



2022 Wisconsin Report on Soil and Water Conservation





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- 🌱 Monte Osterman (Secretary)
- 🌱 Ron Grasshoff
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- 🌱 Sara Walling/Brian Weigel
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Cover Image:
Agroforestry at the Savana Institute's Spring Green Campus.

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INTRODUCTION

With each passing year, research and practical experience provides us with more information about the best way to protect our state's soil and water resources. As we learn, we gain new insights into the management strategies that help us meet our natural resource objectives.

In Wisconsin, our state conservation partners are dedicated to ensuring the health of our soil and water resources and taking steps to implement appropriate management strategies. This partnership includes all levels of government, as well as many non-governmental organizations, including agricultural organizations, environmental non-profits, citizen groups, private agricultural service providers, and individual landowners and farmers.

The 2022 Annual Soil and Water Conservation Report provides an overview of conservation efforts and accomplishments throughout all 72 counties, many of which were completed with state assistance provided through the Joint Allocation Plan. The plan is developed through the collaboration of the Wisconsin Department of Agriculture, Trade and Consumer

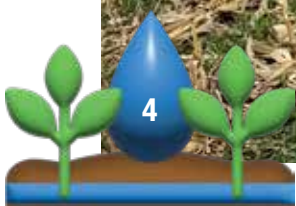
Protection (DATCP) and the Department of Natural Resources (DNR) and allocates funds provided by the state budget to support soil and water resource management activities.

The report highlights the benefit of persistent conservation efforts over generations and the value of collaboration to achieve conservation goals. The report showcases the value of hands-on learning, paired with peer-to-peer discussion to foster adoption of new techniques. It highlights how achieving success with projects of all scale is possible.

Each of us have a role to play to ensure effective land management and stewardship of our natural resources. Through our partnerships with each other and with the residents of the state, we will continue to seek out effective strategies to ensure conservation of our soil and water resources. These strategies may be the tried and true conservation practices or be the result of innovative solutions to challenges. Regardless of the method, one thing is constant – the dedication of conservation partners to the continued stewardship of our soil and water resources.



Interseeded field after harvest in Outagamie County.
Courtesy of: Outagamie County



CONSERVATION FUNDING IN WISCONSIN IN 2022

\$10.7 million in state funding to cost-share agricultural and urban conservation practices and support farmer education for nutrient management and innovative local projects.

\$11.6 million in state funding available for local conservation staff and support.

\$885,000 in state funding used to support necessary training and the development of conservation tools and standards.

\$870,000 million in state grant funds other than those provided through the state nonpoint program.*

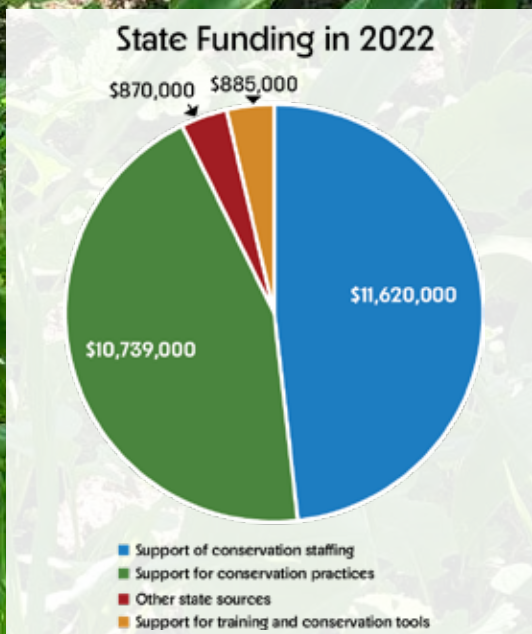
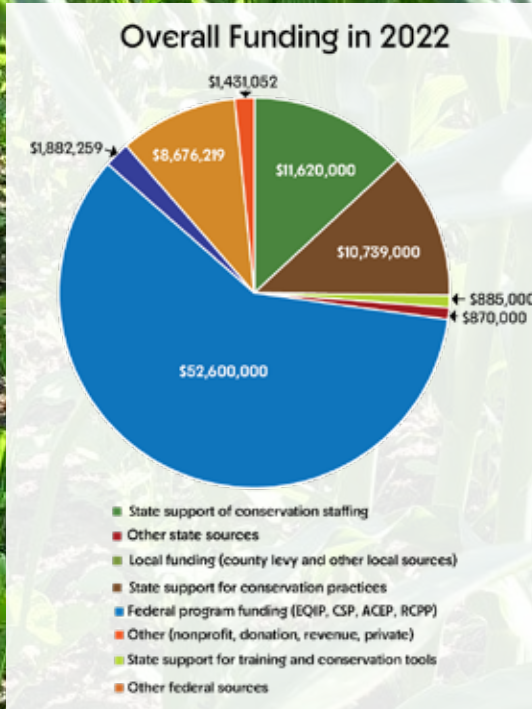
\$8.7 million from county levy and other local sources to support conservation staff and projects.*

\$52.6 million from the federal USDA-NRCS for conservation activities through the Environmental Quality Incentives Program, the Conservation Stewardship Program, the Agricultural Conservation Easement Program, and the Regional Conservation Partnership Program.

\$1.9 million from other federal sources.*

\$1.4 million for urban and agricultural conservation projects from other sources including nonprofit grants, private funding, donations, lake districts and associations, and other revenue.*

* As known and reported by the counties in March 2023.



Close-up view of a cover crop mix into standing corn. Courtesy of Ozaukee County.



Conservation Practices Installed in 2022 With State Funding

Practices Installed Using Soil and Water Resource Management Funds in 2022, DATCP

Conservation Practices		Practices Installed		
		Acres	Feet	Numbers
Soil Erosion Control	Animal Trails and Walkways		6,601	
	Cover and Green Manure Crop	13,267.11		
	Critical Area Stabilization			142
	Diversions		2,689	
	Field Windbreaks		42,747	
	Grade Stabilization Structures			36
	Riparian Buffers	10.84		
	Sinkhole Treatment			1
	Streambank Crossing		1,844	
	Streambank and Shoreline Protection		10,482.20	
	Subsurface Drains			6
	Underground Outlet			17
	Water and Sediment Control Basins			9
	Waterway Systems	454.72		
	Manure Management	Manure Storage Closure		
Manure Storage Systems				3
Access Roads			2,262	
Barnyard Runoff Control Systems				12
Livestock Fencing			101,124.96	
Livestock Watering Facilities				31
Nutrient Management		33,558.97		
Residue Management		1,237.80		
Roof Runoff Systems				12
Roofs				1
Waste Transfer Systems				7
Wastewater Treatment Strips			300	
Other Practices	Prescribed Grazing; Permanent Fencing		105,104.70	
	Prescribed Grazing; Best Permanent pasture	56.50		
	Well Decommissioning			113
	Wetland Development or Restoration	18.92		
	Feed Storage Runoff Control Systems			2



Table 2: Agricultural Best Management Practices Installed in Calendar Year 2022, DNR

Best Management Practice	Installed Amount	Units
Barnyard Runoff Control Systems	1	
Cover and Green Manure Crop	1,662	Acres
Manure Storage Systems	1	
Milking Center Waste Control Systems	1	
Nutrient Management	617	Acres
Other Streambank/Shoreline Protection (incl. assoc fencing)	146	Feet
Residue Management	4,744	Acres
Roofs	1	
Stream Crossing (incl. associated fencing)	100	Feet
Streambank/Shoreline Rip-rapping (incl. associated fencing)	157	Feet
Streambank/Shoreline Shaping & Seeding (incl. assoc fencing)	1,014	Feet
Underground Outlets	1,900	Feet
Waste Transfer Systems	3	
Waterway Systems	3	
Wetland Development or Restoration	0.3	Acres

