

DEEP ROOTS

A NEWSLETTER FOR
FARMERS AND FARMLAND OWNERS
IN IOWA COUNTY WISCONSIN

2024 SPRING

FORWARD FARMING

Mike Wilkinson shares his experience in trying new practices.

MANAGING NITROGEN FOR PROFIT & CONSERVATION

Tools to help farmers find the sweet spot in N rates.

PRACTICES THAT PAY

Additional funding in 2024 for practices that protect groundwater.

MANURE STORAGE CLOSURE

70% cost-share to close old manure storage.

FARMLAND PRESERVATION

Expect a larger income tax credit this year.

GRAZING FOR THE BIRDS

Audubon is working with landowners to support better bird habitat.





ALL THINGS NEW

KATIE ABBOTT



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Deep Roots is published by the Iowa County Land Conservation Department. To receive a copy via mail or email, please contact mayme.keagy@iowacounty.org.

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I am happy to announce the Land Conservation Department is now fully staffed! Sarah Hovis left in August and Casey Michek left in November, and we wish them the very best in their new positions. Please help us welcome our two new staff: Tony Pillow and Sara Wilhelm. We are excited to have them on our team!

Despite being short staffed much of the year, I'm proud of what we accomplished in 2023. Check out our 2023 annual report at: <https://www.iowacounty.org/departments/LandConservation/AnnualReports>

The wild weather of the past twelve months- spring floods followed by drought, almost two feet of snow in one January week that melted in less than a month, and a tornado in February- highlights the importance of protecting our soil and water from weather extremes as much as we can. Spring rains on thawed, bare ground can wash our valuable soil into streams, costing us more to replenish those nutrients and organic matter. Healthier soil is also more resilient; it is better able to absorb heavy rains and hold water during drought.

The Land Conservation Department can provide cost-sharing for no-till, cover crops, grassed waterways, buffers, and many other soil and water conservation practices. As always, feel free to reach out with any questions- we are here to help! In addition, the federal Natural Resources Conservation Service has significant funding for conservation practices available. If you have been thinking of a project or trying a new practice, now is the time!

Katie



TONY PILLOW

CONSERVATION TECHNICIAN

Iowa County landowners have a deeply rooted conservation ethic and I look forward to working with them to promote erosion control and water quality practices. My formal education came from a degree in soil, water, and forestry sciences from Fox Valley Technical College. I have worked in Juneau, Sauk, and Iowa Counties for the last 25 years. Iowa County is where I gained the bulk of my experience and continuing education. Conservation is still my passion and I'm excited to meet new landowners and get reacquainted with people I've worked with in the past.



SARA WILHELM

CONSERVATION SPECIALIST

I grew up in Reedsburg, WI with my two sisters and brother. Growing up around a farming community strengthened my interest in conservation agriculture and attending the University of Wisconsin-Platteville for Soil and Crop Science has taught me how to implement my interest. I also enjoy hiking, photography, and hanging out with friends. I am excited to be joining the Land Conservation Department!

FORWARD FARMING

MAYME KEAGY



“You just need to keep moving forward and make it work.” The rapid expansion of farming technology means that “if you’re not learning something new every day, you’re falling behind.”

Many people know Mike Wilkinson as an extraordinary basketball player. After success in high school, he went on to play as a Forward for the Wisconsin Badgers from 2001 to 2005, red-shirting his freshman year.

Wilkinson graduated from UW with a degree in agricultural business management in 2004 and completed a year in a graduate program in Ag Economics. He played basketball professionally overseas for nine years before returning to his family farm near Blue Mounds, WI due to an injury.

These days, Mike is known as a forward thinker.

In 2010, he and his parents, Kendall and Peg Wilkinson, expanded the family farm from a 225-acre dairy operation to a 500+ acre enterprise centered around beef, corn, soybeans, and hay. The hay is used to feed their herd of 46 Highland beef cattle, and some is custom-baled and sold as horse hay.

In addition to the farm, Mike also runs two side businesses and has two young kids with his wife, Allison.

The farm ranges from upland woods, where his Highlanders browse on brush, to flat bottoms. The soil transitions from sand to clay to black silt loam, sometimes all within one field. Working with the numbers and careful planning are key to making the most of everything the land has to offer.



Mike Wilkinson on his farm near Blue Mounds with his wife Allison, their children, and Mike’s father Kendall Wilkinson.

