ILLINOIS NUTRIENT LOSS REDUCTION STRATEGY

2025

PARTNER PROGRAM AND PROJECT UPDATES

Agriculture

Illinois Department of Agriculture

Illinois Environmental Protection Agency

Illinois Extension
University of Illinois Urbana-Champaign

4R Field Day

Illinois Fertilizer and Chemical Association, IFCA, continued its efforts in 2025 to promote nutrient stewardship and conservation practices through the coordination and support of 4R Field Day activities. These events provide a platform to showcase current research and demonstrate practical applications of best management practices aligned with the Illinois Nutrient Loss Reduction Strategy.

In 2025, the 4R Field Day was held on Sept. 4 at Roots Run Deep Farm in Hammond. The event was hosted in partnership with the 4R Field Day Alliance and the Illinois Nutrient Research and Education Council, NREC, and drew approximately 100 attendees. IFCA staff assisted with coordination and implementation of the field day and presented various topics. Presentations included nitrogen management, soil health and carbon, crop rotations, enhanced efficiency fertilizers, rainfall simulation, and conservation practices.

The 4R Field Day continues to serve as a key platform for demonstrating research findings and promoting practical application of nutrient stewardship practices. By connecting researchers, industry partners, and producers, the event supports the adoption of best management practices that align with the goals of the Illinois Nutrient Loss Reduction Strategy.

Advancing Markets for Producers Grant Program

The Illinois Pork Producers Association encourages Illinois pork producers to participate in the Advancing U.S. Pork Sustainability and Market Value, AMP, Grant Program. This program provides financial assistance and technical support to help producers implement conservation practices that improve environmental sustainability and long-term farm efficiency.

Illinois producers are already demonstrating strong environmental performance. To date, data from 16 Illinois farms show 167,846 head of swine across 26 sites and 17,811 acres under management, highlighting the scale and impact of conservation efforts in the state. Through AMP, producers can further adopt practices such as cover crops, conservation tillage, manure management, and energy-efficient technologies to build on this progress.

Sustainability efforts in Illinois are already producing measurable results. Current farm practices have reduced emissions by 16,107 tons of CO_2e, the equivalent of removing 3,128 passenger vehicles from the road, while also saving 44,684 tons of soil from erosion and preventing nutrient loss into waterways. These outcomes demonstrate the real environmental and economic benefits AMP-supported practices can deliver.

Manure management is another key focus of the program. Illinois farms produce approximately 23.5 million gallons of manure annually, providing over $554,614 in nutrient value when applied to crop fields. AMP funding helps producers optimize these systems, improving soil health while reducing input costs.

The program also supports energy and resource efficiency. Illinois barn data reports an average of 73 kWh of energy use and 785 gallons of water per head, showing opportunities for continued improvement through AMP-supported upgrades.

The AMP Grant Program is available to eligible Illinois pork producers and offers both funding and expert guidance to implement practices that enhance sustainability, improve efficiency, and strengthen market opportunities.

For more information about eligibility and how to apply, visit porkcheckoff.org/pork-production-management/sustainability/advancing-us-pork-sustainability-grant/.

Edge-of-Field Partnership for Woodchip Bioreactors

The Woodchip Bioreactor Partnership was established in 2017 and is a multi-year collaboration between Illinois Farm Bureau, Illinois Land Improvement Contractors Association Inc., University of Illinois, and Illinois USDA Natural Resources Conservation Service. The goal of this partnership is to install a woodchip bioreactor each year and to support research into the impact of woodchip bioreactors on water quality at each site for the duration of the collaboration period and beyond. In previous years, the partnership has installed woodchip bioreactors in Bureau, Henry, McDonough, and Sangamon counties.

In August 2025, a field day was held in Marshall County where attendees were able to learn about a woodchip bioreactor during construction. In August 2026, the partnership will install a bioreactor in Piatt County. The installation will also be part of a larger field day that will feature a saturated buffer, drainage water management structure, and education regarding the importance of these Edge-of-Field Practices on water quality. Approximately 100 to 125 people are expected to be in attendance at the event. For more information, see illica.net/projects.

Edge-of-Field Partnership for Saturated Buffers

The Saturated Buffer Partnership was established in 2019 as a five-year collaboration between Illinois Farm Bureau, Illinois Land Improvement Contractors Association Inc., Southern Illinois University Carbondale, and Illinois USDA Natural Resources Conservation Service. Extended for another five-year term, the goal of this partnership is to install a saturated buffer each year and to support research into the impact of saturated buffers on water quality at each site for the duration of the collaboration period and beyond. The first saturated buffer was installed in the spring of 2019 in Moultrie County. In June 2023, the Saturated Buffer Partnership installed their second saturated buffer to coincide with a Sangamon County field day. Looking forward, the group is looking to install their third saturated buffer in 2026.

For more information, see illica.net/projects.

Fall Covers for Spring Savings

American Farmland Trust continues to lead a coalition of partners in Illinois to secure additional funding for and promote participation in the Fall Covers for Spring Savings Cover Crop Premium Discount program offered by the Illinois Department of Agriculture. The Fall Covers for Spring Savings program, or FCSS, is available to Illinois farmers who are planting cover crops on acres installed outside of state and federal program incentives (e.g., EQIP, CSP and state cost share). Eligible applicants receive a $5/acre insurance premium discount on the following year's crop insurance invoice for every acre of cover crop enrolled and accepted in the program. General program information is available at farmland.org/illinois-fall-covers-for-spring-savings.