Table 3: Urban Best Management Practices Installed in Calendar Year 2022, DNR

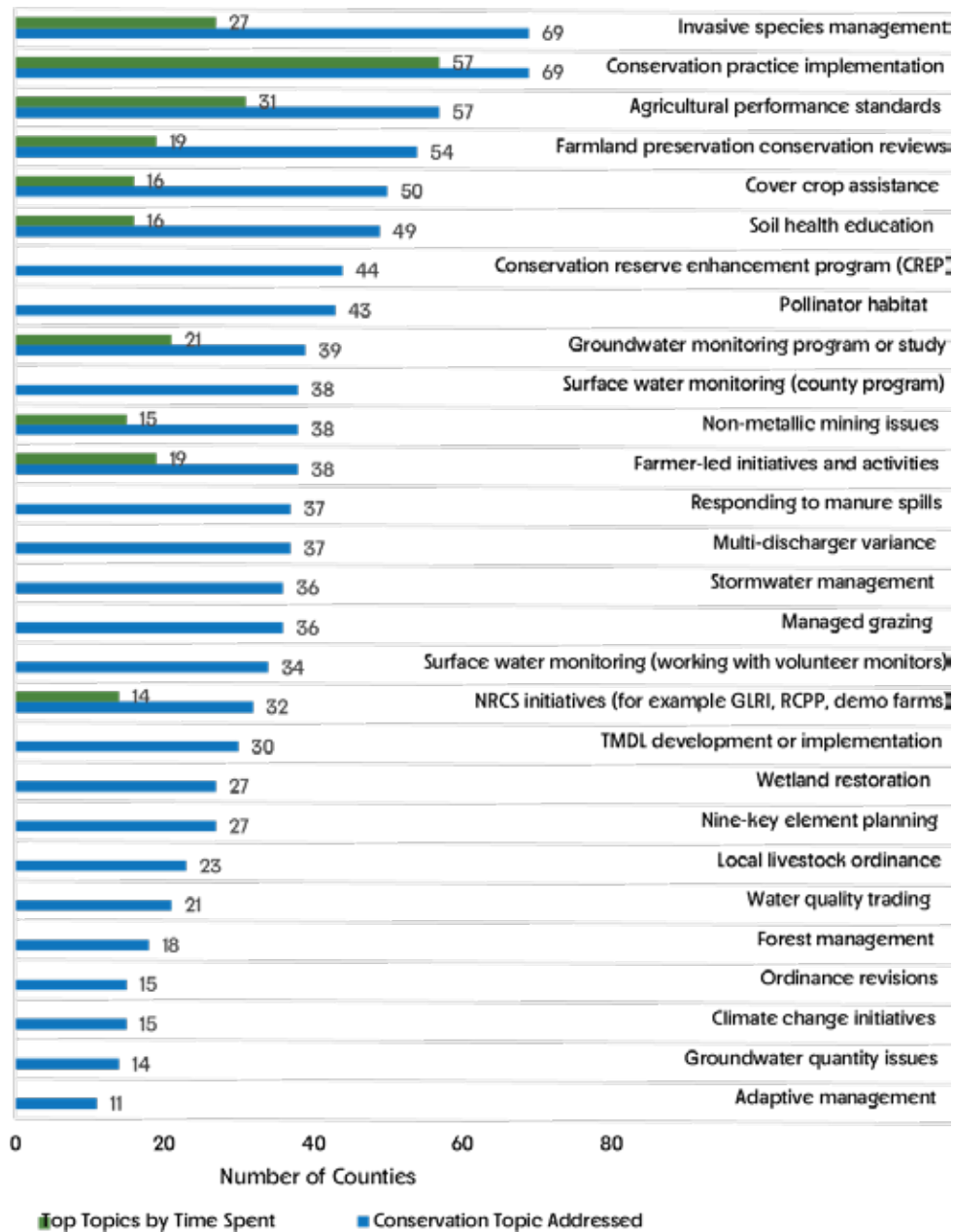
Best Management Practice	Installed Amount	Units
Accelerated or High-Efficiency Street Sweeper	1	
Information and Education Program	6	
Storm Water/Erosion Control Ordinance	7	
Streambank/Shoreline Rip-rapping (incl. associated fencing)	600	Feet
Streambank/Shoreline Shaping & Seeding (incl. assoc fencing)	600	Feet
Urban Stormwater Utility Formation	3	
Urban Stormwater/Erosion Plan	9	
Wet Detention Pond	2	



WISCONSIN CONSERVATION ACTIVITIES IN 2022

The 72 conservation departments across the state work to achieve local and state conservation and natural resource protection objectives. Just as there are variations across the landscape from corn fields to forests, from urban to rural, from the Mississippi River Basin to the Great Lakes Basin, there are variations in the conservation activities of each of the 72 counties.

*Conservation Topics Addressed by Counties and Top Topic by Time Spent, 2022**



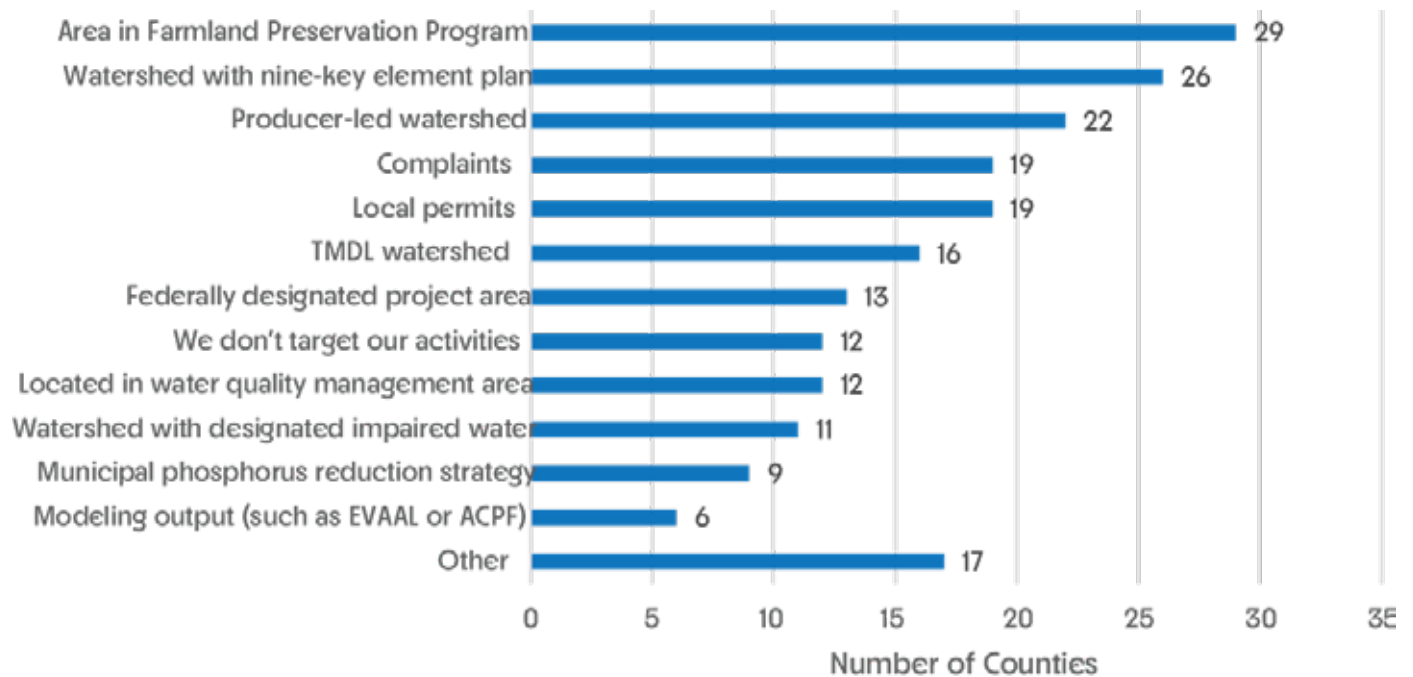
**Chart shows conservation topics addressed by counties and identifies the topics identified as top topics based upon time spent. As reported by counties in 2023.*



Targeting Conservation

It takes staff time and funding to carry out conservation activities. By considering factors such as resource health, existing plans, and stakeholder engagement, conservation professionals prioritize available time and funding. The figure below summarizes the top strategies that county conservation departments used to target areas for conservation activities. The following maps show the location for where several of these strategies are available across the state. Conservation work is frequently planned and implemented at the watershed level. By mapping out where these activities are taking place, conservation professionals can make informed decisions to help target implementation of conservation programming.

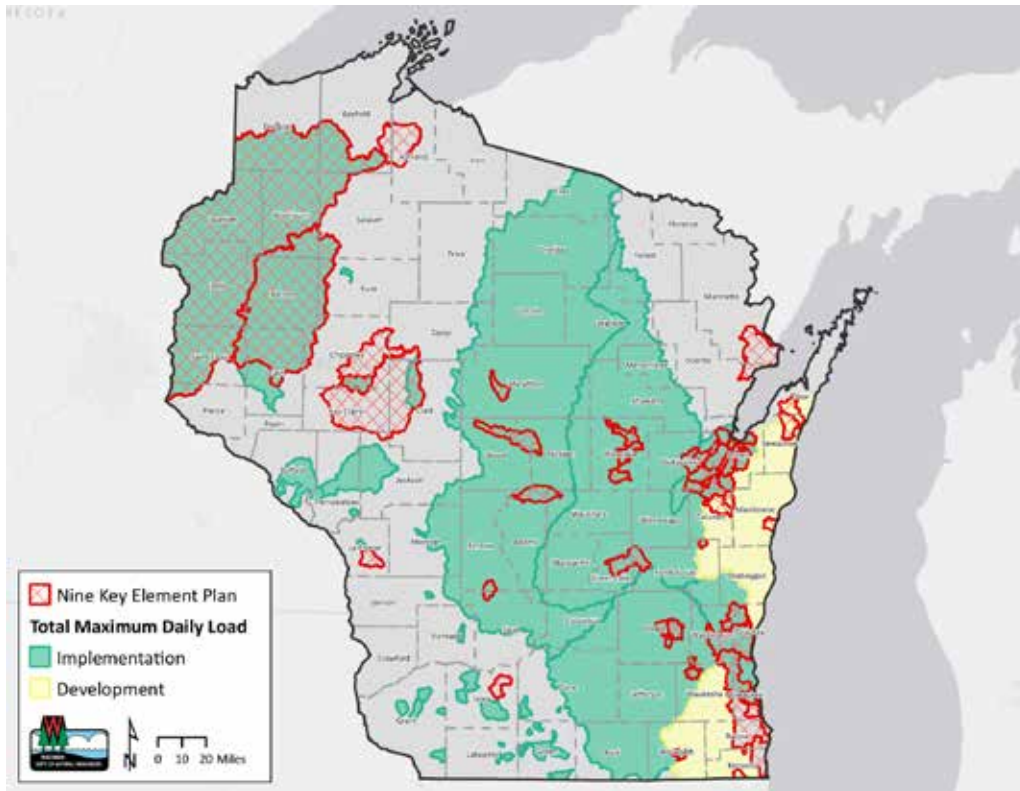
*Top strategies to target conservation practice implementation, in 2022**



