3 projects in progress for 2020-2021. The 2021 application was just submitted, and more funding is anticipated.

2020 - BIG ELK & MAYHEW LAKES PHOSPHORUS REDUCTION PROGRAM

The SWCD received the 2020 - Big Elk & Mayhew Lakes Phosphorus Reduction Program grant of $350,000. Big Elk Lake is in a high population region and is heavily used and Mayhew Lake is 1 of only 2 lakes in Benton County and is located only a few miles from St. Cloud. This project will aid in reducing the frequency and severity of the algae blooms and ultimately enhance aquatic life and experience for users of both lakes.

This grant helped continue our efforts that were implemented in 2013, 2016, & 2017. So far, we have reduced phosphorus by 12% of the TMDL annual reduction goal. With this grant we expect to reduce phosphorus by an additional 12% in the Elk River Watershed. 2 wetland restorations, 4 erosion control and 3 cover crop seedings were completed in 2020. Contracts for in place for 3 more wetland restorations and 2 erosion control projects for 2021 construction.

There are 35 different projects at various stages in this program. Combined they are estimated to reduce phosphorus by approximately 1,483 lbs./yr., nitrogen by 238 lbs./yr., BOD by 1,349 lbs./yr., COD by 3,219 lbs./yr., soil by 2,865 T/yr., and TSS by 1,626 T/yr.



MAP SHOWS SUBWATERSHEDS LABELED WITH TIER 1 (YELLOW) & 2 (GREEN) AREAS THAT WERE IDENTIFIED WITHIN THE ERW TMDL REPORT AS PRIORITY AREAS FOR BMPS.

2020 - BIG ELK & MAYHEW LAKES PHOSPHORUS REDUCTION PROGRAM - CONTINUED

Feedlot project near tributary to the Elk River in need of runoff controls and manure storage.

Crop field experiencing gully erosion in need of erosion control measures in Big Elk Lake Watershed.

Elk River algae bloom.

THANK YOU FOR ATTENDING THE 2021 TOUR OF PRACTICES!

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"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."

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BENTON SOIL & WATER CONSERVATION DISTRICT

NRCS Natural Resources Conservation Service

Serving Benton County since 1948

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