Mike uses no-till practices in most of his fields. “First, no-till saves me time; it also saves me thousands of dollars on fuel and equipment.” No-till practices have replaced his disk, chisel, plow, and drag. “It takes 3-5 years for the soil to set up with no-till, for the structure to build. I don’t have any washing like we used to,” Mike said.

Mike split-applies his nitrogen, with the first application at planting and the second, with stabilizer, after tassel. This approach ensures that more nitrogen is utilized by the crop and less is lost to leaching.

Last year, when Mike noticed a decrease in corn yields, one of the factors he investigated was planting depth. Their existing planter was limited to 1½ inches. They purchased a Massey Ferguson VE Series planter equipped with hydraulic DeltaForce technology, enabling a seed depth of 2¼ inches. Mike is optimistic that this decision will increase yield, but he’s also quick to admit, “We’ll see.”

Mike acknowledges that last year was challenging. They missed the ideal planting window and faced some stand issues due to the learning curve of the new planter settings. “We didn’t receive any rainfall from May 1st until July 12th. Everything initially lagged, but it caught up. I can’t complain.”

When asked what advice he would offer to other farmers, Mike replied, “You just need to keep moving forward to make it work.” The rapid expansion of farming technology means that “if you’re not learning something new every day, you’re falling behind,” Mike explains. He learns through research, experimentation, and by listening to other farmers about what works for them. “Take risks and try small adjustments; you don’t need to be drastic.”

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MANAGING NITROGEN FOR PROFIT & CONSERVATION

SARA WILHELM, KATIE ABBOTT

Achieving profitable yields requires an adequate Nitrogen supply. However, over-applying nitrogen harms soil health, wastes money on fertilizers, and can contaminate the groundwater that supplies our drinking water.

From 1950 to 2005 nitrogen application was based on yield goals. In recent years, many field trials have shown no relationship between yield-based recommendations and profitable N rates. At some point, adding more nitrogen results in little or no yield increase. The point where the cost of the next unit of N is higher than the price earned from a yield increase varies from year to year. Luckily there are tools to help you find the sweet spot of N rates.

UW-Extension has developed the Wisconsin Maximum Return to Nitrogen (MRTN) based on experiments conducted on Wisconsin soil. These quick and easy nitrogen rate recommendations are based on optimizing economic return and were not developed as an environmental standard. This allows the producer to select a N rate that is appropriate for their economic situation. In addition, implementing the MRTN can have positive soil health impacts, such as increased organic matter, calcium levels, and pH. Try it out at <https://www.cornratecalc.org/>.

The MRTN makes recommendations based on soil yield potential, previous crop, and N:crop price ratios. However, this is a basic guide that does not account for tillage or soil organic matter, which will greatly affect mineralization. More accurate methods include soil nitrate testing and plant tissue testing.

Soil Nitrate Tests estimate the plant-available N in the root zone of loamy soils. It can account for previous fertilizer applications, supply from preceding legume crops, and manure applications.

Preplant Soil Nitrate Tests (PPNT) can be used for corn, sweet corn, and wheat if corn was the previous crop. This test consists of collecting a soil sample in both 0-1 foot and 1-2 foot depth increments before planting.

Pre-Sidedress Nitrate Tests (PSNT) are used to adjust corn and sweet corn N application rates. For this test, you would take a soil sample at approximately 1 foot deep when the corn is 6-12" tall, usually 4-6 weeks after planting.

The 4Rs are helpful to keep in mind when managing N to minimize losses:



RIGHT RATE

Nitrogen rates have the potential to make the largest impact on both crop production and the environment. Account for your nitrogen credits by using the UW-Extension MRTN guidelines, then adjust with soil or plant tissue testing.



RIGHT SOURCE

Keep in mind that N is mobile and there are differences in how N fertilizers interact with the environment, which can affect both availability and loss. For example, some forms like urea can volatilize when surface applied, and other forms are more prone to leaching. A nitrification inhibitor could make financial sense in some situations.



RIGHT TIME

The nutrient supply should be synchronized with crop demand and uptake as much as possible. Weather conditions play an important role too. Apply urea before rain, only fall apply on loamy soils after the soil has cooled <50 degrees, sidedress or split apply N on sandy or poorly drained soils, and wait for better soil conditions if too wet or too dry.