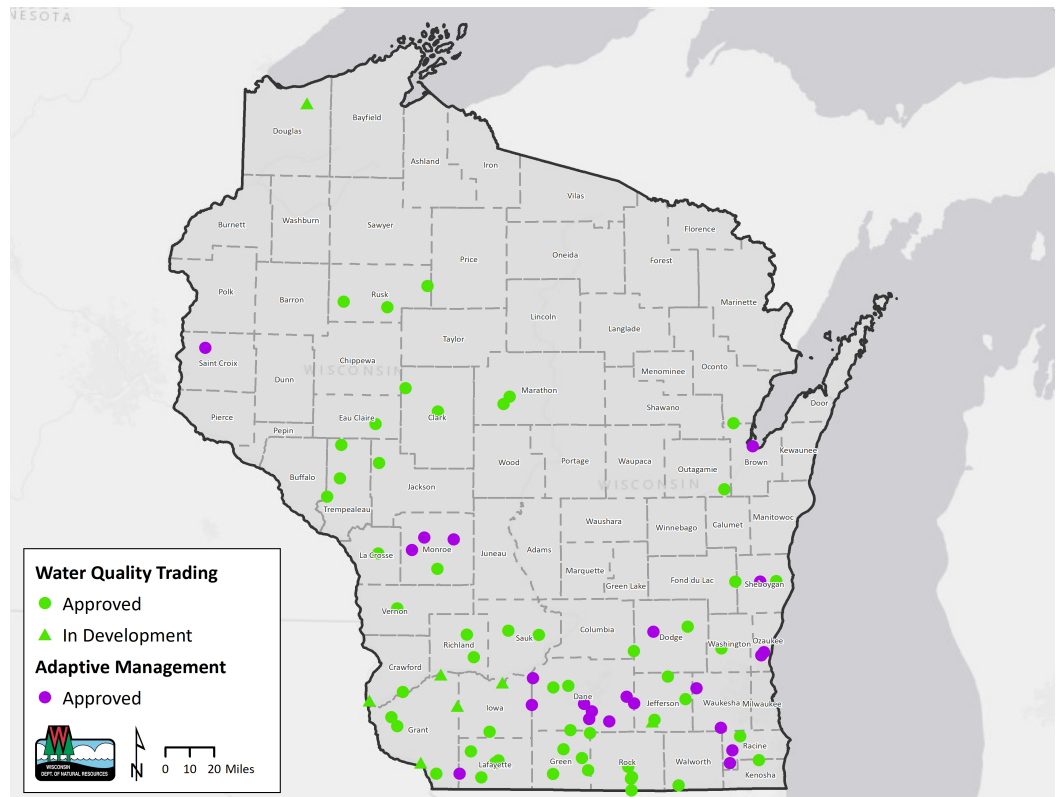
**Counties reported their top three strategies in 2023*



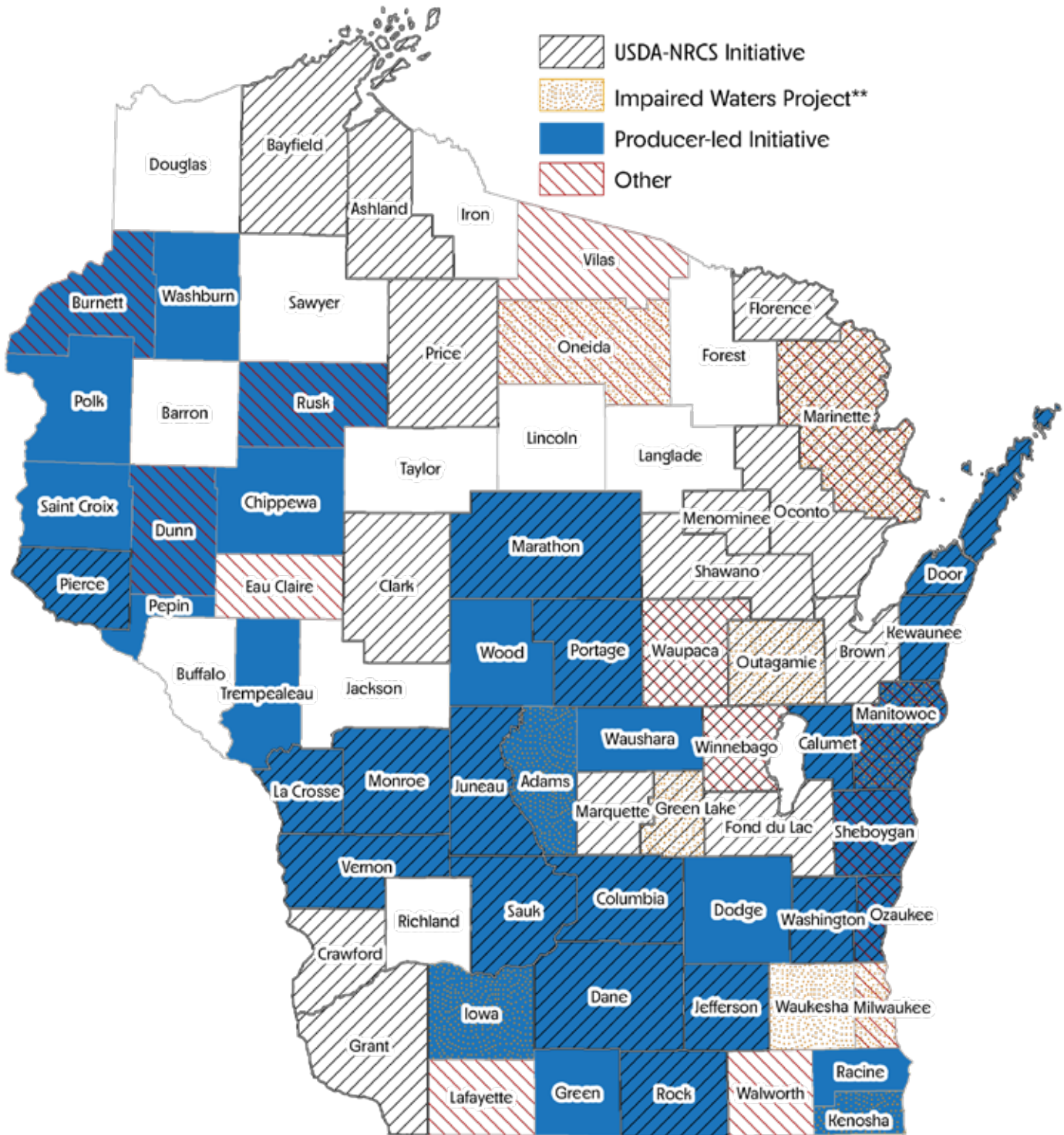
Watersheds with Nine Key Element Plans and Total Maximum Daily Loads, 2022



Water Quality Trading and Adaptive Management Sites, 2022



Watershed Based Activities within Counties*



*As reported by counties in March 2023.

Activities may be occurring in only a portion of the county.

