

**United States Department of Agriculture** 





Fiscal Year 2017 Wisconsin Annual Report





Wisconsin Natural Resources Conservation Service wi.nrcs.usda.gov







Helping People Help the Land

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# GREETINGS

## - Welcome from the State Conservationist

Welcome to the Fiscal Year (FY) 2017 Wisconsin Annual Report. The Report provides snapshots of the USDA Natural Resources Conservation Service's (NRCS) approach in "*Helping People Help the Land*" to ensure its productivity for future generations.

You will meet many Wisconsin farmers and landowners who have had success in working with us to put conservation on the ground. You'll learn about our program and outreach successes, along with highlights of the work we do, which is strongly focused on meeting our responsibilities in a cost-effective and accountable manner. You'll also see highlights of how NRCS is helping boost local economies through innovative conservation efforts that lead to increased yields and decreased input costs for farmers.



Angela Biggs, State Conservationist

Through our continued focus and emphasis on conservation planning, we are connecting with our customers on farms and in field offices across the state to develop and implement plans to protect, conserve and enhance natural resources within our client's social and economic interests. NRCS delivers one-on-one, personalized advice on the best solutions to meet the unique conservation and business goals of those who grow our nation's food and fiber.

The 2014 Farm Bill has enabled us to continue investments in conservation efforts across the state through the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP). We are also continuing investments in our Agricultural Conservation Easement Program and specialty programs and initiatives, such as the Regional Conservation Partnership Program (RCPP), designed to focus conservation at the landscape scale. We encourage you to visit our website for information regarding technical tools, services and assistance available to farmers and landowners.

NRCS–Wisconsin had many great accomplishments this year and we could not do it without our partners. I would like to take this opportunity to thank them. Thanks to the farmers and landowners who partnered to enroll in the EQIP, CSP and the various other initiatives, adding new acres of conservation. Thanks to the customers reaching out to field offices seeking conservation technical assistance to remedy an





erosion problem, improve water quality or enhance wildlife habitat. Thanks to all the partners in conservation that we work with, collaborating to make the most of our dollars and helping to provide the best assistance and programs possible. Thanks to the NRCS staff, who continue to work towards our mission, day in and day out, tirelessly.

NRCS celebrates over 80 years of being pioneers in conservation to maintain healthy and productive working lands. Our agency started in Wisconsin, restoring the Coon Valley Watershed. We can be proud of our heritage; as conservation leaders, we will continue to evolve and grow to meet new challenges as an agency, one farm partnership at a time. I am proud to share with you the Wisconsin Annual Report highlighting our conservation accomplishments. I welcome your comments and feedback, and look forward to continuing our partnership efforts in *"Helping People Help the Land."* 

Angela Biggs, Wisconsin State Conservationist

## Sign up online for Client Gateway

A secure online portal for individual landowners and land managers to track payments, request assistance, sign documents and request conservation assistance anytime, anywhere.

www.nrcs.usda.gov/clientgateway

Greetings

# BACKGROUND



## S Wisconsin NRCS History

### The First in the Nation for Conservation

Our agency was born in 1935, during a time of hardship and desperation, when the very soil that put food on our tables was literally blowing in the wind.

Erosion was such a serious problem in the 1930s that it awakened the nation to heed the message of a man named Hugh Hammond Bennett to save our soil. We began to realize then, and we must not ever forget, how the protection of our soil and water is the foundation of the health and wealth of our country.

It took only 70 years, from the time of the first infusion of settlers, to the early 1930s, for traditional farming methods to reduce the land around Coon Creek, Wisconsin, and elsewhere in the state, from pristine to the brink of agricultural uselessness.

Wisconsin became the home of the first erosion control demonstration project in the country, the wildly successful Coon Creek Watershed in Vernon County. It was 22 miles long, nine miles wide, 92,000 acres over three counties, with outlet directly to the Mississippi River. There, the science and art of soil conservation to protect our land, water, food and nation, was born.

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## - Helping People Help the Land

Thanks to the vision of early conservation leaders, our prosperity as a nation aware of conservation, is flourishing. The conservation legacy in this state, from our Coon Creek Watershed beginnings, led to today's establishment and success of the USDA–NRCS.

NRCS is committed to helping private landowners care for the land, use it productively and excel as stewards for the future. America's working lands produce food and fiber, clear air and water, wildlife and healthy soil. Farming can be one of the most environmentally compatible uses of land there is.

NRCS is the leader in helping people make sound choices, to ensure healthy land and water. Through voluntary incentive-based programs, NRCS works directly with farmers and landowners to provide technical expertise and financial assistance to make conservation work on private lands.

The agency promotes conservation practices, everything from practices that manage excess nutrients and waste on farms, to practices that promote soil health, among a host of others, all of which are helping to protect our natural resources for the long term, while at the same time improving Wisconsin farms. Taking care of the land-scape in concert with agricultural productivity is our goal.

NRCS celebrates over 80 years of working with farmers and landowners, local and state governments and other federal agencies to maintain healthy and productive working lands.

## - State Resource Priorities

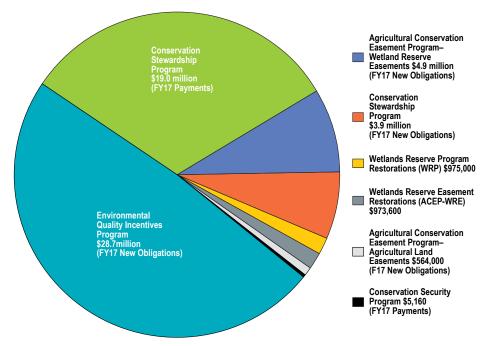
- Water Quality Degradation
- Soil Erosion
- Soil Quality Degradation
- Inadequate Habitat for Fish and Wildlife
- Degraded Plant Conditions

- Livestock Production Limitation
- Excess Water and Insufficient Water
- Air Quality Impacts
- Insufficient Energy Use

# HIGHLIGHTS

### - Budget Overview

### FY2017 NRCS–Wisconsin Program Dollars



### \$59.2 Million Provided Through Conservation Programs

### - Local Working Groups

Local Working Groups, a subcommittee of the State Technical Committee, offer an avenue for interested individuals and groups to advise NRCS on local resource priorities for program funding. Local Working Groups are comprised of two or more counties united by geography, similar land use, resource and type of agriculture.

In 2017, each of the 18 Local Working Groups met to gather input on resource concerns and identify EQIP funding priorities for the upcoming year. Over 360 participants attended Local Working Group meetings. Collaboration was excellent, continued learning took place and partnerships were developed and strengthened.

If you are interested in attending your county local working group meeting, visit www.nrcs.usda.gov/wps/portal/nrcs/main/wi/newsroom/pnotice/.

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## - Technical Assistance

NRCS offers technical assistance to address opportunities, concerns and problems related to the use of natural resources to help landowners make sound resource management decisions on private, tribal and other non-federal lands.

Every county in Wisconsin has a conservation team to assist in conservation planning. Having a conservation plan allows landowners to participate in financial assistance and easement programs. Conservation Technical Assistance is a voluntary program carried out by NRCS, partnering with local county conservation professionals.

### - Conservation Performance Results

NRCS assists landowners in conserving resources on private lands by providing technical and financial assistance available through voluntary incentive-based programs. Highlights of our accomplishments are listed below.

- 2,099 Conservation Plans written on 283,060 acres
- 1,200 acres of wetlands created, restored, or enhanced
- 39 Comprehensive Nutrient Management Plans written
- 373,461 acres with conservation applied to improve water quality
- 935 acres with conservation applied to improve agricultural irrigation water management
- 2,510 acres with conservation applied to improve irrigation efficiencies
- 327,272 acres of cropland with conservation applied to improve soil quality
- 30,812 acres of cropland with conservation applied to improve soil health and sustainability
- 5,829 acres of cropland with applied soil health management systems
- 396,504 acres of conservation applied to improve environmental quality
- 21,230 acres of non-federal land with conservation applied to improve fish and wildlife habitat
- 25,100 acres of forest land with conservation applied to protect and improve vegetative condition
- 16,326 acres of grazing land with conservation applied to improve resource base
- 7,255 acres of grazing land with conservation systems applied to achieve a sustainable forage-animal balance

# **CONSERVATION PROGRAMS**





## - Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) provides voluntary conservation promoting agricultural production, forest management and environmental quality to help install or implement structural, agronomic or management conservation practices to protect soil and water quality.

Farmers develop a conservation plan for the acreage affected by EQIP practices. Conservation practices must meet NRCS technical standards. NRCS evaluates and ranks each application, with higher priorities given to the practices that address local resource concerns and provide the most environmental benefit.

### **Special EQIP Opportunities**

**On-Farm Energy**—NRCS and producers develop Agricultural Energy Management Plans (AgEMP) or farm energy audits that assess energy consumption on an operation. Audit data is used to develop energy conservation recommendations. NRCS–WI obligated \$1,313,560 in 44 contracts covering 2,853 acres.

**Organic**—NRCS helps certified organic growers and producers, and also those working to achieve certification, to install conservation practices to address resource concerns on organic operations. NRCS–WI obligated \$209,209 in 22 contracts covering 1,696 acres.

**High Tunnel Systems**—NRCS helps producers plan and implement high tunnels, steel-framed, polyethylene-covered structures that extend growing seasons in an environmentally safe manner. High tunnel benefits include better plant and soil quality, fewer nutrients and pesticides in the environment and better air quality. NRCS–WI obligated \$610,521 in 68 contracts covering 135 acres.