In 2025, AFT focused policy efforts to expand state cover crop insurance rebate programs, such as Illinois' Fall Covers for Spring Savings to meet demand. During the 2025-26 year, 190,000 acres were enrolled.

Farmer-Led Advances in Soil Health

In 2025, American Farmland Trust launched Farmer-Led Advances in Soil Health, FLASH, a statewide initiative in Illinois where farmers are leading efforts in priority watersheds to improve soil health and protect water quality. FLASH groups are organized by farmers, for farmers, with each group tailoring conservation efforts to address local needs and priorities. This collaborative effort is supported by a $13 million RCPP project led by Sand County Foundation that includes $4 million for Illinois farmers. Additional support is provided by the Lumpkin Family Foundation, the Mosaic Company Foundation, and the Walton Family Foundation. General program information is available at farmland.org/flash.

American Farmland Trust is leading a coalition of diverse partners to launch and provide ongoing support to farmer networks in Illinois. The program brings together farmer groups with local conservation professionals to identify and prioritize conservation needs and to provide guidance for successful implementation of conservation practices. Local professionals also facilitate leadership training and support for farmers willing to serve as FLASH leaders, and conduct outreach to other farmers.

AFT partnered with the Sand County Foundation to secure approximately $4 million in financial assistance from USDA's Regional Conservation Partnership Program (RCPP). Funding is used to increase conservation practices that improve soil health and retention of nutrients on farmland. The resulting improvements in water quality will help meet goals identified in the Illinois Nutrient Loss Reduction Strategy. Applied practices will also lower greenhouse gas emissions, sequester carbon in the soil, and build farms' resilience to the impacts of climate change.

Seven FLASH groups are established in the following counties: Jo Daviess, Livingston, Champaign, Macon, Coles, Montgomery, and Clinton. FLASH groups utilize a Batch and Grow Cover Crop program that offers free cover crop seed and custom application to participants of the groups. Using this model, each FLASH group has selected two to five proven cover crop mixes tailored to their local area that participating farmers can choose from. This makes it easier to get started, with trusted support from experienced cover crop users and conservation partners in their community. Over 8,000 acres were

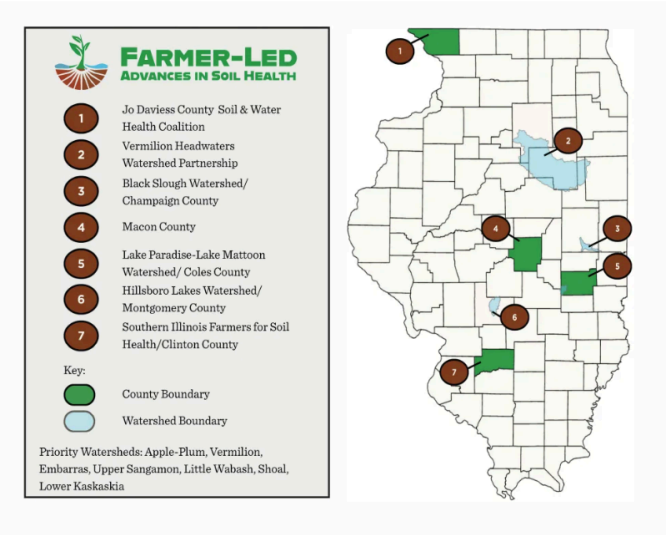


Figure 1. 2025 Active FLASH groups in priority watersheds.

seeded in cover crops, resulting in an estimated reduction of 33,662 lbs of nitrogen, 2,341 lbs of phosphorus, 9,158 tons of sediment, and 2,271 metric tonnes of CO2e of greenhouse gas. Figure 2 summarizes these estimations calculated using AFT's Project by County Outcomes Calculator Tool.

The first round of Batch and Grow was implemented in fall 2025, with over 8,000 acres seeded in cover crops. Additional outreach includes hosting field days in collaboration with each FLASH group, a quarterly newsletter, and prioritizing attendance and support to the meetings of each FLASH group.

Figure 2. Estimated nutrient reductions achieved by cover crops enrolled in the Batch and Grow program. Calculated using AFT's Project by County Outcomes Calculator Tool.

FLASH Group	Number of Farmers	Acres Enrolled	Acres Seeded (as of 12/31/25)	Nitrate-N Load Reduction (lbs/yr)	Total P Load Reduction (lbs/yr)	Sediment Load Reduction (tons/yr)	GHG emissions Reduction (Metric tonnes CO2e/yr)
Black Slough	11	1,011.50	1,117.71	4,503	219	830	321
Lake Paradise / Lake Mattoon	5	936.60	940.87	2,906	283	1,148	316
Hillsboro	17	2,103.93	2,063.11	2,949	811	2,191	937
JoDaviess	19	2,832.73	2,354.10	13,087	609	3,622	289
Vermilion	10	1,573.87	1,602.03	10,217	419	1,367	408
Total	**62**	**8,458.63**	**8,077.82**	**33,662**	**2,341**	**9,158**	**2,271**

Illinois Ag Retail Survey

The Illinois Ag Retail Survey program continued in 2025 to track nutrient management practices across Illinois agriculture and provide insight into current field-level practices that influence nutrient loss and water quality outcomes.

The survey utilizes a statistically robust, randomized sampling approach to generate a representative dataset across Illinois crop reporting districts. Agricultural retail locations are randomly selected, and anonymous field-level data is collected to reflect real-world management practices.

January through March, survey liaisons visited randomly selected agricultural retail locations to collect data representing practices from the 2024 growing season. In 2025, a total of 845 fields were surveyed, exceeding the minimum sample size needed for a representative statewide dataset.