** Other than TMDL and 9-key element

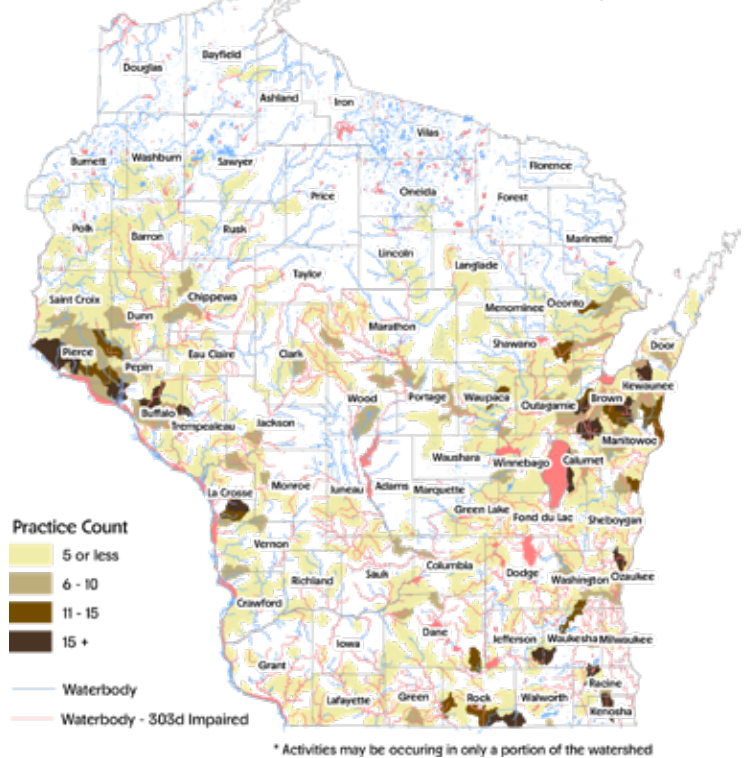


Federal sources of funding available to landowners through U.S. Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) allow for the installation of a significant number of conservation practices in Wisconsin. The following maps show the relative location and number of soil quality and water quality practices obligated through USDA-NRCS programs by watershed in 2022.

*Water Quality Practices Obligated by NRCS by Watershed, 2022**



*il Quality Practices Obligated by NRCS by Watershed, 2022**



Site Assessment and Evaluation

On-site assessment and evaluations are important aspects of conservation work. The state established performance standards for agriculture as well as for construction site erosion control and storm water management. By visiting sites in person and assessing the resource needs, conservation

professionals can ensure that natural resources protections are in place and the standards are met. In addition, participation in some state conservation programs, such as the Farmland Preservation program, requires regular evaluation to make sure eligibility is maintained.

2022 Conservation Site Visits

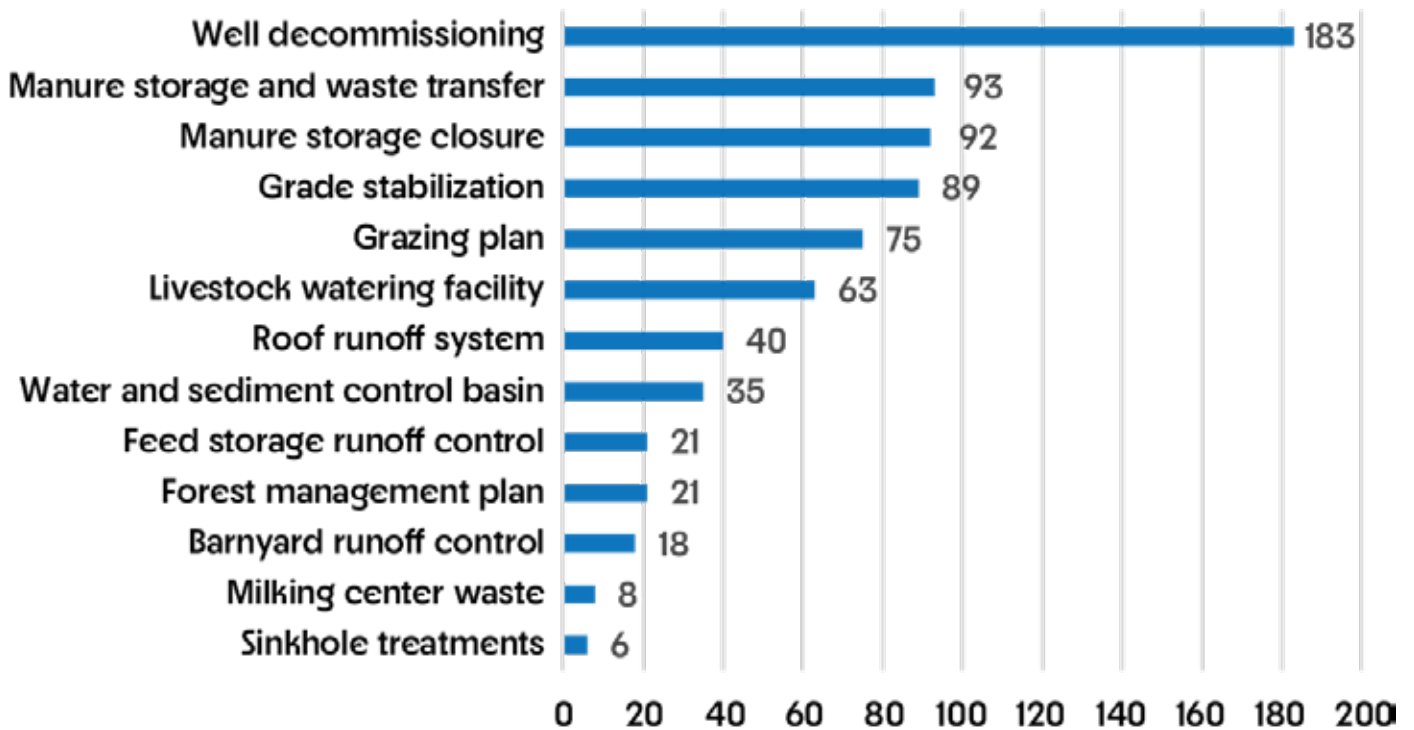
- ◆ 702 visits to determine compliance with agricultural performance standards (in Wis. Admin. Code § NR 151)
87% of the sites visited met state standards
- ◆ 291 farmland preservation program site visits
92% of the sites visited met the requirements for the Farmland Preservation program and state soil and water standards
- ◆ 997 other site inspections, including storm water, construction site erosion control, and forestry
94% of the sites visited met standard



Implementing Practices

Conservation professionals across the state work closely with landowners and farmers to help address identified resource concerns and to meet soil and water conservation goals. The conservation professionals provide necessary technical assistance to identify a solution and then develop a plan and implement the conservation practice. Conservation funding is frequently available to help landowners achieve conservation goals and to reduce nonpoint sources of nutrients and sediment. The tables at the beginning of the report summarize the conservation practices implemented using state funding available through DATCP and DNR in 2022.

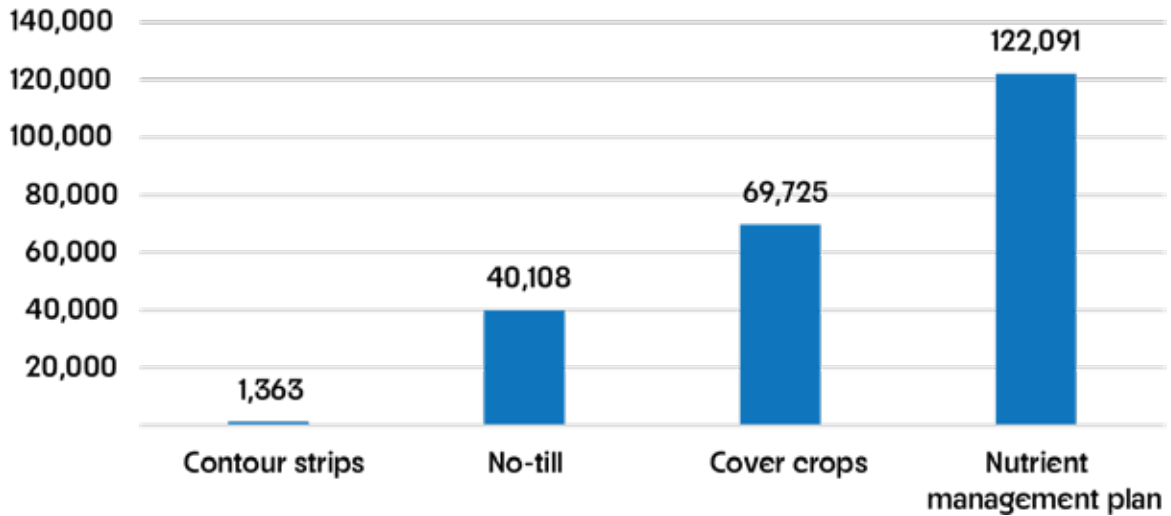
*Conservation practices installed in 2022, by number**



**Installed with county assistance including funding, planning, design, construction or inspection. As reported in March 2023.*