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**Soil Health Initiative**—Sound principles and systems that include no-till, cover crops, diversifying the crop rotation and managing nutrients and pesticide application improve soil health, which results in increased soil organic matter and water infiltration, as well as better profits and crop yields. NRCS–WI obligated \$2,093,487 in 43 contracts covering 12,418 acres.

**Conservation Activity Plan (CAP)**—A CAP can be developed for producers to identify conservation practices needed to address a specific natural resource need. NRCS–WI obligated \$790,583 in 215 contracts covering 23,288 acres.

**New and Beginning Farmers**—Funds have been set aside to assist new and beginning farmers to develop and maintain economic viability on their farm operations. NRCS—WI obligated \$4,276,960 in 317 contracts covering 13,853 acres.

**Socially Disadvantaged Groups**—Funds have been set aside to assist socially disadvantaged, limited resource and Veteran farmers. NRCS–WI obligated \$1,248,698 in 21 contracts covering 2,896 acres.

#### **FY2017 EQIP Funding Highlights**

- Provided \$28.7 million in financial assistance (includes all initiatives and special funding).
- Established 1,364 contracts.
- Enrolled 120,588 acres.



# **CONSERVATION PROGRAMS**

### TOP 40 EQIP OBLIGATED PRACTICES BY FINANCIAL INVESTMENT

Includes all initiatives and special funding)

	Practice	FY17
Drastias	Count	Obligation
Practice	(Number)	(Dollars)
Cover Crop	920	7,057,266
Waste Storage Facility	41	3,306,230
Streambank and Shoreline Protection	122	1,920,949
Fence	299	1,399,323
Lighting System Improvement	60	1,138,176
Heavy Use Area Protection	127	1,019,554
Waste Facility Closure	32	798,607
Prescribed Grazing	362	781,052
Waste Transfer	34	780,335
Sprinkler System	18	725,881
Grade Stabilization Structure	72	696,291
Comprehensive Nutrient Management Plan - Written	85	673,655
High Tunnel System	70	620,371
Access Road	53	619,100
Livestock Pipeline	157	515,887
Roofs and Covers	9	463,203
Forage and Biomass Planting	126	462,145
Conservation Cover	104	421,453
Grassed Waterway	169	347,537
Mulching	252	339,370
Early Successional Habitat Development/Management	88	308,096
Pumping Plant	34	307,544
Residue and Tillage Management, No-Till	149	250,009
Waste Treatment	4	244,054
Stream Habitat Improvement and Management	52	242,055
Brush Management	125	233,290
Subsurface Drain	35	215,565
Underground Outlet	61	198,231
Forest Management Plan - Written	115	189,092
Wetland Restoration	24	170,557
Forest Stand Improvement	86	169,765
Obstruction Removal	123	152,248
Lined Waterway or Outlet	14	151,012
Farmstead Energy Improvement	24	130,354
Spoil Spreading	64	119,288
Water Well	9	118,688
Woody Residue Treatment	21	116,648
Pond Sealing or Lining, Compacted Clay Treatment	10	115,960
Stream Crossing	74	115,846
Pond Sealing or Lining, Flexible Membrane	4	102,752

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### TOP 40 EQIP OBLIGATED PRACTICES BY PRACTICE COUNT

(Includes all initiatives and special funding)

Practice(Number)Cover Crop920Prescribed Grazing362Fence299Mulching252Grassed Waterway169Critical Area Planting159Livestock Pipeline157Residue and Tillage Management, No-Till149Watering Facility148Heavy Use Area Protection127Forage and Biomass Planting126Brush Management125Obstruction Removal123Streambank and Shoreline Protection122Forest Management Plan - Written104Early Successional Habitat Development/Management88Forest Stand Improvement86Comprehensive Nutrient Management Plan - Written85Stream Crossing74	Obligation (Dollars) 7,057,266 781,052 1,399,323 339,370 347,537 40,487 515,887 250,009 70,904 1,019,554
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Spoil Spreading 64	119,288
Underground Outlet 61	198,231
Lighting System Improvement 60	1,138,176
Tree/Shrub Establishment 58	100,105
Access Road 53	619,100
Stream Habitat Improvement and Management 52	242,055
Tree/Shrub Site Preparation 47	53,543
Waste Storage Facility 41	3,306,230
Subsurface Drain 35	215,565
Pumping Plant 34	307,544
Waste Transfer 34	780,335
Prescribed Burning 33	77,035
Waste Facility Closure 32	798,607
Irrigation Water Management 30	42,497
Roof Runoff Structure 30	31,925
Structures for Wildlife 26	7,099
Farmstead Energy Improvement 24	130,354
Wetland Restoration 24	

Data Source: ProTracts 10/2017

# **CONSERVATION PROGRAMS**





## - Regional Conservation Partnership Program

The Regional Conservation Partnership Program (RCPP) uses partnerships to multiply conservation investments and reach goals on a regional or watershed scale, promoting coordination between partners to deliver assistance to producers and landowners. NRCS provides assistance through partnership agreements and program contracts or easement agreements.

NRCS and its partners help producers install and maintain conservation activities in selected project areas. Partners leverage RCPP funding in project areas and report on the benefits achieved. RCPP encourages partners to join in efforts with producers to increase the restoration and sustainable use of soil, water, wildlife and related natural resources.

Wisconsin secured a new agreement to improve the nation's water quality, enhance soil health, support wildlife habitat and protect agricultural viability.

**Lafayette County Agricultural Enterprise Area Water Quality Project**—This project will mobilize an existing informal network of landowners to address water quality concerns in the Pecatonica River Watershed through the widespread adoption and installation of conservation practices.

- NRCS Investment: \$600,000
- Lead Partner: Wisconsin Department of Agricultural, Trade and Consumer Protection
- Number of Partners: 10
- Program: Environmental Quality Incentives Program

This brings the Wisconsin active RCPP project total to eight, with 161 contracts obligated in FY17 on 12,266 acres for a total of \$2,736,754.

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## 🗢 Conservation Stewardship Program

The Conservation Stewardship Program (CSP) helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resource concerns. CSP provides assistance to landowners who practice good stewardship on their land and are willing to take additional steps over the next five years.

#### FY2017 CSP Funding Highlights

- Established 449 new contracts and 296 renewal contracts.
- Provided \$3.9 million in financial assistance for new and renewal contracts.
- Enrolled 251,463 acres for new and renewal contracts.

#### FY2013–FY2017 CSP Funding Highlights

- Enrolled 1,137,926 total acres as of 10/2017.
- Established 2,987 active contracts as of 10/2017.



Through CSP, participants take additional steps to improve resource conditions including soil quality, water quality, water quantity, air quality and habitat quality, as well as energy. NRCS coordinates its implementation of CSP with the other premier Farm Bill working lands program, EQIP. CSP and EQIP work in a complementary manner to address conservation issues associated with agricultural operations. CSP provides financial and technical assistance to help land stewards install additional conservation practices. Eligible lands include private or tribal cropland, grassland, pastureland, rangeland, non-industrial private forest lands and other land in agricultural use.

# LANDSCAPE INITIATIVES

NRCS uses Landscape Conservation Initiatives to accelerate the benefits of voluntary conservation programs, such as cleaner water and air, healthier soil and enhanced wildlife habitat. Conservation programs help agricultural producers improve the environment while maintaining a vibrant agricultural sector.

NRCS recognizes that natural resource concerns transcend farm, county and state boundaries. The most effective way to increase protection of natural resources is to target conservation to the most vulnerable or valuable areas and to apply a systems, rather than a practice-by-practice approach to conservation. By approaching largescale resource concerns on a landscape level, this science-based approach puts conservation in the right places.

NRCS is targeting conservation assistance to critical resources through a number of landscape scale initiatives. In Wisconsin, the initiatives are allowing NRCS and partners to focus staff and financial assistance on targeted resource concern issues in selected priority watersheds.

## - Honey Bee Pollinator Initiative

One out of every three bites of food in the U.S. depends on honey bees and other pollinators. Honey bees pollinate \$15 billion worth of crops each year, including more than 130 fruits and vegetables.

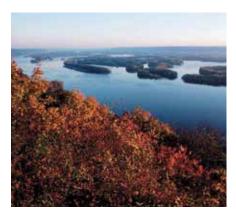
NRCS helps farmers and landowners implement conservation to provide safe and diverse food sources for pollinators. These conservation practices provide forage for honey bees while enhancing habitat for other pollinators and wildlife and improving the quality of water, air and soil. NRCS–WI obligated \$635,953 in 59 contracts covering 1,222 acres.



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## - Mississippi River Basin Healthy Watersheds Initiative

NRCS and partners are helping producers in selected watersheds in the Mississippi River Basin voluntarily implement conservation practices that avoid, control and trap nutrient runoff; improve wildlife habitat; and maintain agricultural productivity. Two projects were prioritized including the Rush River in Pierce County and the Kickapoo River in Monroe, Vernon, Richland and Crawford Counties. In FY2017, NRCS–WI obligated \$2,529,496 in 69 EQIP contracts covering 6,841 acres.



### - National Water Quality Initiative

The National Water Quality Initiative is committed to improving impaired waterways throughout the nation. Four watersheds were prioritized including Big Green Lake in Green Lake County, Spring Creek in Green County, Pigeon Lake-Pigeon River in Waupaca County and Wilson Creek in Dunn and St. Croix Counties. NRCS manages the initiative by making funds available to farmers and forest landowners in the selected watersheds to accomplish needed conservation practices to reduce sediment and nutrient runoff on agricultural lands. In FY2017, NRCS-WI obligated \$576,951 in 19 EQIP contracts covering 2,924 acres.