As the program continues, the growing multi-year dataset will allow for evaluation of trends over time and support ongoing efforts to assess progress toward Illinois Nutrient Loss Reduction Strategy goals and identify opportunities to improve nutrient stewardship practices across the state.

Illinois Cover Crop Initiative

The Illinois Cover Crop Initiative, ICCI, is a partnership between American Farmland Trust, AFT, the National Fish and Wildlife Foundation, Natural Resources Conservation Service, and Archer-Daniels-Midland Company, ADM. ICCI provides financial incentives and technical assistance to Illinois farmers planting cover crops. Additional incentives are available for ADM customers to implement no-till and/or provide data for emissions scoring. For more information, see farmland.org/icci.

In partnership with ADM, AFT began the Illinois Cover Crop Initiative in 2022. In 2025, ICCI supported the program through a variety of pathways, ranging from virtual webinars to direct one-on-one technical assistance designed to strengthen farmers' knowledge to increase cover crop success.

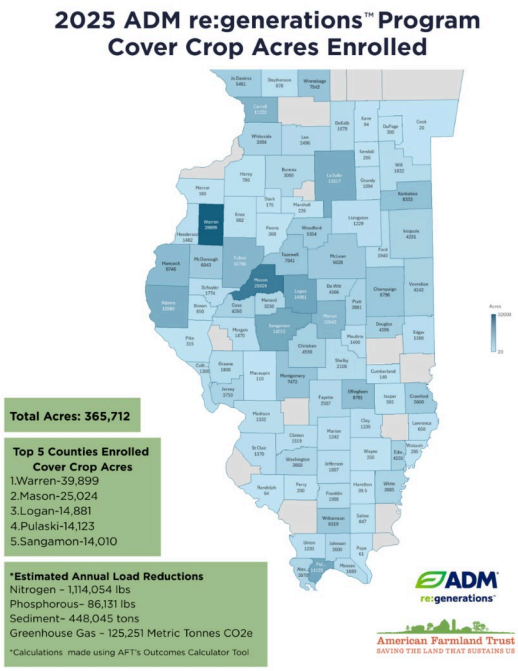


Figure 1. 2025 ADM re:generations Program Cover Crop Acres Enrolled

AFT consulted directly with 500 farmers in 2025 on topics including: cover crop termination strategies, cover crops for soil health benefits, weed management, planting into green cover crops, and conservation efforts during a dry autumn. AFT utilized a targeted approach resulting in two post-harvest virtual Cover Crop Coffee Chats. One served northern Illinois and one served north central Illinois. These farmer-to-farmer, informal gatherings created a space for producers within the same geographic region to share cover crop successes, challenges, and practical insights. AFT also partnered with Illinois Soil and Water Conservation Districts to offer field day opportunities aimed at increasing producer knowledge of the benefits of cover crops and sharing practical methods to support successful conservation outcomes.

Over 365,000 acres were enrolled in the 2025 re:generations™ program in Illinois, resulting in an estimated reduction of 1,114,054 lbs of nitrogen, 86,131 lbs of phosphorus, 448,045 tons of sediment, and 125,251 metric tonnes CO2e of greenhouse gas. See the 2025 ADM re:Generations Program Cover Crop Acres Enrolled map for more details. Counties with the greatest acres enrolled include Warren, Mason, and Logan counties; Figure 1 summarizes acres enrolled by county. The estimated annual load

reductions are 1.1 million lbs of nitrogen, 86,131 lbs of phosphorus, 448,045 tons of sediment, and 125,251 metric tonnes CO2e.

Figure 2. Estimated nutrient reductions achieved by cover crops enrolled in the ICCI program. Calculations were made using AFT's Project by County Outcomes Calculator Tool.

	Estimated Load Reductions
Phosphorus	**86,131 lbs**
Nitrogen	**1,114,054 lbs**

Illinois Fertilizer & Chemical Association-Supported Illinois Nutrient Research & Education Council Projects

The Illinois Fertilizer and Chemical Association supports outreach and implementation activities associated with Nutrient Research & Education County-funded research by working directly with University of Illinois researchers and project collaborators, agricultural retailers, and growers to translate research findings into practical, on-farm applications. Outreach efforts focus on key nutrient loss reduction strategies including nitrogen rate optimization, cover crop adoption, conservation cropping systems, tillage practices, and improved nutrient timing and placement.

Outreach activities in 2025 included hosting and participating in farmer meetings, watershed engagement events, and field days; coordinating on-farm demonstrations; conducting individual farm visits; assisting with grower enrollment and communication; facilitating data collection; and supporting implementation of conservation practices within project areas. These efforts help ensure that research findings are effectively communicated and adopted at the field level to support Illinois Nutrient Loss Reduction Strategy goals.

IFCA continues to be a partner in several NREC-funded research projects, assisting with the management and implementation of nutrient applications, crop protection, cover crop establishment, and tillage practices.

The following list are NREC projects IFCA helps coordinate.

Scaling up conservation agriculture by growing cover crops ahead of soybean and moving fall fertilizer nitrogen application to spring

IFCA serves as the primary liaison between growers and University of Illinois researchers within the Black Slough watershed. Responsibilities include recruiting and coordinating farmer participation, developing field maps, collecting nitrogen application and cover crop data, and facilitating cover crop seeding and termination.

In 2025, IFCA worked directly with 20 producers representing approximately 1,192 acres of cover crops. Sixteen of these producers transitioned to applying nitrogen in the spring, representing over 2,400 acres within the watershed. IFCA also conducted individual farm visits, coordinated payments, and

facilitated communication between growers and research staff to support successful implementation of the project.