RIGHT PLACE

Nutrients should be placed where the crop can use them. With urea, incorporate or apply as a liquid, anhydrous inject, and incorporate manure if possible. Special considerations need to be made regarding sensitive soils or near wells; these areas can be seen on your Nutrient Management Plan maps.

In addition, higher soil organic matter produces larger amounts of plant-available N, so less N needs to come from fertilizers. Organic material can be increased by planting cover crops, reducing tillage, adding manure or compost, and diversifying rotations.

By implementing some of these practices and using the MRTN, you can effectively manage N to optimize crop profitability. Avoiding excess N application will lower costs and reduce the potential of nitrate leaching to the groundwater.

For more information and resources visit our nitrogen page at: <https://www.iowacounty.org/departments/LandConservation/nitrogen>.

The Iowa County Land Conservation Department is offering an incentive for farmers to complete a Nitrogen Use Efficiency assessment: \$750 for simple assessment, \$1500 for advanced, using Discovery Farms NUE assessment guidelines: <https://uwdiscoveryfarms.org/articles/nitrogen-use-efficiency-guide-to-conducting-your-own-study/>.

You can also propose your own N trial for approval by the Land Conservation Department. Call Katie Abbott if you are interested: 608-930-9893.



FARMLAND PRESERVATION TAX CREDIT \$10 PER ACRE

New Wisconsin legislation has increased the Farmland Preservation Program income tax credit, starting in tax year 2023, from \$7.50/acre to \$10/acre.

New participants must meet eligibility requirements related to farm revenue, conservation compliance, residency, and zoning.

Visit our website for more information: <https://www.iowacounty.org/departments/LandConservation/FarmlandPreservationProgram>



CLIMATE-SMART SOLUTIONS

Producers and land managers are experiencing firsthand the impacts of climate change. The Natural Resources Conservation Service (NRCS) can help farmers, ranchers, and forest landowners contribute to climate solutions.

While NRCS offers financial assistance for a broad suite of voluntary conservation activities, the agency identified a sub-set as critical to climate change mitigation. These activities may deliver measurable reductions in greenhouse gas emissions and/or increases in carbon sequestration. Many also help operations build climate change resilience while addressing other concerns such as soil health, water quality, pollinator and wildlife habitat, and air quality.

NRCS climate-smart agriculture and forestry mitigation activities are divided into seven categories:

Soil Health

Reducing emissions and enhancing soil carbon sequestration

Nitrogen Management

Implementing the 4Rs of nitrogen management and reducing nitrous oxide, a potent greenhouse gas

Livestock Partnership

Reducing potent methane emissions from manure

Grazing and Pasture

Reducing emissions and building soil carbon in grazing systems.

Agroforestry, Forestry, and Wildlife Habitat

Building carbon in perennial biomass and soils

Energy, Combustion, and Electricity Efficiency

Reducing emissions from agricultural operations and infrastructure through efficiency and system improvements