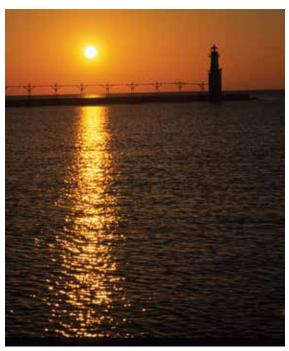


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# LANDSCAPE INITIATIVES

### - Great Lakes Restoration Initiative

NRCS and the Wisconsin Department of Agriculture, Trade and Consumer Protection, in partnership with Peninsula Pride Farms, established the Door-Kewaunee Demonstration Farm Network. These farms are installing leading edge conservation practices that reduce phosphorus runoff. The demonstration farms showcase the practices by conducting field days and tours for farmers. This effort builds off the success of the existing Lower Fox Demonstration Farms Network, a partnership effort between NRCS, Brown and Outagamie Counties and UW-Extension.



NRCS completed a "Fox P Trade" project which analyzes supply and demand for phosphorus credits and evaluates the best approach for the establishment of a nutrient credit trading program for the Lower Fox Watershed. A trading guidebook was developed and released. On October 13, 2016, the first official modern water quality trade between a crop farmer and a waste-water treatment facility in the U.S. side of the Great Lakes basin took place.

In FY2017, NRCS–WI obligated \$4.5 million in 54 contracts covering an estimated 10,514 acres to reduce sediment and nutrient runoff to Lake Michigan through the GLRI–EQIP Nearshore Health program sign-up. For the first time, GLRI-EQIP funds were available in the Door-Kewaunee Rivers Watershed in addition to the existing Lower Fox, Manitowoc-Sheboygan and Milwaukee River Watersheds.

# EASEMENT PROGRAMS



## - Agricultural Conservation Easement Program

The Agricultural Conservation Easement Program (ACEP) provides financial and technical assistance to help conserve agricultural lands, wetlands and their related benefits.

#### FY2017 ACEP Funding Highlights

- Wetland Reserve Easements: Obligated over \$4.9 million in eight agreements covering 991.3 acres.
- Agricultural Land Easements: Obligated \$564,875 in three easements covering 349.5 acres.



**Wetland Reserve Easements**—Provides technical and financial assistance directly to private landowners and Indian tribes to restore, protect and enhance wetlands through the purchase of a Wetland Reserve Easement. For acreage owned by an Indian tribe, there is an additional enrollment option of a 30-year contract.

**Agricultural Land Easements**—NRCS provides financial assistance to eligible partners for purchasing Agricultural Land Easements that protect the agricultural use and conservation values of eligible land. In the case of working farms, the program helps farmers and ranchers keep their land in agriculture. The program also protects grazing uses and related conservation values by conserving grassland, including rangeland, pastureland and shrubland.

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# SUCCESS STORY HIGHLIGHTS



## - Raspberry River Streambank Stabilization Efforts

#### Partnering with the Red Cliff Band of Lake Superior Chippewa Reservation

The Red Cliff Reservation, established during the treaty of 1854, is one mile wide and 14 miles long, located at the top of the Bayfield Peninsula, on the shores of Lake Superior in northern Wisconsin. The reservation has 7,021 total enrolled tribal members. Natural resources and conservation has always been of the utmost importance to those members. Spirit Island is a small piece of upland land surrounded by an extensive, frequently flooded marshy area and coastal estuary for the Raspberry River system on the south shore of Lake Superior. "The island is located within the Red Cliff Band of Lake Superior Chippewa (RCB) Reservation and has significant historical and cultural value to the Red Cliff Tribe," said Todd Norwood, Project Coordinator, RCB. For many years, community members and tribal councils expressed concern that the southwest facing bank of Spirit Island along the Raspberry River was heavily eroding and depositing the sandy soil downstream and at the mouth of the river. "Not only did the erosion and sedimentation cause a potential threat to fish, wildlife and wild rice habitat, it also raised concern about the longevity of the island itself," said Chad Abel, Division Administrator, Treaty Natural Resources Division, RCB.

In 2012, following a heavy rainfall event of 5-6 inches in 24 hours, Red Cliff Treaty Natural Resources (TNR) staff observed the Spirit Island streambank eroding more heavily along its 335 foot distance. "Numerous large pine trees were now losing their underlying support and falling into the river, taking large portions of the streambank with them," said Chad. As a result, TNR staff approached the U.S. Department of Agriculture's NRCS for assistance though EQIP. "NRCS places special emphasis on working with tribes and building tribal partnerships; we were excited for the opportunity to work with the Red Cliff Band of Lake Superior Chippewa to restore their streambank,



putting conservation on the ground and directly into the watershed," said Tom Krapf, NRCS Assistant State Conservationist for Programs.

In an effort to assess damages and focus on conservation planning and implementation, in spring 2016, NRCS engineering and conservation staff, along with TNR staff, surveyed the stream channel from the river mouth to upstream of the erosion site. The results suggested that the extensive wetland network in the Raspberry River estuary helped prevent high velocities that would erode the toe of the streambank at the project site. It was determined the erosion was mostly the result of the lack of streambank vegetation that resulted in an unstable bank condition. Based on survey results, NRCS developed an initial plan requiring large equipment for placement of bioengineering of large root wads and woody material to protect the bank. This idea was presented to the Tribal Council by NRCS District Conservationist, Gary Haughn. "The Council was concerned about the impact the large equipment would have on sacred and fragile tribal lands and asked if a less invasive method could be developed," explained Gary. NRCS re-evaluated options for low impact methods the tribe would accept. The revised low impact plan required hand labor only, to eliminate the negative environmental impacts associated with heavy machinery in the fragile area. RCB Tribal Council accepted the plan during summer 2016 and work began. Protection was required at the waterline and was provided by aspen fiber 'bio-logs' rather than root wads that required machinery. Bio-logs were secured into the streambank with wooden stakes and natural fiber rope, all of which are designed to biodegrade over a 3–5 year period. "Following some minor bank shaping and site preparation, we planted approximately 12,000 plants to help stabilize the bank," said Todd.

Plants were selected based on species already existing on site or nearby with some species originating from seed collected on Spirit Island.









Wetland species used for the Spirit Island restoration include Lake Sedge, Tussock Sedge, Common Rush, Softstem Bulrush and Broadfruit Bur-Reed. Upland species used for the restoration include American Marram Grass, Poverty Oatgrass and Wavy Hair-Grass. Plants were spaced at 8 inches for the upland dry section and at 12 inches for the wetland portion. Todd explains, "The uplands were planted along the entire slope and onto the upper flats where the former trail existed and vegetation was lacking. The wetlands were planted directly into the bio-log with some plants placed directly behind the bio-log where soil was wet." Partnerships were key in completing the 12,000 plug planting. TNR held a community event where Red Cliff tribal members could take part in preserving Spirit Island. Area Bayfield High School science students also provided planting assistance. "A subsequent planting event with the students occurred two weeks after our initial planting, followed by a few days of final planting by TNR staff," said Todd. The former trail was re-routed inland to help prevent future vegetation loss and slope failure, while also allowing for new plant establishment and bank stabilization. "One month post planting, the site looks excellent and the plants are thriving," explained Chad. "This project wouldn't have been possible without the technical and financial support of the Natural Resources Conservation Service (NRCS) and the U.S. Fish and Wildlife Service; their successful partnership with the Red Cliff Band was instrumental," said Todd. "The NRCS partnership with the tribal council and staff lead to strong community support for this project. With community support, the protection needed to preserve Spirit Island's sacred importance was possible and a great cultural gain for present and future generations," said Gary.



# SUCCESS STORY HIGHLIGHTS



## - Beginning, Veteran Farmer Grazes His Way to Success

### High Quality Meat and Produce Directly to Your Dinner Table

Entering Justin Duell's farmhouse, you'll see his passion for farming stands out quickly. A shelf of homemade maple syrup graces the entry, calling to all visitors who stop at The G Farm in Larsen, Wisconsin. Justin is a beginning farmer who joined to serve in the Army after 9/11, then came home to finish school, get a job and ultimately, start a farm. He doesn't have your traditional farmer's background. He did tax preparation for 10 years and still does it today, only doing so to keep his newly found farm passion alive.

"It really was an initial concept of preparedness. I kept looking at my cupboards and found nothing in there, so I decided to start with a little bit of canning and gardening," said Duell. "While living in the city, I scaled up and got a few chickens, to have some continuous production. I was allowed 5 pets, so I had 4 chickens and my dog, Jack." Justin enjoyed canning, gardening and raising chickens; he wanted to expand. His father and grandfather had a property with many maple hardwoods. He decided to start making maple syrup. "I only made \$90 from the syrup the first year, but I realized I loved the work and wanted to continue making syrup, so I decided to rent land from my grandpa to use the trees on his property." Duell developed a preliminary business plan, estimating the trees in the woods and the potential income. "I thought, I can really do this," said Duell.