Integrating tillage, soil carbon dynamics, and tile nitrate loss

IFCA supports implementation of tillage and nutrient management treatments using IFCA-owned equipment, including strip-till and broadcast fertilizer applications. The project evaluates how different tillage systems impact soil carbon dynamics and nitrate loss in tile-drained systems.

IFCA also assists with logistical coordination, equipment operation, and ensuring consistent application of treatments across research sites.

Evaluating nutrient loss reduction strategies: Longer rotation with cover crops and bioreactors

IFCA continues long-term involvement in this project by assisting with nitrogen applications, cover crop management, and coordination with cooperating growers. The project evaluates the effectiveness of diversified crop rotations, cover crops, and bioreactors in reducing tile nitrate loss.

IFCA provides ongoing support to ensure timely applications, proper nutrient rates, and coordination between researchers and cooperators.

Evaluating the impacts of controlled-release nitrogen fertilizers on nitrogen use efficiency and grain yield

IFCA implements on-farm trials comparing controlled-release nitrogen products to traditional nitrogen sources and application timings. Responsibilities include site selection, trial setup, fertilizer handling, application, and data collection in coordination with University of Illinois researchers.

These trials provide insight into nitrogen use efficiency and yield response under varying management systems and application timings.

Validating the MRTN recommendation to reduce tile nitrate loss in conventional and cover cropping systems

IFCA manages on-site trial implementation, including planting, nitrogen application, and data collection. Each treatment is applied using randomized, replicated field strips to evaluate corn yield response and tile nitrate loss across multiple nitrogen rate treatments.

IFCA also coordinates with growers and research personnel to ensure accurate data collection and analysis.

Illinois STAR

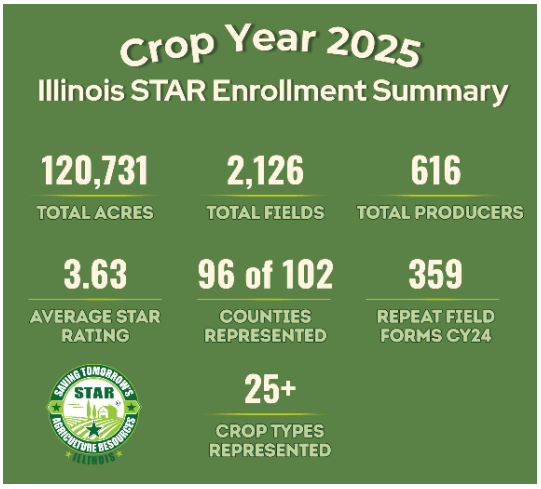
Program Overview

Illinois STAR, Saving Tomorrow's Agriculture Resources, is a free, voluntary, science-based conservation practice assessment tool designed to help farmers evaluate their current management practices, plan for improvements, and connect to technical, educational, and financial resources. The STAR Tool generates a 1-to-5 STAR Rating for individual fields based on responses to a field form covering crop rotation, cover crops, tillage practices, nutrient management, and conservation structures. Ratings are guided by the Illinois STAR Science Committee, which includes researchers, Extension educators, and conservation professionals.

Illinois STAR is governed by a steering committee of farmers, conservation professionals, and agency partners, and is administered through the Champaign County Soil and Water Conservation District with support from the Illinois Department of Agriculture.

The STAR Tool is available at www.STARtool.ag and is used by farmers, STAR Navigators (local technical assistance providers), and partner program staff to document and evaluate conservation practice adoption at the field level. Producer data collected through the STAR Tool is protected by a privacy and data use policy. Aggregated and anonymous data contributes to Illinois' ability to track and report on conservation progress under the Nutrient Loss Reduction Strategy.

Crop Year 2025 Enrollment



In Crop Year 2025, CY2025, Illinois STAR reached 616 producers across 96 of 102 Illinois counties, with 2,126 fields, 359 repeated from Crop Year 2024, and 120,731 acres enrolled. The average STAR Rating across all enrolled fields was 3.63 out of 5.

Fields were enrolled across a wide variety of crop types, reflecting the breadth of Illinois agriculture. Corn, 1,140 fields, and soybeans, 829 fields, represented the majority of enrollments, with additional fields in winter wheat, double-crop systems, alfalfa, hay, pasture and grass, oats, rye, and others.

Crop Year 2025 STAR Rating Distribution

5 STAR	22.11%
4 STAR	31.77%
3 STAR	35.14%
2 STAR	8.83%
1 STAR	2.15%

Over half of enrolled fields, or 53.88%, achieved a 4- or 5-STAR Rating, indicating strong conservation practice adoption among STAR participants. The 35% of fields at 3-STAR represent a significant opportunity for practice improvement through continued engagement and technical assistance.

STAR Navigator Network

A key strength of Illinois STAR is its statewide technical assistance delivery network. All 97 Illinois Soil and Water Conservation Districts, SWCDs, have signed STAR Navigator Agreements, and University of Illinois Extension serves as a Navigator for Peoria, Tazewell, Mason, and Fulton counties. STAR Navigators receive training, tool access, and ongoing support from Illinois STAR staff to help farmers complete STAR evaluations and connect to resources, including IDOA cost-share programs, NRCS programs, and private sector incentive opportunities.

This network means that every farmer in Illinois has a local point of contact for STAR support, reducing barriers to enrollment and enabling the kind of personalized technical assistance that drives conservation practice adoption.

Partner Programs

Illinois STAR supports several state, federal, and private sector programs that require or encourage STAR Tool use as part of their conservation documentation.