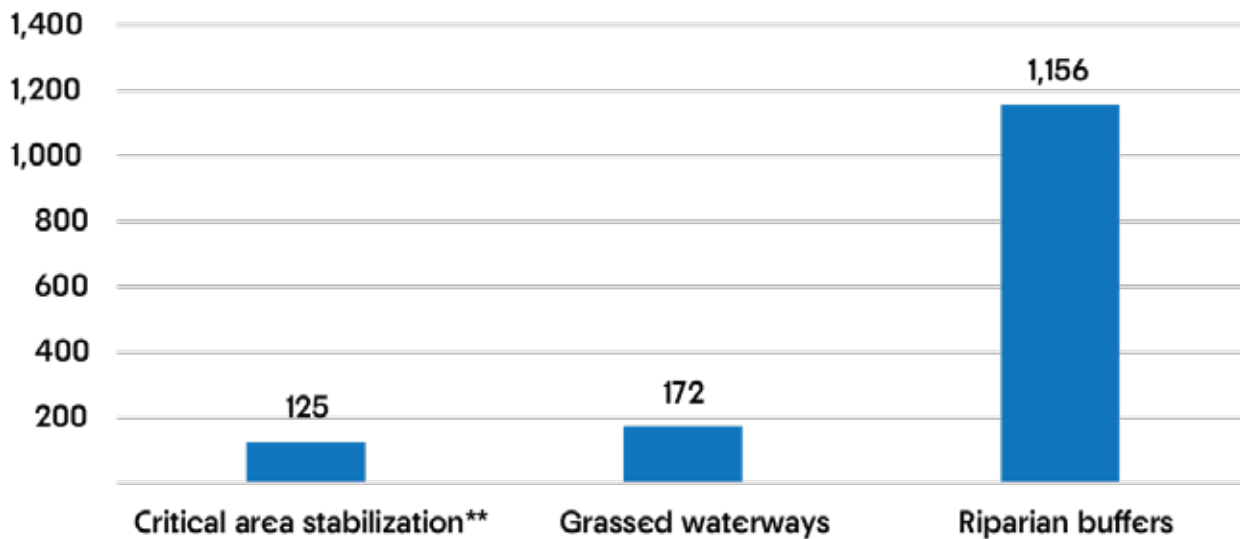


*Cropping practices, in 2022, in acres**



**Installed with county assistance including funding, planning, design, construction or inspection. As reported in March 2023.*

*Soil Erosion Control Practices in 2022, in acres**



**Installed with county assistance including funding, planning, design, construction or inspection. As reported in March 2023. Not including CREP acres.*

***Counties reported assisting with an additional 7,323 critical area stabilizations in 2022.*



*Conservation practices installed in 2022, in feet**

Stream crossing	3,761
Clean water diversion	3,819
Trails, access roads, and walkways	23,224
Streambank/shoreline protection	66,921
Livestock fencing	499,064

**Installed with county assistance including funding, planning, design, construction, or inspection. As reported in March 2023.*



Vertical concrete waste storage facility with push off ramp.
Courtesy of Chippewa County.



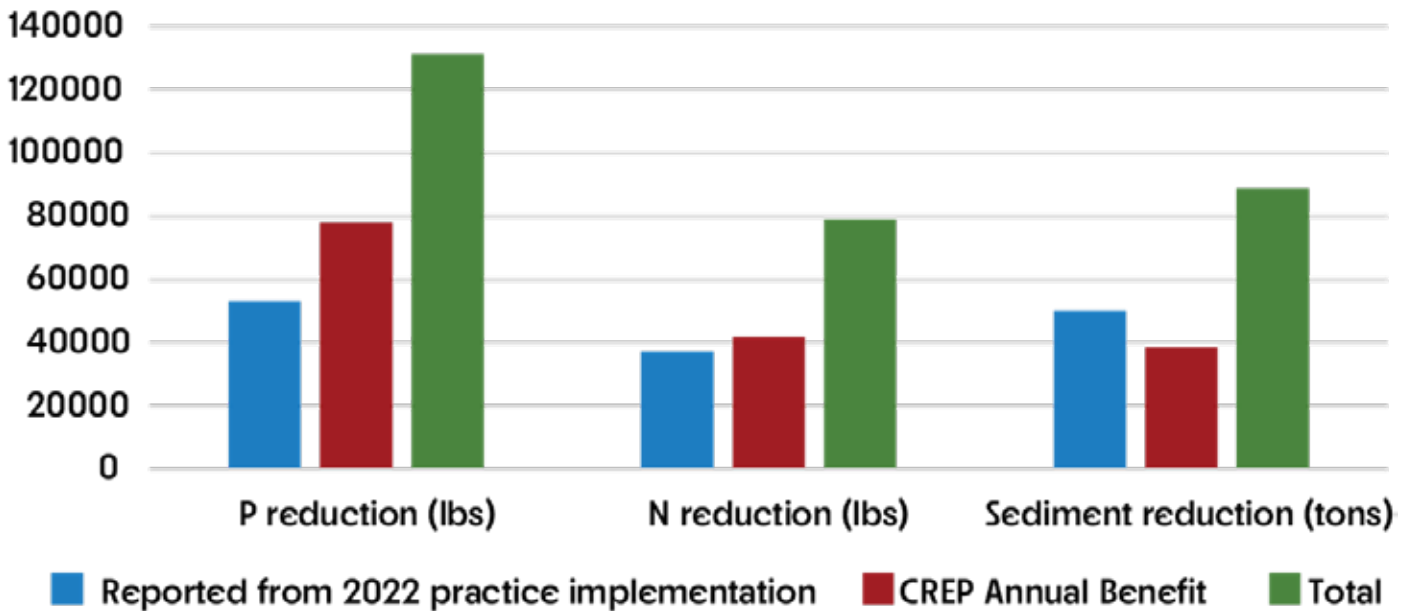
Estimated Load Reductions in 2022

Nonpoint sources of pollution are the cause of water quality impairment in Wisconsin's water. The Wisconsin Department of Natural Resources (DNR) estimates that more than 70% of the lakes and streams within assessed watersheds are degraded by nonpoint source pollution.

By implementing conservation practices on the landscape, sources of nonpoint pollution can be reduced, which leads to improvement

in the health of our soil and water resources. In many counties, the county staff use computer models to estimate the reductions in phosphorus, nitrogen, and sediment resulting from conservation efforts. The figure below shows the estimated reduction of these pollutants in 2022, as reported by counties in March 2023, as well as reductions calculated in the annual CREP report.

*Nutrient and Sediment Reductions, as Reported for 2022**



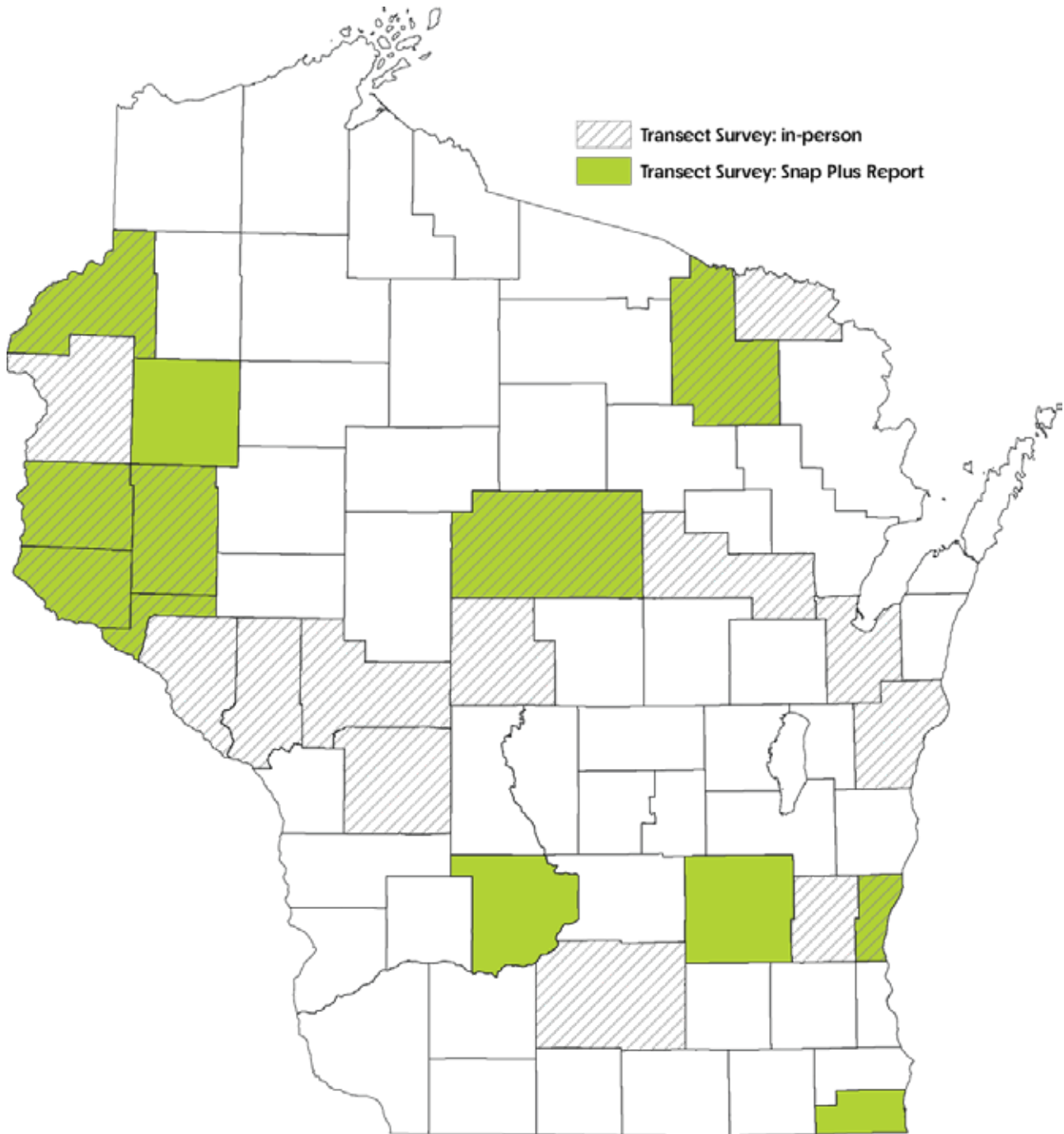
* Not all reductions of phosphorus, nitrogen, and sediment achieved through conservation practices implemented in 2022 are tracked and reported. The numbers shown here capture only the known estimated reductions in 2022 as reported by counties in March 2023, or provided in the Conservation Reserve Enhancement Program's annual report. As a result, the numbers shown here are only a fraction of the total reductions in phosphorus, nitrogen, and sediment from conservation efforts in 2022.