The G Farm was founded in August of 2014, before Justin acquired any farmland. He started the infrastructure and then purchased farmland to ramp up production. "I wasn't fulfilled completely at the end of the day with my current tax work, so I asked myself what am I going to do, then it was right in front of me; do what I really enjoyed, so I decided to actively farm," said Duell. Talk about a modern farmer, Duell listens to podcasts to learn about sustainable agriculture. He also keeps an active Instagram, Facebook, blog and website for The G Farm. Through social media, podcasts



and books, he efficiently learned how to set up the business aspect of his farm, how to make an entity and more. Income through chicken production was Justin's main entry point; he purchased a 27-acre farm in Winnebago County. Duell gained a USDA Farm Service Agency loan, purchasing six pregnant cows and one cow/calf pair. He currently grazes 11 cattle. When Justin acquired the property, heifers had previously been kept in the barn over winter and 2 fields were being cropped in alfalfa. Corn was tried in another field and plowed ruts were left because the corn didn't work due to poor soil quality. Justin knew he had some work to do to improve his land and was ready to get started.

He attended a permaculture design course and heard about the NRCS through Peter Allen, grazier and teacher of the course."That's where I learned how to work with NRCS; I am thankful I've had the opportunity to work with local District Conservationist, Merrie Schamberger. She has a great background in permaculture; she's progressive, offering ideas and solutions," said Justin. "He is the first farmer I've had that really is actively into silvopasture, agroforestry and shelterbelts; so I share pertinent materials with him. Justin has really done a lot of legwork for his farm to be successful and the beginning farmer program with NRCS helped him achieve his goals," said Merrie.

Through EQIP, a conservation activity plan for grazing was developed. "Justin was able to start by developing a plan for his farm, to effectively manage and plan out the installation of grazing practices with the help of NRCS," said Merrie. Starting with a conservation plan gave Justin the opportunity to put his goals down on paper and see what was realistic as a beginning farmer. "Justin recently received another EQIP contract for pipeline, fencing, watering tanks and re-seeding pasture for 2017." The plan is to restore the old corn field and re-plant it with hay and other pasture plants that will benefit Justin's entire grazing system. "I have been rotationally grazing from day one. I started with 2 acres and 2 paddocks to move them around a little bit and its evolved from there," said Justin. Merrie explains further, "The goal is to get the interior fencing and paddock fencing in this year, once the pasture is seeded, and start following a more definitive plan for moving the cattle." Justin has also applied for a high tunnel to be able to start his garden growing season earlier.

"We've had 10 new grazers in the last couple years, and networking with one another is very beneficial. Through these connections, Justin was able to build a relationship with another grazer to have his cattle graze on their property to breed. It also provided time for his pasture to re-establish," explained Merrie.

Justin is also an active participant in the CSP through pasture planning and planting trees and shrubs that produce flowers and berries for wildlife in his pastures. "He is

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hosting a pasture walk on the farm this year to teach others how to effectively implement managed grazing," said Merrie. "I want to be able to advocate for someone else to farm in a manner that is sustainable," said Justin. Justin's interest in silvopasture also sparked the need to plant more trees on the prop



plant more trees on the property.

In 2016, he planted 750 trees and shrubs including cherry, apple, raspberry, lilac, hazelnut, black walnut, maple and more. "I created a silvopasture, planting 8 rows of trees and some around the 3-acre pond, to provide a buffer along the field edge border," said Justin. The new EQIP contract will provide assistance to add rows of trees in a different pasture area as part of a shel-



terbelt. "Cattle can graze in between and it adds a windbreak for them, plus shelter for winter," adds Merrie.

Justin's ultimate goal is to provide great, locally sourced produce, pastured poultry and other seasonally accessible items to his customers. He practices a holistic approach with principles rooted in creating a sustainable, diverse and well managed system. Cattle, pigs, chicken and turkeys are raised in rotating pastures that will be increased with EQIP assistance. "I also have a farm partner, Emily Heeg, I do a yearly garden with; we do vegetable stands and CSA's," said Duell. The garden is free from herbicides and pesticides. He and Heeg also utilize alternative techniques to increase soil fertility, avoid pest issues and increase nutrient content. "You can't have cows and manure, all this garden waste and compost; all the things you create, and not be able to use it, so I want to make my farm a full circle and use all the nutrients and products that I make," said Duell. Justin needs his conservation plan to work together with his farm goals. "In my conversations with Merrie, I was able to make my goals achievable. Once we had a conservation plan, she shared lists of practices I could implement, so I had many options," said Justin.

"The toughest thing to do is to get started, and the beginning farmer program with NRCS helped me achieve my goals." Whether it be through the food he produces, or through a farm visit, he realizes he's making a difference. His goals for the future are to keep the farm successfully running, while also continuing to do more on the farm with the help of NRCS. "Justin is a great example of a beginning farmer who's partnering with NRCS, using the programs to his advantage to get his farm up and running," said Merrie. He truly wants to be your farmer, to bring high quality meat and produce to your dinner table.

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# SUCCESS STORY HIGHLIGHTS



## - Cranberries at the Heart of Cranmoor

### **Native Fruit Thrives at Glacial Lake Cranberries**

Glacial Lake Cranberries, located in Cranmoor, Wisconsin, was established in 1873 by the Arpin family. The property was originally purchased for a lumber business, but the owners found wild cranberries growing and decided to raise cranberries instead. "They built dikes and ditches around the native stands of vines and started cultivating the fruit," said Mary Brazeau Brown, current owner and President of Glacial Lake Cranberries. Cranmoor is unique, housing 14 cranberry marshes in the township. Most of those started by cultivating native vines from the area. Wood County marshes greatly contribute to making Wisconsin the number one state in the country for cranberry production. Brown's Grandfather was the Arpin's attorney and purchased the property with a group of investors in 1923. Mary returned to the property in 1980 and currently owns 6,000 acres. The land includes 330 acres of cranberries, 2,600 acres of forest and around 3,000 acres in reservoirs that support the cranberry acres. The operation has 96 fruit beds and produces 10 million pounds of fruit yearly. "That's more than you'll eat in your lifetime," explained Mary. She runs the operation with the help of her son, Stephen, currently Vice President of Operations, four employees that live on the property year-round, seasonal staff and help from family.

Mary partnered with the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) in 2003, when programs and practices were more applicable and available to cranberry growers. "We needed renovations because it's an old marsh; some beds were planted in 1939 and needed updating. Those are my heirloom varieties," said Mary. As Mary's older producing beds age, they become more uneven because they were built before laser levelers or modern equipment were available. "To be efficient you need to square out beds, so they are level both horizontally and vertically; that's been my mission to bring everything up to the best it can be where it's most efficient to manage," explained Mary. "We reconfigured some





beds and replaced the main pipeline, took out ditches, made beds longer, added new sprinklers and reconfigured the area to be managed much more efficiently." Through the NRCS Environmental Quality Incentives Program (EQIP), Mary was able to install irrigation pipeline, irrigation system sprinklers and complete irrigation water management. A heavy frost fell in the spring of 2016 and the beds with original sprinkler systems obtained frost damage. "There was no frost damage to the cranberry beds renovated through NRCS-EQIP; cost-sharing made Mary's goals achievable and successful," said Roy Diver, Wood County NRCS District Conservationist.

Glacial Lake Cranberries was the first marsh to complete a forest management plan and also a nutrient management plan. Mary participates in the NRCS Conservation Stewardship Program (CSP) to manage her forested acres. "I was so glad Roy explained the benefits of the CSP program," said Mary. For forestry management through CSP, they practice conifer crop tree release to enhance the growth and health of trees, while improving wildlife habitat. "We're not managing our forests for income, we're managing our forests for natural succession, wildlife diversity and the best management practices that will support both of those missions," explained Brown. "Mary is also progressive in keeping soil healthy on her property, by participating in forest stand improvement," said Roy. "We watch the timing of our harvest so we are not compacting the soil. The harvesters can't go in when it's really wet; we only allow travel in certain areas when the ground is frozen to further protect the soils," explained Mary. Glacial Lake Cranberries also applies split nitrogen to reduce the risk of leaching and runoff and to make nitrogen available during critical growth stages. "You do what you know you need to do for sustainability, being proactive about what you can do and what else is out there that's available for conservation measures," said Mary.

The importance of conservation and sustainability at Glacial Lake Cranberries speaks for itself. "When you look at a property that's been commercially producing the same crop for 143 years, you have to be mindful of conservation and sustainability," said Mary. Brown has a large amount of cranberry support land and she realizes her marsh is part of a bigger conservation picture. "I feel responsible for the land. I'm not just a cranberry grower, I realize I'm responsible as a wetland manager, a forestry manager, for hiking and hunting areas, all this needs to work together; when we conserve it's about moderating everything you do and it all comes together to define conservation," said Mary. Brown realizes the value of her efforts in terms of

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wildlife habitat and diversity also. "Wildlife is abundant on my four miles of land. Every time I see a trumpeter swan or an eagle on the property, all the migrating birds stopping, it's really inspirational for me to take care of the land we all need and use," said Mary. Brown's son, Stephen, sees the bigger conservation picture to keep the property thriving also. "I see this marsh as a duty and I really enjoy it; it's what I want to do. We have a really unique operation out here and it takes active management and stewardship to keep it thriving," said Stephen.

Stephen and Mary realize the value of implementing a conservation plan for their property. "Conservation plans are very helpful; there's always another way of looking at something and it's really important to have those conversations. It gives you time to step back and reflect. It's important to plan your work and work your plan," said Stephen. "Roy, our local District Conservationist, what a great guy, talk about having a great conversation; he's always saying, have you thought about this or that? He sees the bigger picture and potential opportunities. NRCS is a team effort, you guys are here to help, it's voluntary, and we're working together through a public-private partnership to make a good change for our natural resources; federal resources are really working with farmers," explained Stephen.

"This property is self-motivating; when you live here, work here, and own it, you feel very responsible for taking care of the land. Whether it's the sunsets, sunrises, northern lights, the birds migrating through, or the harvest that's coming in, there's so many rewarding and motivating things we've been blessed with and the partnership with NRCS has been a great part of that," said Mary.