Crop Year 2025 Partner Program Enrollment Summary

Program	Producers	Fields	Acres	Avg. STAR Rating	Counties
IDOA Partners for Conservation	351	732	41,347	3.36	86
NRCS (EQIP, CSP, Other)	48	193	9,929	4.35	34
AFT FLASH (Batch & Grow)	73	322	10,200	3.62	9
Precision Conservation Management	26	166	13,276	4.14	17
Siemer-STAR Producer Rewards	16	102	4,510	4.64	11

IDOA Partners for Conservation, PFC: PFC represents the largest share of partner-enrolled acres in CY2025. STAR is required for PFC applications, serving as the soil health field assessment that documents baseline conservation practices and supports IDOA's Healthy Soils Initiative reporting requirements. The 86-county reach of PFC enrollments demonstrates the statewide impact of this integration.

USDA Natural Resources Conservation Service Programs: Fields enrolled through NRCS programs, such as Environmental Quality Incentives Program, EQIP, and Conservation Stewardship Program, CSP, had the highest average STAR Rating among partner programs at 4.35, reflecting the advanced conservation practice adoption typical of NRCS cost-share recipients. STAR provides an independent, field-level documentation of the conservation outcomes associated with NRCS investments.

American Farmland Trust's Farmer-Led Advances in Soil Health, FLASH, Batch & Grow Program: AFT's FLASH program, which provides cover crop cost-share to Illinois farmers, uses STAR to document practice adoption. FLASH fields spanned nine counties and averaged a 3.62 STAR Rating, with 56% of fields at 4- or 5-STAR.

Precision Conservation Management, PCM: PCM, a program of the Illinois Corn Growers Association, has partnered with STAR since 2017. CY2025 PCM fields averaged a 4.14 STAR Rating, with over 82% at 4- or 5-STAR — among the strongest performance of any partner program.

Siemer-STAR Producer Rewards Payment Program: In its third year of operation, the Siemer-STAR Producer Reward Payment Program, PRPP, connected conservation practice incentives directly to Siemer Milling Company customers. The program grew 24-fold from its 2023 launch with one farmer to 24 participating farmers in CY2025 across Illinois, Indiana, and Kentucky. Program enrollment exceeded the $75,000 annual payment cap, with eligible payments reaching $119,793 — demonstrating strong farmer demand for private sector conservation incentives. Illinois participants averaged a 4.64 STAR Rating, with 75% of Illinois fields achieving a 5-STAR Rating.

Environmental Outcomes

Illinois STAR's Science Committee has developed an environmental outcomes estimation methodology that calculates the conservation benefits of specific management practices documented through the STAR Tool. This methodology estimates non-point-source nitrogen loss avoided, total phosphorus loss avoided, sediment delivery avoided, and carbon sequestration and greenhouse gas emission reductions. Outcomes are calculated based on cover crop use, no-till/strip-till practices, and nutrient applications at or below Maximum Return to Nitrogen, MRTN, and removal rates. All metrics are calculated on a per-practice basis using county-specific variables and NLRS nutrient removal efficiencies; they are not additive across practices.

Crop Year 2025 Estimated Environmental Outcomes Summary

Practice	Acres	NPS NO3-N Loss Avoided (lbs)	NPS TP Loss Avoided (lbs)	Sediment Delivery Avoided (tons)	Carbon Sequestration & GHG Emission Reduction
Winter-Hardly Cover Crops	34,042.27	125,323.45	8,753.66	36,532.05	11,611.88
Applying Nitrogen At Or Below MRTN Rates	52,711.52	66,766.46	—	—	—
Applying Phosphorus At Or Below Removal Rates	93,842.59	—	5,341.71	—	—
Use Of No-Till/Strip-Till	80,617.77	—	32.832.25	103,396.49	46,235.85

Looking Ahead

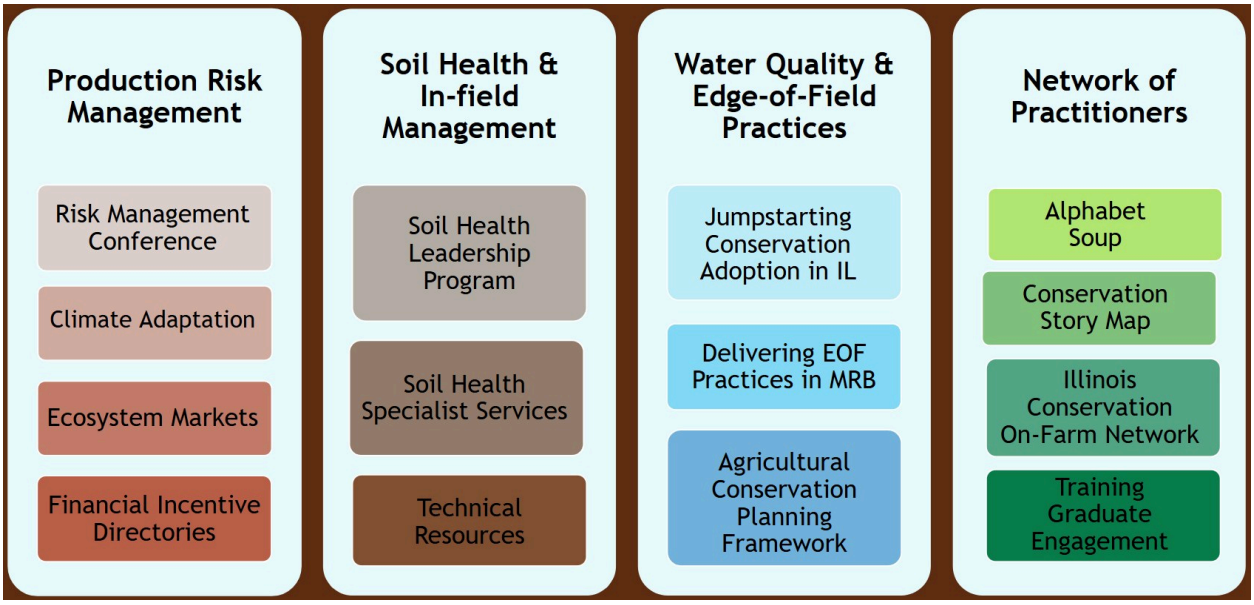
Continued growth of private sector partnerships like the Siemer-STAR PRPP and ongoing Navigator network engagement, positions Illinois STAR to significantly increase both the scale and impact of conservation documentation in Illinois in the coming years, directly supporting the ongoing implementation of the Illinois NLRS.