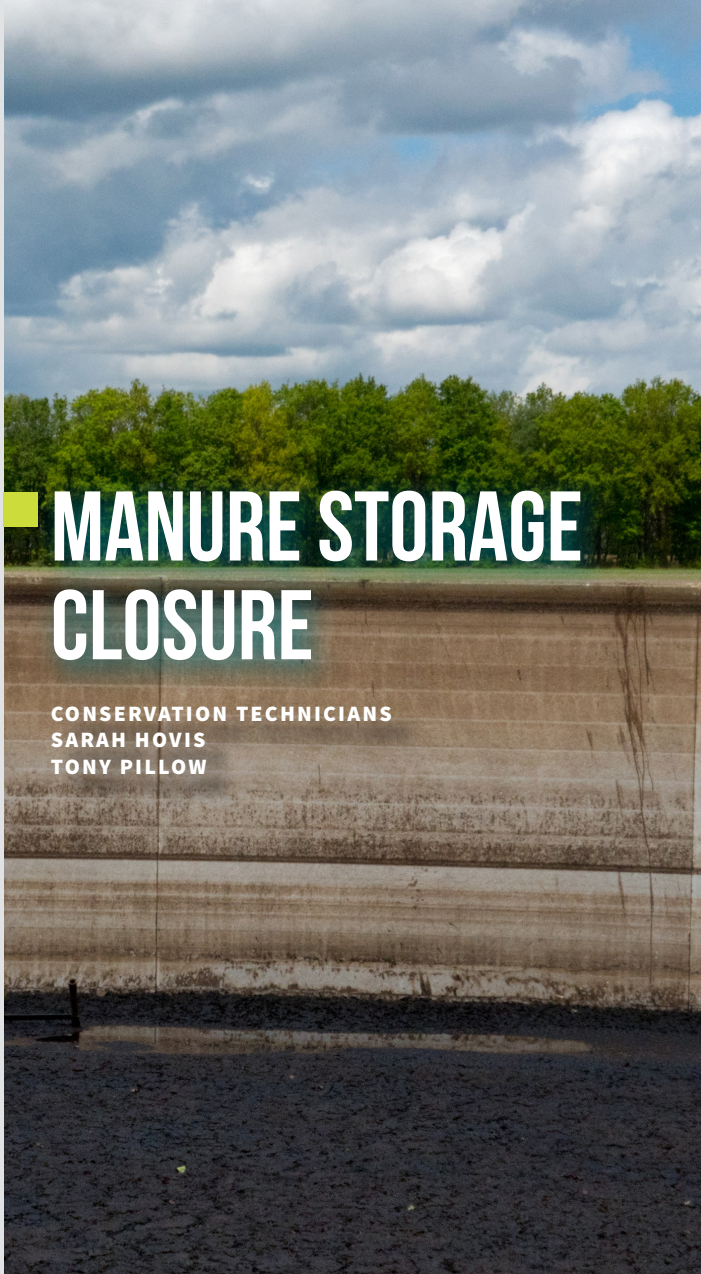
Wetlands

Restoring wetlands to enhance carbon storage in soils and vegetation

Producers interested in funding for new climate-smart activities should contact their local NRCS office (in Iowa County: (608) 935-2791 x3).

For more information regarding soil health or Farmland Preservation contact Sara Wilhelm at 608-930-9895, Sara.Wilhelm@iowacounty.org





MANURE STORAGE CLOSURE

CONSERVATION TECHNICIANS
SARAH HOVIS
TONY PILLOW

Unused manure storage units can deteriorate over time, making them structurally unsafe and posing a risk to groundwater if re-used or sitting idle. That’s why Iowa County Ordinance and Wisconsin law require manure storage structures to be properly decommissioned if they have been idle or unused for 24 months. Closure is also needed to stay in compliance with the voluntary Farmland Preservation Program.

Even older pits that may seem harmless can pose a threat because they can contain organic matter or ammonia-filled manure remains. When mixed with rainwater, these compounds break down and convert to nitrates. This rainwater can find its way down to a crack in the bedrock and directly to groundwater.

Iowa County offers financial and design assistance for manure storage closures. The County technician will come out to view and survey the area and create a design tailored to your specific setup, including removing any transfer systems.

The first step of closure involves completely emptying the pit of manure or any water that has accumulated. Then the bottom of the storage is broken, and the technician will check beneath the liner for any signs of contamination. If found, contaminated soil is removed, excavated to 2’ below any signs of contamination, and spread like any other animal waste, according to the farm’s 590 plan. Walls can be removed from the site for disposal or pushed into the storage and buried under 3’ of clean fill.

The finished ground will be graded so water does not pool over the closure site. The site should be seeded or protected with a usable gravel or concrete surface. The Iowa County technician will work with you to make the site fits into your day-to-day operations.

Iowa County offers 70% cost-sharing (90% for financial hardship) for manure storage closures. If you have a storage unit you are no longer using, give us a call.

For more information, technical assistance, or to inquire about possible cost-sharing opportunities contact Tony Pillow at 608-930-9894, tony.pillow@iowacounty.org



ADDITIONAL FUNDING TO PROTECT GROUNDWATER

The Iowa County Land Conservation Department is accepting applications for one-time cost-share projects that reduce groundwater contamination. Funds are limited and must be used in 2024 or 2025. Most eligible projects will be awarded first-come first-served.

Funding includes up to \$5,000 for Iowa County landowners to replace old septic systems, replace wells that connect aquifers, or protect sinkholes and mineshafts.

Funding also increases nutrient management plan cost-share and offers a new incentive payment to farmers to assess nitrogen use efficiency or conduct a nitrogen rate trial. Priority is given to areas mapped as “most susceptible” to groundwater contamination.