**Success Story Highlights** 

# SUCCESS STORY HIGHLIGHTS



## - Restoration Leads to Flourishing Wetlands

### Jefferson County Landowner Brings Wildlife Home

When land floods more often than it grows crops, why not let it go back as nature intended, to a flourishing wetland. Ohne and Karen Raasch, of Lake Mills, Wisconsin, had goals to do just that with a property they purchased. Since the age of 12, Ohne grew up hunting on the land they acquired from a farmer friend in 2010. Karen also got her first buck 40 years ago on the 155-acre farm. The Raaschs had always loved the land and wanted to own the property. They had many goals and aspirations for the land. "When Ohne and Karen were able to acquire the farm, they really wanted to restore the property to its original beauty as a wetland," said Mark Steinfest, Elkhorn Area Civil Engineering Technician, Natural Resources Conservation Service (NRCS).

Ohne had built a working relationship with NRCS through the Farm Service Agency's Conservation Reserve Program and through NRCS cost share assistance, providing for installing tree and shrub plantings in the past. Most recently, NRCS partnered with Ohne to acquire a permanent easement through the former Wetland Reserve Program (WRP), now known as Wetland Reserve Easements (WRE), and then completed the restoration through a long-term agreement. With WRE, NRCS offers 30-year or permanent easements to landowners who want to maintain or enhance their land in a way beneficial to agriculture and the environment. "The land was previously being cropped; part of the farmland was showing signs of erosion; some conservation needed to be done," explained Ohne. "I didn't know much about the logistics of WRP when I started, but working with NRCS, I was excited about the opportunity to restore my land." Ohne has always had an interest in conservation and restoring land to bring wildlife back. "I started by putting out duck houses with my neighbor and it grew from there. At first I had 15, and now I have 350 on multiple properties! I've been involved in conservation organizations over the years and realize the importance of making good decisions for our natural resources," said Ohne.

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The local Elkhorn NRCS Service Center worked with Ohne to develop a restoration plan for their property. A plan is completed so owners know what to expect throughout the easement process. "We even worked together to figure out different soil types and what I could plant where, that would work best," said Ohne. "There are some changes along the way as needed, but we work together to come up with a preliminary easement management plan that is best for the land and landowner," said Mark.

The restoration started by Ohne seeding highly eroded fields with native, local seed. Then, excavators dug and scraped 13 shallow ponds to remove sediment deposited from the upland crop fields. "This is really wet soil, so trucks had tracks instead of wheels on them. They moved the soil from the scrape ponds to the ditches that needed filling in. The soil was placed in the ditches in layers so it would push the water out and seal well; the ditches were also built up for settlement. The specialty equipment kept the disturbed areas minimal," said Mark. They filled in 4 ditches and a small diversion; holding that water on the cropland and halting runoff. "Wetland restoration also helps to eliminate invasive species, like reed canary grass, by putting water on it.

Something unique about the property, there are lowland and upland areas on the easement," said Mark. Lowland areas are now restored wetlands with open water areas that will soon revegetate with wetland plants. Upland areas were seeded, oak and cherry hardwood trees were planted and two small food plots for wildlife, including corn and soybeans, were also planted. Those crops are left over winter to provide food and shelter for wildlife. "The hardwoods planted, give great habitat for roosting birds like songbirds and doves and hold up to future management tools, like the use of fire," explained Mark. Ohne comments further, "The restored wetlands filled in really quick with water; they have never been close to drying out. I've seen a lot of increased wildlife recently; I've seen many more geese, Sandhill cranes, ducks and turtles." The Raaschs love seeing the results of what their efforts can do. They've seen an abundance of pollinators and beneficial insects also. "When I walk around the restored prairie, I've seen an increase in bees and many other bugs I've never seen before," said Ohne. Since the restoration, NRCS Farm Bill Biologists visited and are excited about seeing many native species establishing on the easement.

Ohne took ownership during the construction process and worked to keep every step as conservation minded as possible. "Ohne has really gone the extra mile; he was out there dragging the land and seeding it to add a temporary cover; he also planted trees and worked to plant seeds on any disturbed areas as the contractor worked on wetland restoration," said Mark. There were no disturbed soils during the project for



more than a week because of his proactive seeding of areas. Ohne worked with local neighbors, family, friends and Madison Audubon volunteers to collect and plant native seed in the area. Some of the Raasch fields have over 60 native varieties of seed, including prairie grasses and forbs. "This project was really a team effort and Karen and I are so thankful for the financial and technical assistance we received from NRCS, family and friends, neighbors and partners," said Ohne.

Although the easement restoration was completed in the fall of 2015, Ohne still proactively works on the property, fighting invasive species like reed canary grass, buckthorn and box elder. "After spraying, we collect and spread out native seed over the invasive areas, working on the areas one by one," explains Raasch. "Ohne's been proactive, and I recognize his efforts for taking care of the land and working to combat invasive species," said Mark.

Easement restorations through WRP/WRE take time, so landowners need patience and commitment to the process. Mark explains, "The Raaschs were just that, the perfect, proactive landowners to be involved in the process." "The superman, Mark from NRCS, flew in and really helped me through the whole process. I knew the results would far outweigh the time commitment," said Ohne. Ohne and Karen are happy with the results and excited to continue managing their land in the future. "You open up a wood duck house and see it's occupied and eggs have hatched; it makes you feel really good, like you are making a difference. Any habitat work done to make an improvement is our thing. We are so glad we were able to get the farm and really restore the wetlands on it. The NRCS office is exceptional considering the small amount of staff they have and how much workload they complete, including my restoration," said Ohne.







# SUCCESS STORY HIGHLIGHTS



## 🗢 Green Fire Farm Lives Regenerative Agriculture

#### Mimicking Nature to Create a Pasture of the Future

In 2015, Jacob Marty, of Green Fire Farm in Monticello, Wisconsin, established a regenerative, managed grazing operation as a beginning farmer. Jim and Jacob Marty, a father-son team, farm 400 acres in Green County. Jacob is a sixth generation farmer, with his families farm roots dating back to the 1850s. The farm was an active dairy until 2012. "After 37 years of milking, it was time for a change," said Jim. Jacob runs the new 90-acre grazing operation. His focus is grass-fed beef, pastured heritage pork, pastured poultry and eggs and sheep. His father runs the cropping operation, actively cropping corn and alfalfa and also producing grain and hay for animal feed. "My dad is the best at making great quality hay to feed my beef cattle; we work as a team and challenge one another to benefit this farm," said Jacob. The Marty family has served as stewards of their land each generation by working hard and adopting conservation-minded agriculture technologies to continue to provide a restorative future for Green Fire Farm. The farm was even named after Aldo Leopold's famous conservation writings in *A Sand County Almanac*. Jacob's great uncle was a friend of Aldo and a successful forester, so conservation runs deep in the Marty family.

**Success Story Highlights** 

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With a background and degree in Wildlife Ecology, Jacob was interested in conservation and endangered species. "I needed to figure out what I could apply my passion to, and realized I might be able to manage a farm to provide habitat, since I have a passion for animals. I started looking into the ways of permaculture and grass-fed grazing operations, and how they can mimic grasslands and provide nesting bird habitat. That was my gateway into grazing on the farm," said Jacob. "If you do this on a broad scale, the birds are going to come back, you're going to provide habitat for many beneficial species." By going back to the family farm and transitioning some of the acres to a grazing operation, Jacob knew he could make a difference, and at the same time, enjoy his passion for animals.



Jacob learned about the USDA–NRCS in school and through networking with other graziers. Jacob's first exposure to grazing was a six week field course. His interest was piqued. "That was the first time I had an opportunity to go on a farm and see rotational grazing work," said Jacob. "From there, I started reading and researching on providing habitat for wildlife in a grazing environment."

"When Jacob first visited his local NRCS Service Center, he came prepared with plans and goals; he had everything laid out and was more than ready to work with us; he had really



done his research," said Tony Strenz, Green County Soil Conservation Technician. He visited many grazing operations. "I wanted to know what worked well, what I should be doing and how to finish high quality beef; I did my research," said Jacob. His goal is to regenerate and build soil, sequester carbon and enhance the health of the local water, air and nutrient cycles by observing and mimicking patterns that occur in nature through his grazing operation. "My livestock are managed in ways that mimic their natural history and behavior. This results in healthy and happy animals that produce incredible quality meat in the process," said Jacob.

Technical and financial assistance, provided by NRCS through EQIP enabled Jacob to set up a 90-acre rotational grazing operation. In 2015, he enrolled 48 acres in prescribed grazing, did 1,000 plantings for tree and shrub establishment, installed perimeter fencing, livestock pipeline, watering facilities and did forage and biomass plantings of cool season grasses on all 48 acres. Through a second EQIP contract in 2016, he enrolled 39 more acres in prescribed grazing, installed more perimeter fencing, livestock pipeline, and did forage and biomass plantings of cool season grasses on all 48 acres.

Jacob seeded down over 80 acres of crop ground previously in corn, into pasture using an 18 species mix of native grasses, legumes and some medicinal herbs. "The diverse mix came in really well with clover, alfalfa, meadow fescue, radishes and turnips," said Jacob. Many of the species were chosen to provide increased habitat for wildlife and pollinators, while also providing a diverse mix of forage for the cattle. The new grazing acres are divided into 6 large paddocks, that are then separated into smaller grazing





sections by portable fencing. In 2015, he additionally planted 8 acres of silvopasture to increase wildlife habitat on his own, including chestnut and apple trees. "As a beginning farmer, the NRCS cost share assistance really helped me get my grazing operation going. The initial biomass seeding was really important; seed is expensive and I wanted to plant a diverse multi-species mix. The cost sharing made my goal achievable," said Jacob.