For more information, visit IllinoisSTAR.org or contact Natalie Kerr at natalie@STARconservation.org.

Illinois Sustainable Agriculture Partnership

The Illinois Sustainable Ag Partnership, ISAP, brings together member organizations that work collaboratively to encourage the adoption of sustainable and profitable production practices that improve soil health and restore local waters. ISAP's programs are based on a combination of academic and on-farm research data, employing a "train-the-trainer" approach that results in a cadre of professionals who can inform and influence producers across the state.

ISAP's members include: Savanna Institute, American Farmland Trust, Illinois Nutrient Research & Education Council, Precision Conservation Management, The Wetlands Initiative, The Association of Soil & Water Conservation Districts, Illinois Central College, Midwest Dairy, Agricultural Drainage Management Coalition, The Nature Conservancy, Illinois Corn Growers Association, Certified Crop Adviser, The Zea Mays Foundation, Illinois Farm Bureau, Illinois Soybean Association, Illinois Land Improvement Contractors Association, Saving Tomorrow's Agriculture Resource, University of Illinois Extension.



ISAP's programs fall into four pillars: Production Risk Management, Soil Health & In-field Management, Edge-of-Field Practices, and Network of Practitioners.

Production Risk Management

ISAP's Production Risk Management programs engage farmers, advisers, and conservation practitioners to emphasize the role of soil health and water quality practices in building profitable and resilient agricultural systems. Improving soil health and water quality are crucial to reducing environmental risk, and there is growing evidence that these improvements will also lead to increased profitability for farmers.

In 2025, ISAP began convening partners to compare results from various ecosystem models to better understand how conservation practices influence outcomes across Illinois agricultural landscapes. Guided by the question of which practices drive the greatest outcomes, this effort will explore how model assumptions, soil types, climate, management scenarios and more affect estimates produced by the compared models. This work will help farmers, advisers, and technical service providers better interpret model results and support informed decision-making across practices and geographies.

Soil Health and In-Field Management

ISAP's Soil Health Leadership Program supports farmers, advisers, and conservation professionals who are looking to sharpen their skills within conservation agriculture. The program brings together diverse participants working together to improve agricultural environmental stewardship.

In December 2025, ISAP graduated a cohort of 23 Soil Health Ambassadors from the Soil Health Leadership Program, an 18-month soil health training program facilitated by Jim Isermann, ISAP's soil health specialist. The cohort completed six total sessions, focusing on soil health demonstrations, cover crops, species selection, nutrient management, water quality, and edge-of-field practices.

Edge-of-Field Practices

ISAP's Edge-of-Field programs highlight practices like saturated buffers, constructed wetlands, controlled drainage, and bioreactors, which are designed to capture and treat high levels of nitrate-nitrogen from tile flow. ISAP began a Batch & Build pilot program in 2025, modeled after the successful Iowa Batch & Build effort. ISAP and the Knox County Soil and Water Conservation District are promoting saturated buffers, bioreactors, and drainage water management in four sub-watersheds of the Flint-Henderson Watershed. The project team evaluated potential sites and ended the year with completed designs for eight practices. This batched approach offers an opportunity to treat multiple tile drainage outlets at one time by more efficiently deploying engineering and construction resources, and by simplifying the process for participants. ISAP's water quality and edge-of-field practices pillar continues ISAP's commitment to maximize agricultural productivity potential while reducing environmental impacts.

Network of Practitioners



ISAP leads Alphabet Soup, a program which provides training and networking opportunities for agronomists, researchers, educators, conservation practitioners, and industry partners. In August 2025, more than 40 agriculture and conservation professionals gathered on Ag Day at the Illinois State Fair to connect, collaborate, and learn from one another.

ISAP's Illinois Cover Crop On-Farm Network, ICCON, rebranded in 2025 and is now the Illinois Conservation On-Farm Network, ICON. This rebrand expands the way ISAP talks about on-farm conservation and convenes specialists from across the region for monthly discussions exploring new research, troubleshooting field conditions, and providing updates on policies and programs related to conservation agriculture. Throughout the year, more than 250 conservation enthusiasts joined calls to learn about cover crops, edge-of-field practices, perennial cropping systems, and more.



Illinois Soybean Association Government Relations Policy Initiatives

The Loyal to the Soil event was led by ISA in partnership with University of Illinois Extension, American Farmland Trust, Illinois Stewardship Alliance, the Illinois Environmental Council and other organizations. Participants informed legislators and changemakers about the role of organizations like Illinois Extension and Soil and Water Conservation Districts, as well as state programs such as Fall Covers for Spring Savings, in protecting the environment and achieving conservation goals.