In Juneau County, the Land & Water Department partnered with Guardians of Lake Decorah (GOLD) to help acquire an aquatic weed harvester for the group. Since acquiring the weed harvester, GOLD has removed 386 pounds of Nitrogen, 45 pounds of Phosphorus, 271 pounds of Potassium, and 125,000 pounds of weed material from Lake Decorah.



Soil Transect Survey

Some counties conduct a transect survey to gather information about soil erosion. The survey looks at the crops grown and tillage used at different points around the county to estimate soil erosion. Some counties conduct this survey in-person by driving to established points around the county to gather information. Today, a handful of counties use the state's SnapPlus software to prepare a report of this information.



* as reported by counties in March 2023



Managing Ecosystem Health

In 2022, 65 counties worked on issues related to aquatic invasive species and 55 counties worked on terrestrial invasive issues. These efforts often rely on broader partnerships with other local governments and regional non-governmental organizations. Funding for these efforts

comes from multiple sources, including the state's Surface Water Grant program. These programs address water quality issues other than from agricultural and urban nonpoint sources. Through this work, conservation partners work to manage invasive species and protect and restore ecosystem health.

Florence County marked its third year without documentation of phragmites in the county. Hitting this milestone in 2022 is the result of the management efforts and partnership between the county and our Cooperative Invasive Species Management Area, and Wild Rivers Invasive Species Coalition. – Scott Goodwin, Florence County Conservationist



Forest County staff and the Wild Rivers Invasive Species Coalition (WRISC) work together to treat a small Phragmites outbreak in Forest County on a cold day. *Courtesy of Forest County.*

County Efforts to Address Aquatic and Terrestrial Invasive Species*

Conducted plant surveys	49
Developed management plans	25
Implemented control or eradication strategies	51
Provided general informational materials	66
Conducted boat inspections	37

*As reported by county conservation departments in March 2023.

Wildlife and habitat management also are important components of conservation work and planning. In 2022, 23 counties worked on wetland restoration projects for habitat; 49 sponsored tree and plant sales; and many others worked to increase pollinator habitat, restore native plants, and complete in-stream habitat work and fish passage.

Outagamie County was one of 49 counties that hosted a tree sale in 2022. The county sold over 30,000 trees to area landowners. In addition to the tree sales, the county assisted in establishing nearly 75 acres of native prairie plantings through a partnership with the local chapter of Pheasants Forever.

Waupaca County also provided support to landowners the plant 47 acres of prairie. In addition, the county provided assistance with the establishment of 3.5 acres of pollinator habitat.

Door County responded to a request for assistance from the county conservation department by two landowners. With the assistance from the county staff and through the use of a no-till drill, two landowners completed pollinator planting of approximately 40 acres.

Marinette County identified a couple of locations that impeded the migration of Northern pike. Once identified, the county worked to replace two culverts, the result of which improved fish passage for Northern pike and allowed access to spawning areas



Enforcing Local Regulations

Many counties across the state administer local ordinances that regulate activities that can impact soil and water resources. In some counties, the administration of the ordinance by issuing permits, as well as monitoring and inspection, are handled by the county's conservation department. In other counties, these actions are handled by a different county department, often with the assistance of the county conservation department. When permittees are out of compliance, the county works with the permittee to address the issue. In some counties, the county department responsible for the ordinance may take enforcement actions to ensure that resources are protected and permit conditions are met. The information below is specific to the actions of the county conservation departments.

*Permits Issued by County Conservation Departments in 2022**

Manure storage construction and transfer systems	Manure storage closure	Livestock facility siting	Winter spreading	Nonmetallic/ frac sand mining	Stormwater and construction site erosion control	Shoreland zoning
102	98	25	59	436	3,109	1,179

**As reported by county conservation departments in March 2023. Does not include permits issued by other county departments.*

*Ordinance Monitoring and Enforcement Actions for Facilities Permitted Under Manure Storage and Livestock Facility Siting Ordinances, in 2022**

Compliance inspections	Notices of violation or similar determination issued	Facilities cited or fined for violations	Referrals to corporation counsel for commencement of legal proceedings	Number of notices resolved
4,667	69	3	7	58

**As reported by county conservation departments in March 2023.*



NUTRIENT MANAGEMENT PLANNING AND EDUCATION

Nutrient Management Plans Reported in 2022

- 7,599 nutrient management plans reported by counties
- 3.45 million acres covered by a 590 and NR243 plan
- 37% of Wisconsin's cropland covered

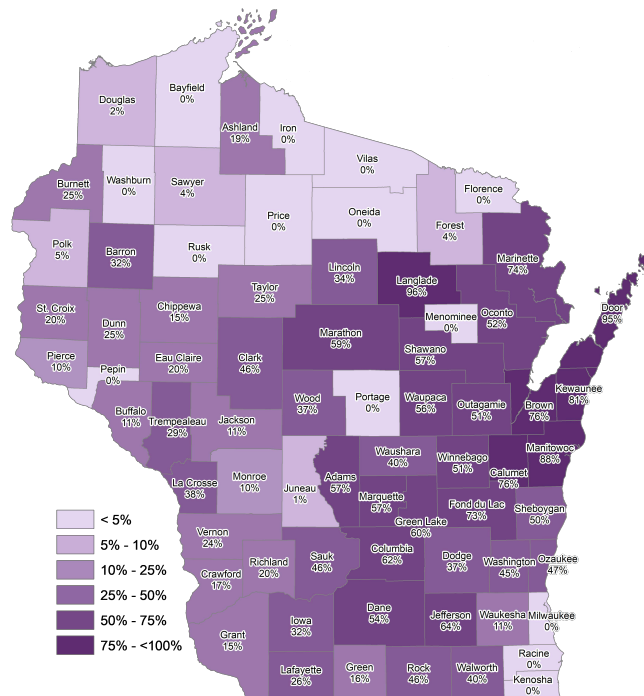
Farmer Developed Plans in 2022

- 1,708 farmers wrote their own plans
- 563,640 acres covered by plans written by farmers
- 22% of all nutrient management plans are written by farmers

Management Farmer Education Grants in 2022

- \$200,690 awarded through 13 Nutrient Management Farmer Education Grants to support programs teaching farmers to develop their own plans

Percent of County Cropland with 2022 Nutrient Management Plans.



Harvested cropland acres are derived from National Agricultural Statistics Service, Census of Agriculture, 2017. The 2012 census reported 9,148,876 harvested cropland acres; the 2017 census reported 9,234,611 harvested cropland acres



New Options Help Meet Interest and Need During 2022 Nutrient Management Farmer Education Classes (NMFE)

A new online self-paced curriculum for nutrient management farmer education launched in 2022. This new curriculum, developed through a partnership between DATCP and the Nutrient and Pest Management Team at UW-Madison, provides flexibility in meeting the needs of county farmer education programs. Since the COVID-19 pandemic, many counties rely on one-on-one in-person sessions to help farmers write their nutrient management plans. With this new free curriculum, anyone interested in learning more about nutrient management planning or interested in becoming certified to write a plan for their own farm have access to the information when they need it.

The curriculum was incorporated into county NMFE classes as well. Some counties took a hybrid approach and required participants to complete the online training on their own and then attend an in-person SnapPlus workshop where they received additional one-on-one help. Other counties used the curriculum videos as part of the in-person classes to facilitate group discussion after the viewing.