Once the grazing system was planned, Jacob purchased a starter herd of 17 Black Angus cow/calf pairs from a retiring grass-fed beef producer. Since then, Jacob has added many new cattle, including 2 bulls to grow the herd. His breeds of choice are Black Angus, Red Devon and Galloway. Currently, they have 98 cattle and are due to calve around 40 to increase their herd further. "We needed to be aggressive in expanding the managed grazing aspect of our farm so we could compete and be economically profitable within a couple years," said Jacob. This year, he will be using a leaderfollower grazing system where his animals, with different forage needs, pass through each pasture in succession, using the land more efficiently without destroying its ability to support livestock. "I'll be moving them twice a day; we are really trying to get our grazing system churning at full capacity," said Jacob.

Jacob partnered with a farm in Peoria, Illinois, to keep St. Croix sheep and heritage pigs on his property to graze also. Jacob takes care of over 30 pigs and 25 sheep. For the work he does, he keeps the lambs and piglets that are birthed. Jacob also manages 12 different heritage chicken breeds on pasture, which offer a lot of diversity and variety in the flock. "I love being around my animals. I'm so used to being around and caring for them; when I went to a conference for a few days recently, I couldn't wait to get home and see my lambs," said Jacob.

Jacob wants others to see how his system works. He held a pasture walk on his farm to help others learn about the benefits of managed grazing. Jacob has also worked to build relationships with other grazers in the community to share ideas and knowledge. "He's always looking to do better and make conservation-minded decisions for his grazing operation and animals," said Tony. "If I do it right and share with others, hopefully others will want to do the same; I'm working towards being an influence in the grazing community. I feel like it's my opportunity to be a spokesperson for wildlife. I feel obligated to take advantage of the privilege I have with the family land and farming history," said Jacob.

Jacob took his conservation efforts further by enrolling 89 acres in the CSP for five years. He retrofit watering facilities for wildlife to escape and enhanced access for bats



and bird species. He also hosted a grazing related field day. He manages livestock calving season to coincide with forage availability and he uses nitrogen provided by legumes to supply over 90% of the nitrogen needs in his pasture. "The more you do for conservation, the more it gives back to your business and farm. Our farm not only aims to weather the ups and downs of Wisconsin seasons, but grow and regenerate while doing it," explained Jacob. Jacob wants it to be regenerative, not only maintaining current production, but also increasing it, while not diminishing the resource base he relies on. "To truly be regenerative, it requires protecting and building the soil by preventing erosion, making management decisions to promote microbial life and cycling nutrients," explained Jacob. "Restoration agriculture to me, is the intentional restoration of healthy, functioning communities for our farm to be viable. All the communities, such as our pasture, crops, livestock and wildlife are integrated."

Conservation is really important to Jacob. He feels proud to provide healthy food for his family and his customers, while also providing increased habitat for wildlife. Jacob explains further, "I really care about nature, and conservation is my way to do that. Nature provides everything we need. I do everything to increase the quality of the land base through conservation." Due to Jacob's passion, others are gravitating to Green Fire Farm. "It's almost like the field of dreams; build it and they will come. I have people who want to help me, and I can help them; many want to start grazing on their own," said Jacob.

Jacob is happy with his results and has put in a new application with NRCS to further continue his conservation efforts through EQIP. "I have nothing but praise for NRCS. I've told many people that EQIP worked for me. I came prepared and ready to make things work. We've built a level of trust. Every farmer is different and their situations are unique, but NRCS is ready and willing to work with everyone," said Jacob. "The conservation decisions I've made with NRCS assistance have been smart for my business and the environment."



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# SUCCESS STORY HIGHLIGHTS



### Pioneers of No-Till

### Farmer Fosters Land Stewardship Ethic

Jack Herricks, a pioneer of no-till farming in Monroe County, Wisconsin, no-tilled before it was popular or regularly accepted. In 1971, at the age of 19, Jack came home to run the family farm. "I came home with a suitcase of clothes and ten dollars' worth of change in my pockets, to ten siblings younger than me," said Jack. Jack started with 34 cows and 120 acres. He now owns 1,080 acres and 600 cows. "We farm about 1,300 acres currently," explains Jack. A century farm in 2012, Jack is a third generation farmer. He farms with his wife, Pat, and his son and daughter, who are part owners. His son-in-law and three nephews also work on the farm full time, as well as eight other employees.

Jack's dad and grandpa laid out their first contours on the property in the early 1940s, to gain greater productivity from the soil and reduce erosion. In 1985, Herricks made his first effort at no-till corn. Jack and his family have always tried to make good, conservation-minded decisions with their land. Jack quoted Winston Churchill in saying "success is going from one mistake to the next, without any lessening of enthusiasm." He resolved, through the challenges, he was going to make no-till work, and his farm has been no-till for many years now. Jack is such an advocate of no-till, he promotes it and helps others in the area. "We used to go to several neighboring farms and plant a few acres here and there, with our no-till planter to help out, since no one else had the equipment," said Jack. The Herricks have played a major role in no-till being widely accepted in their area.

Jack learned about the NRCS from his father. He has a hand written conservation plan his dad worked on with the Soil Conservation Service, now NRCS, in the early 1950s. "I remember as a boy, helping my dad put in waterways and contour strips. He was always concerned about keeping soil in place and he tried to do the best conservation practices he could in that era, so it was a natural follow through for me to continue



those efforts," said Jack. With assistance from NRCS through the Environmental Quality Incentives Program, the Herricks installed cover crops, contour strips, water retention structures and grassed waterways. They also practice no-till, forest management, timber stand improvement and manure management. Through the NRCS



Conservation Stewardship Program, they increase wildlife habitat by leaving standing grain and use a nitrification inhibitor. "The inhibitor helps retain the nitrogen for the plants to use," said Herricks. Jack also has 1,200 taps for maple syrup, another step to diversify and make his land more productive, while cleaning up and improving his wood lots.

As the Herricks expand their dairy, they have started harvesting more corn for silage and there is less residue left on the fields. He protects the soil and builds organic matter by planting cover crops. "It's very humbling when I walk across the farm and think my family has made a living here for over 100 years," said Jack. This is a great example of sustainability. The conservation practices Jack has implemented also help enhance his farms profitability, "The economics have to work out, over time, using no-till and cover crops, have worked and been economically profitable," said Jack. He's seen organic matter go up from 2.6 percent to current soil test levels over 4.3 percent. "Due to our healthy soil and the use of cover crops, we are able to feed all our livestock and are self-sufficient in forage and grain," said Jack.

In the early 1990s, the middle Kickapoo River Watershed, where Herrick's farm is located, was targeted for improvement. Through the targeted efforts, Herricks was able to install many water retention structures. During the initial assessment, a biologist walked Brush Creek in the watershed and deemed it a dead trout stream; it was not good fish habitat. The same biologist walked brush creek 20 years later. From the efforts put forth by the area farmers and partners, the creek was deemed an active fishery, had deeper water and other improvements noted. "We have double the livestock than the rest of the watershed has; I feel the report is a direct reflection on us and how we manage our land and our manure," said Jack. "The quality shows up in the water, and that's when you know your conservation decisions are making a true difference," explained Michelle Komiskey, NRCS Monroe County District Conservationist.

Jack knows farming is his calling. He enjoys being a responsible steward and it motivates him to make the best decisions he can. "The working relationship with NRCS has been a true partnership. I see them as a resource for advice and design assistance. I might have ideas, but I can go to them and say, we'd like to do this, and they can help. It makes a huge difference to have staff I can call on and know I will get qualified answers and information," said Jack. "Were partnering together to make conservation work in this community," said Komiskey.

## SUCCESS STORY HIGHLIGHTS



- Natural Resources Education and Restoration

#### **Flyways Waterfowl Experience Directors Restore Wetlands**

In 1999, Craig and Nichol Swenson, of Columbia County, Wisconsin, bought property in Baraboo. They are also Directors of the Flyways Waterfowl Experience open to the public on Highway 136 south of Baraboo. The Swenson property was enrolled in the Natural Resources Conservation Service's (NRCS) Wetland Reserve Program (WRP) in 1998, but restoration work had yet to start when they acquired the property. The Swensons were excited to restore their acres and actively manage their land through WRP. Craig and Nichol own 23 acres of the WRP and three other neighbors own the rest of the 80-acre easement.

The importance of conservation is something Craig learned really early in life. "I grew up in McFarland, Wisconsin, and we farmed a bit; you learn what conservation is all about. We've hunted, fished and trapped our whole lives too. If you don't consider conservation, you won't have clean water, animals and our other important natural resources," said Craig. Nichol has a different background story concerning what conservation means to her. She grew up on a barrier island in South Jersey, which fueled her interest in soil conservation. Nichol explains, "I see conservation from a different perspective, an ecological perspective. That's why we started the Flyways Waterfowl Experience, to bring kids in to talk about the importance of these things. We strive to teach why we need to respect the land so it's around for future generations." Nichol and Craig can teach first-hand, the importance of active conservation and land management at their Experience, because they are stewards of the land they own.