Illinois Soybean Association Soybean Production Research, Outreach and Education

Each year, the Illinois Soybean Board of Directors, consisting of farmers from around the state, approves a suite of projects funded with Illinois Soybean Association, ISA, checkoff dollars in three focus areas: market development, soybean production and government relations. The ISA Agronomy Team is responsible for cross-functional agronomic research and education that creates opportunities for Illinois soybean farmers to increase on-farm profitability and manage crop production risks.

During ISA's 2026 fiscal year, Sept. 1, 2025- Aug. 31, 2026, external projects totaling over $800,000 were approved that provided research, education and outreach on topics related to best management practices listed in the Nutrient Loss Reduction Strategy, NLRS. Farmers can learn more about checkoff-funded soybean production projects by visiting FieldAdvisor.org/current-projects/. Project titles and leaders are listed below.

- Evaluation of a Targeted Conservation Plan in the Lake Bloomington Watershed – Shalamar Armstrong, Purdue University
- Benchmarking and Integrating Soil Health, Water Quality, and Climate-Smart Footprints of Illinois Soybeans – Andrew Margenot, University of Illinois
- Residue Management and Nutrient Value for Soybean Production – Andrew Margenot, University of Illinois
- Integrated Management Strategies for Maximizing Soybean Production in Conservation Tillage Systems – Giovani Preza Fontes, University of Illinois

- Enhancing the Profitability of Wheat-Soybean Double Cropping – Jessica Rutkoski, University of Illinois
- Comparison of Early and Conventional Planting Timing of Narrow-row Soybean Weed Management Systems in a No-Till Environment – Aaron Hager, University of Illinois
- Impact of Cover Crops on Lesion Nematodes – Nathan Schroeder, University of Illinois
- Managing Cover Crop Systems in a Corn and Soybean Rotation – Nathan Johanning, University of Illinois Extension
- Assessing Insect Pest Effects on Yield and ROI of Pest Control Inputs – Nick Seiter, University of Illinois
- Novel Cover Crop and Herbicide Management for Controlling Waterhemp in No-Till and Strip-Till Soybean Fields – Karla Gage, Southern Illinois University
- ISAP Soil Health Leadership Program – Illinois Sustainable Ag Partnership
- Scaling Cover Crop Adoption in Nutrient Loss Reduction Strategy Priority Watersheds – Rachel Curry, University of Illinois Extension
- Connecting Landowners to Local Conservation Resources – Pheasants Forever & Quail Forever

The website FieldAdvisor.org is dedicated to delivering the latest agronomy information and on-farm research from local experts. Covering a wide range of topics — including soybean, wheat, and corn crop conditions, pest and disease management, cover crops, soil health and fertility, weather outlooks and agricultural technology — Field Advisor is an essential resource for farmers aiming to optimize their operations. In 2025, Field Advisor blog posts, videos, and podcasts that touched on NLRS topics had over 10,700 views.

Led by the ISA agronomy team, the On-Farm Trial Network, OFTN, engages farmers across Illinois in on-farm research trials to address information gaps in soybean production. Three different trial types exist within the OFTN: Legacy, Action, and Demonstration Trials. Legacy Trials are long-term strip trials designed to evaluate the impact of cover crops and tillage on soil health. Action Trials are flexible, replicated trials that address relevant agronomic issues and provide actionable guidance on topics ranging from pest management to planting rates.

In 2025, one of two Action Trials in the field during the growing season related to the NLRS goal of improving nutrient management: Sulfur Fertilization in Soybeans. The development of the 2026 trial protocols took place in 2025. All four 2026 Action Trial protocols related to NLRS goals: 1) Cover Crops & Weed Suppression; 2) Foliar and Seed Treatment Insecticides, with a component that studied seed treatments in conservation systems; 3) Sulfur Fertilization 2.0 in Soybeans; 4) Double-Crop Wheat & Soybean Management. The implementation and planting of the Cover Crops & Weed Suppression trial took place in 2025. Educational opportunities are also hosted by the team at permanent demonstration plots at the ISA Agronomy Farm near Heyworth and the Farm Progress Show grounds in Decatur. Demonstrations have included growing several varieties of cover crops so farmers can ask questions before trying the cover crop on their fields.

Improving Water Quality through Soil and Water Conservation Districts in the Illinois River Basin

A major conservation effort is underway in central Illinois to improve water quality, strengthen farm resilience, and support long-term agricultural sustainability. The project is funded through the National Fish and Wildlife Foundation, NFWF, and led by the National Association of Conservation Districts, NACD, in partnership with the Association of Illinois Soil and Water Conservation Districts, AISWCD, local Soil and Water Conservation Districts, and Ecosystem Services Exchange, ESE, within the seven counties of McLean, Dewitt, Ford, Livingston, Piatt, Iroquois, and Macon in the Illinois River Basin.

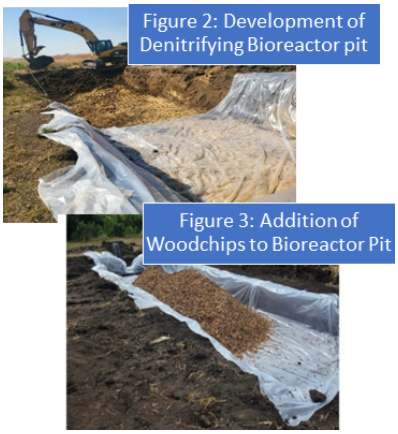
The project focuses on increasing the use of conservation drainage practices on farmland with underground tile drainage systems already installed. Illinois has millions of acres of tile-drained farmland, but adoption of new conservation drainage technologies has remained low despite their environmental and economic benefits. The initiative aims to design 100 conservation drainage practice by 2028. These practices are expected to improve water management on nearly 6,000 acres of farmland while significantly reducing nitrogen pollution entering streams and rivers.