An additional new NMFE class for graziers was also made available in 2022. This class, developed in partnership by DATCP, the Nutrient and Pest Management Program, UW-Extension Grazing Specialist Jason Cavadini, and Kirsten Jurcek of Glacierland RC&D, offered nutrient management training specific to grazing. The training focused on the importance of managing soil fertility for pastures and the importance to soil testing. The training was recorded and can be found on the DATCP NM Training Webpage here: [DATCP Home Nutrient Management Trainings \(wi.gov\)](https://datcp.wi.gov).

Green Lake County hosted an in-person NMFE training for the first time in three years. The training in 2022 was offered in partnership with the Regional Crops Educator and Nutrient Pest Management Specialist. According to Todd Morris, County Conservationist, the partnership was a success and he stated “the training went much better and I think they learned so much more.” The discussion expanded the thinking about the value of cover crops beyond protection of the soil surface. As attendees listened to the educators explain how a rye cover crop can take up nutrients and then release them slowly during the growing season, they increased their understanding of the benefit of cover crops. One participant likened the value to a “slow release fertilizer.” Feedback from farmer attendees confirmed the success of the training and one farmer commented that they are already looking forward to next year’s training!



Winter rye as a cover crop.
Courtesy of Chippewa County.

CELEBRATING A CHILIAD: 1,000 DAMS IN PIERCE COUNTY

A dedication ceremony for the 1,000th dam was held on the Holst Farm in Diamond Bluff on November 8, 2022. Those in attendance included members of the county board, earth work contractors, and previous conservation staff to celebrate this momentous occasion.

Dams, also called earthen dams or grade stabilization structures, offer protection from erosion and decreased down slope flooding by slowing water coming off slopes, allowing it time to infiltrate back into the ground. Despite its topography, Pierce County experiences less frequent flooding than expected. This is quite possibly because

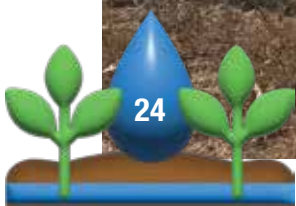
of the presence and abundance of these structures in upland settings.

The 1,000 dam total is based on when the Pierce County Land Conservation Department started counting their work in 1955. This number does not include dams completed on private property without their assistance – so the number could be even higher.

“The Driftless area comes with drastic changes in topography,” Conservation Program Specialist Retta Isaacson accounted, “but with these strategic conservation dams in our uplands, even



Before hidden from view by brush, a large gully formed at the edge of this field.



with the increase in intense rainfall we've seen in the past few years, we are protected from serious flash flooding issues and soil erosion."

Over 50,657 acres, or 80 square miles, of Pierce County drain into one of these structures, which average a 67% reduction in surface runoff. Over 40 engineers and engineering technicians are credited with designing these structures. Jim Christenson, a now-retired Pierce County technician, designed the most structures, with 261 during his career.

"A 'chiliad' is a word that describes 1,000 rare things," explained Isaacson." "And 1,000 dams, in places that citizens of our county

cared enough to do something, that has impacts for generations to come and that's rare," she added. "We are so thankful for all the landowners, engineers, and contractors who made our chiliad possible."

After the ceremony, Pierce County created an interactive StoryMap using ArcGIS. The StoryMap takes viewers on a virtual trip through the county, highlighting the dam structures maintained by Peirce County Land Conservation Department. The StoryMap also details the process of the how dams come to be and features photos from the dedication on Holst Farm.



After construction A finished dam on the reshaped and now protected field edge.
Courtesy Pierce County.



RAVINE REMODEL: DUNN COUNTY COLLABORATES TO PROTECT ELK CREEK LAKE

When Janet Christianson moved to Elk Creek Lake, she was instantly taken with the calm and scenic shores of the 57-acre body of water. The man-made lake sits between Dunn and Eau Claire counties, making its cold waters a favorite local spot for paddle sports, boating, fishing, and swimming. However, Christianson eventually noticed that the lake faced a pressing issue.

Severe runoff—especially after intense rainfalls or snowmelt—would flood the public boat access and park, wash away the lake’s beach, cover the parking areas in muck, and carry unwanted sediment into the lake. She decided to attend a meeting of the Elk Creek Lake Protection and Rehabilitation District to learn more about these issues, which were mostly stemming from a nearby ravine. Soon after, she found herself nominated as the Lake District’s new secretary and, with the encouragement of the local township, embarked on a mission to better understand the issues and challenges of finding a lasting solution.

Christianson was not the first person to recognize this problem. The Lake District, Spring Book Town Board, and local citizens had a long history of concerns with the severely eroding ravine. The land’s drainage area that flows into the ravine covers 294 acres and consists mostly of continuous row cropped farmland, with some wooded residential areas. A significant portion of this cropland is tile-drained and the discharge from these drain systems hinders the establishment of vegetation on the steep downstream channel and slopes. The ravine’s soils consist of layers of dense silt and clay sandwiched between layers of sand, creating a barrier that

restricts the vertical flow of groundwater and instead directs it horizontally, causing it to seep out at the sides and bottom of the ravine.

The major challenge in finding a long-term solution quickly became evident: funding. Bob Kaner, a conservation planner working in the Dunn County Land & Water Conservation Department, explained that their office had been receiving requests for assistance in stabilizing the eroding ravine since 2013. However, the township and property owners were unable to afford the cost of the project. In 2014, the estimated cost was approximately \$65,000, and since then, the current estimate had risen to nearly \$100,000. Meanwhile, the erosion and runoff continued to impose costs on the township, as the lake required dredging, sediment removal by trucks, and frequent road repairs.

Christianson and Kaner knew they had to find a significant source of funding. “I’d always had a great interest in conservation and taking care of the earth,” Christianson said. “I was nearing retirement, and there was something I’d always wanted to do—write a grant.” So, when the application for DNR’s Surface Water Restoration Grant opened, Christianson and Kaner developed a proposal and plan that would properly address the runoff.

Kaner and a local contractor, Brent Wachsmuth, collaborated on ideas to widen the bottom of the ravine from four to 14 feet. Their goal was to create an access road that would not only accommodate the installation of the lined rock way but also allow for future light maintenance access. Kaner drew up a plan that included the installation of a rock-lined waterway that was designed to safely contain the flows of a 10-year storm within its channel.



“One of the biggest challenges was that we needed to line 600 feet of the 25-foot deep, narrow ravine with riprap rock placed over geotextile fabric” said Kaner. Winter construction would be used with the hopeful idea of clearing and shaping the wet ravine, then subgrade could be used to form a frozen access road for hauling materials deep into the ravine. “I had been thinking about this project for a long time, so I was thankful that Chase Cummings, our LWCD department head, trusted me to work on this,” Kaner said. He then worked with Pete Wurzer, DATCP Conservation Engineer, to refine and finalize the plans.

Fortunately, they were awarded the \$50,000 DNR grant, but increased construction costs meant that they still needed to raise nearly \$50,000 to complete the project. To help meet the funding goal, funds were contributed by the Town of Spring Brook, the Town of Union, Dunn County, and Eau Claire County.

Kaner and Christianson then worked to get landowner access agreements created and recorded. Much of their work included educating lakeshore property owners on the importance of finding a solution. “There were multiple landowners who needed to be involved, and a major construction project can be daunting,” said Kaner. “It’s important to take the time to explain what’s going on their land, and once they understand, they have a much greater buy-in for the project.”

Christianson began soliciting donations from various sources with a connection to the lake, ranging from individual homeowners to Doane Kidney Bean Company, among others. In addition, the Lake District and landowners hosted a neighborhood potluck fundraiser, where they explained the plans and the positive impact that it would have on the lake. With the funding gap finally closed, work could finally begin on the ravine.

Kaner’s involvement didn’t stop at the planning stages. He, along with other staff

from their department, hauled rocks and staked and measured slopes during project construction. “Brent and I watched the weather and when the forecast showed perfect temps with highs of 2° and lows of -20°,” Brent entered the ravine from the outlet end,” explained Kaner. “He worked upstream clearing and shaping the bottom and sides, and then left the site for a day to freeze down.” The contractor would build about eight to 10 feet of the lined waterway at a time, and then move downstream and build another eight to 10 feet.

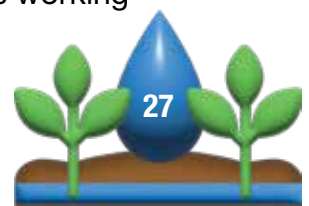
“We had quite a spectator group when the project started in January,” said Kaner. “They were excited to see something finally happening and engaged community members are what kept this project going.” After two weeks of winter construction and a decade of concern, the ravine’s remodel was complete.

In July of the following summer, the lined waterway was extended 200 feet downstream to new road culverts. This reach was funded by the Town of Spring Brook, the Lake District, and donations by the contractor.

“I could not believe the amount of time and effort that Bob put into this,” said Christianson. “He was out here checking on things during the project, and had been thinking about it for years before. And he was educating me all along the way,” she added.