WRP, now known as Wetland Reserve Easements, is a voluntary opportunity to restore and protect wetlands on private property with the help of NRCS. Landowners, like the Swensons, receive technical and financial assistance to restore wetlands that have been drained for agriculture. The Swenson land was previously conventionally farmed and corn was always grown. The erosion was vast, flooding was a constant concern





and something needed to be done. Craig and Nichol worked with NRCS and other partners to fill two drainage ditches and install an overflow structure on their easement property. "In 2001, the overflow structure was completed and wetland water could be let out efficiently, as needed," explained Craig.

Since the successful restoration, the landowners are able to view many diverse species every day. "We see so many great blue herons and egrets walking around the wetland; we've seen a huge increase in wildlife species since the restoration," added Craig. "We've seen a lot of monarchs all over the prairie acres and we encourage milkweed too." Tally Hamilton, Farm Bill Biologist in partnership with NRCS and Pheasants Forever adds, "The Swensons have many pollinator friendly plants in their prairie, which helps bring in many beneficial insects and provides nesting cover for wildlife." The Swensons utilized state resources to initially seed the grasslands surrounding the wetland restoration with native, pollinator-friendly, grasses and forbs. "At the WRP easement outlet, now going into the Baraboo River, the water clarity is very clear and without sediment due to all the plantings," explained Craig. The Swensons get many duck species on the property that roost there, including wood ducks in the fall. "Last year, in the fall, we had 500 pelicans roosting in our area. We see so many eagles and ospreys out there also," added Nichol. The Swensons noted the abundance of wildlife has really improved in the grasslands acres also. "My brother Richard and I have 45 acres combined in prairie; we see deer, turkeys, rabbits, snakes and a tremendous amount of frogs too," said Craig. The Swensons also complete active burning and mowing practices; maintenance done by themselves. These management practices restore the prairie and help rid it of invasive species. Active weed management and mowing on the property has been crucial in battling the wild parsnip, which is spreading rapidly across Wisconsin. Since the WRP restoration, the Swensons have burned the property five times and have plans to continue the practice in the future. They are also taking measures to control invasive carp in the marsh. "When the marsh fills up two days after a 3-inch or more rainfall, the largest issue we currently deal with is controlling the carp that come in from the river and root up all the vegetation. With the overflow structure in place, we can draw the water down in the winter to deal with some of the carp," said Craig.

In 2012, with interest in education and conservation of lands, the couple opened the Experience. "I wanted to do something that was going to be meaningful. Natural resources education is so important," said Nichol. The Experience houses world class





exhibits and interactive displays, a duck blind theatre, waterfowl art and galleries, decoys, duck calls, a virtual laser arcade and much more. "I wanted to teach about the importance of natural resources history and the duck stamp. It's a story that needs to be told, many people don't know about. Ninety eight cents of every dollar that is used to buy duck stamps at the post office goes back into habitat conservation. That's what is used to pay for the resources to develop things like waterfowl production areas and national wildlife refuges," said Nichol. "We need to have educational places, like the Experience, where the general public can learn the importance of our natural resources." The Flyways Waterfowl Experience gets many visitors of all ages and welcomes schools and groups. "We also have an upstairs classroom for meetings, school groups and events," said Nichol. The Swensons are ready to teach students from pre-K, up to college level and even host international students, accommodating the needs of different individual groups. "These youth are the policy makers of the future and they need to be taught the importance of conservation and managing our natural resources in a way that is sustainable."

Nichol is proud of her educational work at the Experience and she feels it's a success if she is able to impact even one child's life through it. "We bring in the National Duck Stamp Art Exhibit and encourage area teachers to bring their students in to learn about the program. In fact, the U.S. Fish and Wildlife National Junior Duck Stamp Art Exhibit was at the Flyways Waterfowl Experience for all to see the first place winners of every state and 15 of the adult entries from various states," added Nichol. Plan your visit and find out more information about hours by visiting www.duckmuseum.com. "We're so excited to house this wonderful natural resources exhibit; we love getting people enthusiastic about it," added Nichol.

Success Story Highlights

The Swensons look forward to enjoying their land and doing active management to keep it thriving. They also look forward to continue to educate the public that visit the Flyways Waterfowl Experience. "Our goal is to bring in more classes through building partnerships with local schools and organizations," said Nichol. Twyla Kite, NRCS Columbia County District Conservationist, adds "Its been a pleasure partnering with the Swensons; they have an excellent conservation land ethic, are doing active management and promoting natural resources and habitats through their Flyways Waterfowl Experience. We look forward to continuing our partnership through their WRP."

## **OUTREACH HIGHLIGHTS**



### - Communicating Our Message

Outreach is an integral part of daily NRCS work. We work to ensure that programs and services are made accessible to all customers, while placing special emphasis on those who may be underserved. Outreach involves understanding customers and their needs, learning how best to communicate with various groups, earning the trust and acceptance of customers and developing partnerships and working relationships. FY2017 highlights for participation in outreach, activities and events are below.

- Farm Technology Days, the largest Wisconsin annual farm show
- World Dairy Expo
- MOSES Organic Farming Conference
- Midwest Manure Summit
- UW–Nelson Institute Earth Day Conference
- Wisconsin Farm Bureau Conference
- Wisconsin Farmers Union Convention
- Wisconsin Potato and Vegetable Growers Conference
- Wisconsin Fresh Fruit and Vegetable Conference
- Grassworks Grazing Conference
- Wisconsin Wetlands Association Conference
- Agri-Business Crop Management Conference
- Wisconsin Land and Water Conference
- Wisconsin Woodland Owners Conference
- Oneida Nation Food Sovereignty Summit
- Professional development workshops for all ages and the underserved on soil health and conservation
- · General and underserved targeted career and county fair events

## **OUTREACH HIGHLIGHTS**



#### - Tribal Trust

The relationship between federally recognized tribes and the United States is one between sovereigns, i.e., between a government and a government. The trust doctrine is a source of federal responsibility to Indians requiring the federal government to support tribal self-government and economic prosperity and to protect tribal treaty rights, lands, assets and resources. These duties stem from the government's treaty guarantees to protect Indian tribes and respect their sovereignty.

The ability of the NRCS and other USDA agencies to meet their tribal trust responsibilities is greatly enhanced by the work of the Wisconsin Tribal Conservation Advisory Council. Thoughout the year, the Council representatives of the eleven federally recognized tribes in Wisconsin meet with representatives of the USDA agencies to identify opportunities to work more closely together.

In 2017, the NRCS and the Tribes were able to plan and contract over 1.1 million in EQIP funded conservation practices. This year's practices focused strongly on phosphorus reduction to the bay of Green Bay, sustainable walleye populations and forestry and wildlife habitat improvement.

Pictures above are (L) Red Cliff Tribal Natural Resources staff discussing sediment reduction at Frog Bay Tribal National Park. (R) Angela Biggs, Wisconsin NRCS State Conservationist, (center) discussing Tribal implications of the new Farm Bill at the October 2017 Oneida Nation Food Sovereignty Summit.

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### - Highlighting the Oneida Nation

Most of the 16,000 acres of the Wisconsin Oneida Tribe's agricultural lands lie within the Lower Fox River Watershed. The Oneida share area concerns over biotic integrity of the area's streams and the levels of phosphorus in runoff which are impacting the bay of Green Bay.

The Oneida Nation partnered with NRCS Tribal Liaison Sherrie Zenk Reed and other staff to plant cover crops, riparian forest buffers, grassed waterways and filter strips. Their efforts led to water quality improvements which have recently allowed for the restoration of a robust brook trout population to Trout Creek.

In the past few years, the Oneida Nation has worked closely with grazing specialist Adam Abel to convert cropland to land managed through prescribed grazing. In 2017, they committed to converting some acres to improve beef and buffalo herd productivity, improve soil health and reduce phosphorus runoff to the bay of Green Bay.

The Oneida Nation participated in the Conservation Stewardship Program, building on their exisiting conservation efforts. They also committed to restoring over 400 acres through a 30 year Wetland Reserve Easement contract. The project will restore 155 acres of emergent marsh and wet prairie and approximately 257 acres of mesic prairie and hardwood forest.

Pictures above are (L) a map of the Oneida Nation of Wisconsin (green) in relationship with the Lower Fox River Watershed (tan). (L to R) Alan Johnson, Executive Director, WTCAC; Angela Biggs, Wisconsin NRCS State Conservationist; Pat Pelky, Environmental Division Director for the Oneida Nation of Wisconsin; and Joanie Buckley, Internal Services Director, Oneida Nation of Wisconsin; discuss future conservation implementation on the Oneida Nation acres.

# **OUTREACH HIGHLIGHTS**

### - Conservation Collaboration Through Agreements

Partnerships make our mission possible by leveraging existing funds to put more conservation on the ground. In FY2017, NRCS–WI collaborated with conservation partners to enter into 28 new grants and agreements. These agreements leverage NRCS financial investments with partner contributions to accomplish conservation priorities and address natural resource concerns. In FY2017, NRCS–WI obligated \$5 million into grants and agreements, with financial commitments from partners totaling \$1.3 million.

NRCS–WI thanks the following partners for their collaboration and financial commitment to make conservation work.