For more details or to apply, visit: <https://www.iowacounty.org/departments/LandConservation/GroundwaterProjectFunding>.

- Replace old septic systems
- Replace wells that connect aquifers
- Protect sinkholes and mineshafts
- Nutrient management plans
- Assess nitrogen use efficiency
- Conduct nitrogen rate trial



90% COST-SHARE FOR WELL DECOMMISSION

When you live in a rural area, you most likely have a well to supply water to your home and/or barn. What happens when the well dries up, is no longer used, or no longer functions as desired?

According to state statute, unused wells must be properly abandoned to protect groundwater. This involves filling and sealing with approved materials so contaminants cannot enter the well hole and reach underground aquifers. Prior to filling, the pump and any piping inside the casing are removed.

Wisconsin law states that only licensed well drillers and pump installers may fill and seal wells. The Department of Natural Resources (DNR) has a complete list of licensed contractors available on their website. Iowa County Land Conservation

Department offers 70% cost-share assistance to landowners planning to decommission their wells according to state standards. For a limited time, Iowa County has extra groundwater funding to offer an additional 20% cost sharing, bumping the landowner up to 90% reimbursement of the total!

If you are interested in funding to properly decommission a well on your property, stop in the office or give us a call at 608-930-9891.

Groundwater funding application: <https://www.iowacounty.org/departments/LandConservation/GroundwaterProjectFunding>

WI DNR website for private well owners: <https://dnr.wisconsin.gov/topic/Wells/homeowners.html>

BIRD-FRIENDLY GRAZING

ASHLY STEINKE, AUDUBON WISCONSIN GRASSLAND ECOLOGIST

Grassland bird populations have dropped by more than 50% since 1970—the steepest decline of all North American birds. In response, Audubon is working with cattle and bison producers to improve habitat for grassland birds on their ranches through the Audubon Conservation Ranching (ACR) program. After success in the Great Plains and Western U.S., ACR is now being launched in Wisconsin. Iowa County is in the heart of where this exciting program is being introduced.

When a ranch signs up for ACR, Audubon works with each landowner to create a unique management plan that prioritizes the interests of both grassland bird habitat and the rancher. Participants earn a “Grazed on Audubon Certified Bird Friendly Land” seal that can be used on product packaging.

Audubon provides bird monitoring to track how grassland bird populations respond to habitat improvements.

ACR is an opportunity for farmers to not only improve the land they manage, but also to lead by example and showcase the win-win for the environment, the farmer, and the community. There is strong and growing evidence that well-managed pastures provide clean water, flood reduction, soil retention, and soil carbon storage, which are results of continuous vegetation cover and improved soil health.

If you are interested in learning more about this free opportunity, please contact Audubon Wisconsin Grassland Ecologist Ashly Steinke at ashly.steinke@audubon.org.



DEEP ROOTS



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EVENTS & RESOURCES



WATER TESTING IN IOWA COUNTY

Iowa County Health Department
303 W Chapel Street, Dodgeville

The Iowa County Health Department is now certified to test for bacteria in well water samples and partners with UW Oshkosh to test for nitrates, arsenic, and lead.

While most private wells in Wisconsin provide safe drinking water, some may contain substances that can affect our health. The only way to make sure a well is safe for drinking is to test it regularly.

For more information call the Health Department at (608) 930-9870 or visit <https://www.iowacounty.org/WaterTestingforPrivateWells>.



HANDLING CATTLE ON PASTURE

Wednesday, July 24, 6PM
5915 Section Line Rd., Dodgeville

What does a herd of 250 stocker cattle look like on a pasture? Come to this pasture walk and see for yourself. Cattle handling, vaccination protocols, and watering 250 head at one time will be discussed. Cattle insurance will also be a topic of discussion.

For a full schedule of 2024 pasture walks visit: co.sauk.wi.us/landconservation/2024-pasture-walks.



BOOSTING BIODIVERSITY ON FARMS

Thursday, August 22, 6 PM-8PM
Twin Crix Farm, Highway 23

Learn how we can improve the health of our farm landscapes by increasing biodiversity with edge-of-field conservation practices, agroforestry, and many other ideas. Leaders: Patrick Michaels, Dick Cates

Details follow registration: <https://www.driftlessconservancy.org/event-details/evenings-afield-boosting-biodiversity-on-farms>