Since the project’s completion, both Christianson and Kaner have noticed improvements. After a recent rain, Christianson noticed that the water running through the culvert into the lake was crystal clear, and she’s also started to see more loons and frog eggs around the lake.

For Kaner, a crucial next step is working with the farmland owners



to implement practices such as no-till, cover crop rotations, and timing of manure applications. “We’re already making some progress in that area to ensure that there’s less erosion coming from the fields,” said Kaner. He also hopes that collaborating with the area’s producer-led watershed groups will encourage more farmers to adopt conservation practices.

That collaboration between landowners, county staff, township boards, and

contractors is what left Christianson feeling the most optimistic about tackling large-scale projects. “There are plenty of people who are there to help and offer support,” she said. “We couldn’t have done this without Dunn County, and once we were all on board, we had an impressive team. I would encourage anyone to take advantage of the supports—from grants to people—that are in place to protect our resources for the next generation.”

I would encourage anyone to take advantage of the supports—from grants to people—that are in place to protect our resources for the next generation - Janet Christianson



Ravine before the “remodel.”
Courtesy Dunn County.



Outlet of ravine after construction completed.
Courtesy of Dunn County.



FROM PASTURE TO PLATE: BISON BURGERS BLEND FLAVOR AND GRAZING EDUCATION

Connecting with people, particularly farmers, can be especially difficult during the busy summer months. Washburn County Land & Water Conservation took on this challenge by using the one thing that's sure to draw a crowd—the majestic bison. In collaboration with the Northwest Wisconsin Graziers Network, Shell Lake Upper Yellow River Farmer-led Watershed Council, and UW-Madison Division of Extension, the county hosted a pasture walk at Black Creek Bison Ranch. The unique event attracted over 40 participants, ranging from new farmers to

curious consumers.

Dave Fogerty, a leader of the Watershed Council, hosted the event at his 200-acre grass-based operation where he rotationally grazes 40 head of bison. Tractors with touring wagons were provided to take people around the farm. Topics covered during the daylong event included alternative forages, using cover crops as forage, intensively managed silvopasture advantages and disadvantages, and a discussion of soil health metrics for pastures.



Bison on the Black Creek Bison Farm.
Courtesy of Washburn County.

Over the years, Fogerty has worked to develop silvopastures, which have since been stabilized by bison as they graze and browse. Now, there are over 100 acres of expanded grazing areas and high-yielding silvopastures, which the bison prefer over the open fields of more conventional practices. Yoana Newman, Associate Professor of Forages, Extension Specialist at UW-River Falls, led the discussion about some of the current on-farm forage research. Staff from UW-Madison Division of Extension and USDA-Natural Resources Conservation Service also assisted with the event.

For many at the event, the highlight of the day was undoubtedly lunchtime, which featured locally-sourced and prepared bison burgers. “We know that the bison and the bison burgers are a big draw,” said Lynn Johnson, coordinator of the Northwest Wisconsin Graziers Network. Seeing the conservation practices of farmers within their own watersheds can have a positive influence on consumer attitudes and offer a direct marketing opportunity for those producers. “Many people are experiencing it for the first time, so while they might come for the bison, they soon realize they are learning about their local farmer,” he explained.

Johnson also says that many new farmers also attend pasture walks and are impressed by the level of collaboration and available resources. “They recognize there is a lot of technical information, but they often don’t realize how organized we are and that we can offer that level of support.”

He explained that the county land and water department fill two critical roles for those new to farming, or for those looking to adopt new practices. They work collaboratively with other organizations to offer educational opportunities and connect people to available funding through the county and state levels.

“We see many people from urban areas that have a dream of starting a small farm and are starting from scratch in terms of experience,” said Johnson. “They leave knowing that they aren’t in this alone.”



Bison on the Black Creek Bison Farm.
Courtesy of Washburn County.



OAK CREEK STREAMBANK STABILIZATION PROVIDES MANY BENEFITS

A progressively eroding streambank along the Oak Creek in Milwaukee County was threatening the collapse of the highest bluff along the creek and the adjacent Oak Creek Parkway road. In addition, the excessive sediment from the eroding streambank was negatively impacting the health of the stream - an important spawning stream for several Lake Michigan fish species. Milwaukee County took action to stabilize the streambank and improve the overall habitat of the riparian zone and ultimately, the creek.

Early on in the project, Milwaukee County assembled a stakeholder committee to help drive project goals. The committee included representatives from the Wisconsin Department of Natural Resources (DNR), Southeastern Wisconsin Regional Planning Commission (SEWRPC), Southeastern Wisconsin Watershed Trust (Sweet Water), Milwaukee Metropolitan Sewerage District (MMSD), United States Army Corps of Engineers (USACE), City of South Milwaukee, and Milwaukee County Parks. The design for a solution began in 2020. The project design required data collection and review, geomorphic analysis, and permitting. Alternative solutions were created, and specific solutions for streambank stabilization, creek routing, floodplain design,

storm sewer infrastructure, site access, fish passage, and construction means and methods were developed.

The project began in the early months of 2022 and construction activities were planned with help from the DNR to ensure the project would have minimal impact on aquatic species. During the summer of 2022, a temporary bypass system to divert water during construction was installed, and the key elements of the design began to take shape. Much of the project was completed by September 1, 2022 — just 10 days before the largest 24-hour September rainfall in Milwaukee County recorded history. The recently stabilized streambank handled this massive storm extremely well and was a welcomed test of the project's success.

In the spring of 2023, numerous emergent and floodplain plants have begun to “green up” the site and are actively receiving their first year of dedicated plant maintenance. Since project completion, many local anglers and hikers have enjoyed the improved access to this stretch of creek just upstream from the mouth of the river as it empties into Lake Michigan. The project is considered a model for future streambank work in the Milwaukee County Park system.



An angler enjoying the creek.
Courtesy of Milwaukee County

OPPORTUNITIES TO LEARN ARE IN THE FIELD AND THE CLASSROOM

In Manitowoc County, outreach efforts seek to build and strengthen knowledge of important conservation concepts while building relationships between watershed residents. In the Pine Creek Watershed, new soil health initiatives and the development of a watershed plan have expanded opportunities for collaboration across the watershed. In the fall, the county partnered

with UW-Extension, Between-the-Lakes Farm Demo Group, NRCS, and Libertyland Farms to host a soil health field day. The field day provided attendees information about basic soil health concepts and an opportunity for hands-on learning. Field day participants received a free soil health testing kit to use to examine the health of the soil in their fields.



Field day participants explore a soil pit at the Pine Creek Soil Health Field Day. *Courtesy of Manitowoc County.*



Calumet County and Clark County also use field days to provide education about conservation topics and foster partnerships. Calumet County, in partnership with the Between the Lakes Demonstration Farm Network, the producer-led watershed protection group the Calumet County Ag Stewardship Alliance and Manitowoc, and Sheboygan and Fond du Lac counties, had a full year of successful field days. The field days drew up to 100 attendees and provided an opportunity for area farmers to

share ideas and experiences with each other, discussing topics such as low disturbance manure applications, inter-seeding cover crops, mobile hazard map applications, pollinator plantings, and much more. In Clark County, attendees at an August field day at a demonstration plot in the county had an opportunity to learn more about incorporating cover crops as a management practice. A highlight of the field day for participants was the chance to watch how a drone can be used to apply cover crop seed.



Participants see an air drill presentation in Calumet County.
Courtesy of Maranda Miller, University of Wisconsin Division of Extension.

Getting out in the field is a critical way to see firsthand how conservation activities work in the field. Some counties find ways to keep that learning going during the winter by hosting educational workshops. The workshops not only provide information and education, but they offer another chance to connect with other farmers. In Jefferson County, over 70 participants took time on a winter day to attend a soil health workshop. The workshop was a partnership effort between the Jefferson County Land and

Water Conservation Department, Glacierland RC&D, and five producer-led groups from across the region including Jefferson County Soil Builders, Rock River Regenerative Graziers, Biological Farmer Friends, Farmers for Lake Country, and Farmers on the Rock. Marquette County also took advantage of the classroom and hosted two workshops highlighting the benefits of cover crops and no-till as important conservation practices.

IOWA COUNTY YOUTH HEAD BACK TO THE FIELD

The Iowa County Land Conservation Department, in collaboration with the local UW-Madison Division of Extension, renewed their Youth Conservation Field Day after a two-year hiatus due to COVID-19. Over 150 sixth-graders from five schools came out to Iowa County's 600-acre Bloomfield property, which includes a pond, stream, and rolling hills covered in restored tallgrass prairie. Partners from state and local agencies, as

well as non-profit organizations, presented a variety of conservation topics including groundwater, soil health, pollinators, wildlife, invasive species, and prairie. Groups of students rotated through eight stations where they completed a prairie scavenger hunt, measured soil health, wove a food web, saw animal furs and skulls up close, learned a lot, got rained on, and had a great time being outside all day!



Students wander through the restored prairie.
Courtesy Iowa County.







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