Applied Ecological Services Brown County Land and Water Conservation Department Columbia County Land and Water Conservation Department Dane County Land and Water Resources Department First Nations Development Institute **Hmong National Development** Michael Fields Agricultural Institute National Older Worker Career Center Pheasants Forever **Racine County Land Conservation Division** Ruffed Grouse Society / American Woodcock Society Sand County Foundation Soil and Water Conservation Society Taylor County Land Conservation Department The Board of Regents of the University of Wisconsin System Town of Sterling University of Wisconsin–Stevens Point Waupaca County Land and Water Conservation Department Wisconsin Association of Resource, Conservation and Development Wisconsin Department of Administration Wisconsin Department of Agriculture, Trade and Consumer Protection Wisconsin Department of Natural Resources Wisconsin Wetlands Association

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## EARTH TEAM



#### - Volunteers Make A Difference in Wisconsin

The NRCS volunteer workforce, Earth Team, makes a difference in every county in Wisconsin. NRCS works with private landowners to improve soil quality, conserve water, improve air quality and enhance wildlife habitat. Earth Team volunteers work side-by-side with conservation professionals and are an integral part of the conservation partnership.

Earth Team offers many opportunities for people who are interested in volunteering to improve the nation's natural resources. People who are 14 years old and older can volunteer. Volunteers can work part-time or full-time, work outdoors or inside a local NRCS service center office, individually or as a group.

In FY17, Wisconsin achieved 100% office participation in the program across the state! NRCS–Wisconsin had 54 active offices, with 840 volunteers and a total of 8,071 hours! We more than doubled our hours and volunteers since last year and are working to further meet our mission with volunteers.

According to the Federal Interagency for Volunteerism, an hour of volunteer time in Wisconsin is valued at \$23.06 per hour. In one fiscal year, Wisconsin Earth Team Volunteers have donated \$186,118 to help our agency help the land. Volunteer efforts help improve land and wildlife habitat and contribute to cleaner water and air for everyone.

Find out more about Earth Team, how to volunteer and local contacts at www.nrcs.usda.gov/wps/portal/nrcs/main/wi/people/volunteers/.

## SOIL HEALTH



## 🗢 Highlights

Soil is a living and life-giving natural resource. As world population and food production demands rise, keeping our soil healthy and productive is of paramount importance. By farming using soil health principles and systems that include no-till, cover cropping and diverse rotations, more and more farmers are actually increasing their soil's organic matter and improving microbial activity. As a result, farmers are sequestering more carbon, increasing water infiltration, improving wildlife and pollinator habitat—all while harvesting better profits and often better yields.

NRCS–Wisconsin worked to increase understanding of the importance of soil for food security and essential ecosystem functions. Soil health was promoted all year to farmers, landowners and partners, workshops were held across the state, materials were distributed at conferences and career fairs, farm tours were held focusing on our soils and much more.

Television Public Service Announcements (PSAs) were played throughout Wisconsin to educate farmers, landowners and the general public about the importance of healthy soils. These soils are more productive and farmers optimize production, improving their bottom line.

Healthy soil is essential as global demands rise for food, fuel and fiber. Soils also play a crucial role in food security, hunger eradication, climate change adaptation, poverty reduction and sustainable development. As America's agency for soil conservation, classification and studies, NRCS–Wisconsin is excited that 2017 again, brought attention to the importance of soil.



### - Cooperative Soil Survey Program

The National Cooperative Soil Survey Program is an endeavor of the NRCS and other federal agencies, state and local governments and other cooperators. It provides a systematic study of the soils in a given area, including the classification, mapping and interpretation of soils. Soil types are classified from physical properties, drawing heavily on the principles of pedology, geology and geomorphology. Below are new Wisconsin tools available on the official Web Soil Survey at https://websoilsurvey.sc.egov.usda.gov/.

• Commodity Crop Productivity Index for Corn: This interpretation provides soil survey users with an inherent soil property based ranking of Wisconsin soils and map units for common crop productivity. It replaces stored crop yields, produces a consistent statewide crop production index, better reflects local conditions and improves statewide planning.

• Hydric Rating by Map Unit Report: This new report gives hydric soil category rating, indicating the components of map units that meet criteria for hydric soils. Estimates are used in land use planning involving engineering, wetland considerations and conservation planning. This report is under the Soil Data Explorer tab, then Soils Reports sub-tab and then the Land Classification folder.

• Water Feature Report: This report gives estimates of various soil water features. Estimates are used in land use planning involving engineering, wetland considerations or conservation planning. The new column, water features kind, was added to help users to determine if water table is saturated throughout or sitting on top of a restrictive root limiting pan. The report also aggregates similar months together making it simplistic and easy to read. It is located under the Soil Data Explorer tab, then Soils Reports sub-tab and then the Water Features folder.

Find out more about soils and technical soil services by visiting our new Wisconsin soils website at www.nrcs.usda.gov/wps/portal/nrcs/main/wi/soils/.

## RESOURCES



## - Ecological Science Highlights

Ecological Sciences staff have been busy this year. The tasks are always challenging and unique to Wisconsin resource needs. Whether it is dealing with the newest threating resistance weed, demand for a new seeding mix to favor monarch butterflies, grazing training, forest management coordination, Technical Service Provider training or nutrient management challenges, the Resources staff will continue to stay in tune to what is happening across Wisconsin.

This year, new and revised practice standards and tools were developed to help provide more resource protection and focus on science to all our customers. Many opportunities to improve training, to develop tools to measure resource concerns, to improve the field office technical guide and to focus conservation planners on the fine details of conservation planning took place.

Highlights include state trainings for conservation planning, basic conservation, technical service providers and managed rotational grazing. New materials and information about combating problem invasive species, like palmer amaranth, were made available to our customers. Technical assistance was provided to customers on how to best manage their forests, how to implement seed mixes for pollinators, how to implement prescribed managed grazing and much more.

Updated materials for forestry, managed grazing, pollinators and other resource focus areas are available on our website at www.nrcs.usda.gov/wps/portal/nrcs/main/wi/ newsroom/factsheets/.



# WISCONSIN LEADERSHIP

#### 🗢 Leadership Team

Angela Biggs, State Conservationist
Eric Allness, Assistant State Conservationist, Partnerships
Vacant, State Resource Conservationist
Tivoli Gough, State Public Affairs Specialist
Greg Kidd, Assistant State Conservationist, Easements
Tom Krapf, Assistant State Conservationist, Financial Programs
Mark Kulig, Assistant State Conservationist, Field Operations, Southwest Area
Ty Larson, Assistant State Conservation Engineer
John Ramsden, State Conservation Engineer
Josh Sherman, Assistant State Conservationist, Field Operations, Northwest Area
Deb White, Assistant State Conservationist, Field Operations, Southwest Area

#### - District Conservationists by Area

#### **Northwest Area**

Mark Biel, Ellsworth Service Center Gary Haughn, Ashland Service Center Melissa Knipfel, Medford Service Center Tammy Lindsay, Chippewa Falls Service Center Jane Reigel, Neillsville Service Center Dennis Reimers, Alma and Durand Service Centers Patrick Richter, Barron and Ladysmith Service Centers Jennifer Roetter, Altoona Area Office John Sippl, Menomonie Service Center Ron Spiering, Spooner Service Center Ryan Swatek, Black River Falls and Whitehall Service Centers Keith Zygowicz, Baldwin and Balsam Lake Service Centers

### - District Conservationists by Area (continued)

#### Northeast Area

Barry Bubolz, Shawano Service Center Roy Diver, Wisconsin Rapids and Stevens Point Service Centers Joe Johnson, Luxemburg Service Center John Malvitz, Green Bay Service Center Jeff Maroszek, Lena Service Center Amy Neigum, Wausau Service Center Lisa Neuenfeldt, Waupaca Service Center Matt Rataczak, Manitowoc Service Center Merrie Schamberger, Oshkosh Service Center Joe Smedberg, Chilton Service Center Michael Stinebrink, Rhinelander Service Center Lynn Szulczewski, Appleton Service Center Peggy Winter, Antigo Service Center

#### Southwest Area

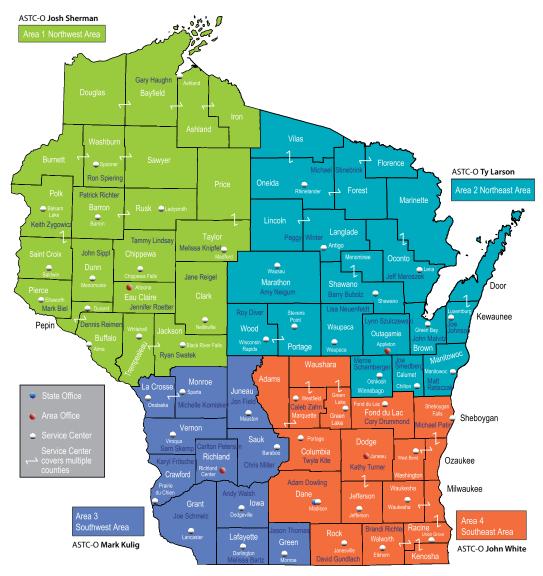
Melissa Bartz, Darlington Service Center Jon Field, Mauston Service Center Karyl Fritsche, Prairie du Chien Service Center Michelle Komiskey, Sparta and Onalaska Service Centers Chris Miller, Baraboo Service Center Carlton Peterson, Richland Center Service Center Joe Schmelz, Lancaster Service Center Sam Skemp, Viroqua Service Center Jason Thomas, Monroe Service Center Andy Walsh, Dodgeville Service Center

#### Southeast Area

Adam Dowling, Madison Service Center Cory Drummond, Fond du Lac Service Center David Gundlach, Janesville Service Center Twyla Kite, Portage Service Center Michael Patin, Sheboygan Falls and West Bend Service Centers Brandi Richter, Elkhorn, Union Grove and Waukesha Service Centers Kathy Turner, Jefferson and Juneau Service Centers Caleb Zahn, Green Lake and Westfield Service Centers

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## WISCONSIN NRCS MAP



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