The three primary conservation drainage practices promoted through the project are:

- **Drainage Water Management:** Systems that allow farmers to control how much water leaves their fields through tile drainage. These systems can store water in the soil during dry periods, improving crop growth while reducing nutrient runoff. The systems can be established as either manual or automatic. The automated version allows producers to seamlessly manage the water leaving the tile drainage system remotely and provides a water-level data record to aid farmer decision making.
- **Saturated Buffers:** Vegetated areas along streams that filter nitrate-rich tile water before it reaches waterways.
- **Denitrifying Bioreactors:** Underground woodchip systems that naturally remove nitrates from drainage water.



Figure 1. A drainage water management system.



Figures 2 and 3. Development of a denitrifying bioreactor pit. Addition of woodchips to bioreactor pit.

Beyond improving crop production, the project addresses several environmental concerns. Excess nutrients such as nitrogen and phosphorus from agricultural runoff contribute to poor water quality in rivers, lakes, and streams. The project estimates that once all 100 planned systems are installed, they could reduce nitrogen losses by nearly 75,000 pounds per year.

Both Saturated Buffers and Denitrifying Bioreactors help to reduce the amount of agricultural runoff. In the case of saturated buffers, once the water has entered the drainage system, it then runs down main lines to the saturated buffer, where the water is slowly released into the vegetation. This process allows the vegetation to help absorb the nutrient runoff before the water enters the main drainage ditches and waterways. Bioreactors work similarly, but instead of having a strip of vegetation often surrounding a main drainageway, the bioreactor works by having the tile drainage drain towards a designed pit. This pit is lined and prefilled with woodchips, which allows for the absorption of nutrient runoff. This nutrient runoff helps fuel bacteria that eat the woodchips and reduces nitrates, while the water is slowly released into drainage waterways. Additionally, the project can reduce greenhouse gas emissions and increase carbon storage in soils and vegetation.

A major emphasis of the project is the use of automated drainage water management systems. These systems use modern technology and remote controls to manage water levels more precisely and efficiently. According to project leaders, automated systems can improve crop yields by 5% to 15% annually while also reducing nitrogen loss from fields by around 40%.

These conservation practices are expected to help farmers adapt to changing weather conditions associated with climate change. With Automated Drainage Water Management, ADWM, systems, producers can store more water in their tile drainage systems that can be utilized during periods of drought, which is common in central Illinois during key growing periods for crops. Alternatively, during rainy months, producers can utilize the system to achieve better drainage in their fields. By storing more water in the soil, farms will become more resilient during droughts and heavy rainfall events. Additionally, the project highlights climate benefits such as reduced greenhouse gas emissions and increased carbon storage in soils and vegetation.

Wildlife may benefit as well. Retaining moisture in agricultural soils can create better habitat conditions for migratory birds that rely on wet soils and insects during seasonal migrations.

To encourage participation, the project provides farmers with technical assistance and conservation drainage designs worth more than $8,000 each at no cost. Farmers who participate may also qualify for additional cost-share funding through USDA conservation programs, such as Environmental Quality Incentives Program, EQIP, to help install the practices.

Project partners have invested heavily in outreach and education efforts to raise awareness about conservation drainage. These efforts include workshops, field days, educational videos, social media campaigns, newsletters, and direct outreach to farmers and drainage contractors.

Overall, the project is intended to serve as a “proof of concept” showing how large-scale adoption of conservation drainage can be successfully implemented in Illinois and potentially replicated in other states. By combining financial incentives, technical support, and strong local partnerships, we hope to demonstrate that agriculture and environmental conservation can work together to improve both farm productivity and water quality.

Lake Decatur Watershed Management Program

Lake Decatur is the drinking water supply for the City of Decatur and the Village of Mt. Zion. The lake, constructed between 1920-23, is approximately 3,090 acres and is a reservoir fed by the upper Sangamon River watershed, with a drainage area of 925 square miles over seven counties. The lake's watershed is 592,665 acres, with over 80% in cultivated crops. Lake Decatur provides a sustained withdrawal rate of about 34 million gallons of water each day to provide drinking water to approximately 79,000 residents and area businesses.

Sediment and excess nutrients from the watershed have been long-standing issues for the city. In 2019, the City completed a $92 million, five-year dredging program to reclaim 30% of the lake's water holding capacity to ensure sufficient water quantity during times of drought. However, even after the completion of the dredging program, sediment continues to enter the lake at an estimated annual dredging cost of approximately $1 million. An estimated 8 million pounds of nitrate enter the lake each year, periodically exceeding drinking water standards and resulting in $250,000 in annual treatment costs.

To protect the investment in the lake, the city is implementing scientific-based watershed management plans guided by a state-of-the-art water quality monitoring network. This network provides real-time data to help target resources to areas in the watershed where the greatest reduction in sediment and nutrient losses can be achieved.

Watershed-based plans outline the overall condition of the watershed, set objectives and identify project opportunities, guide voluntary efforts, and help secure funding to improve and protect water quality. The city's extensive stream and lake monitoring program tracks nutrient and sediment dynamics, measuring changes over time to evaluate progress toward key goals. Education and outreach efforts are supported by the city and its partners. Figure 1 shows key strategies and a chronology of actions since 2020.

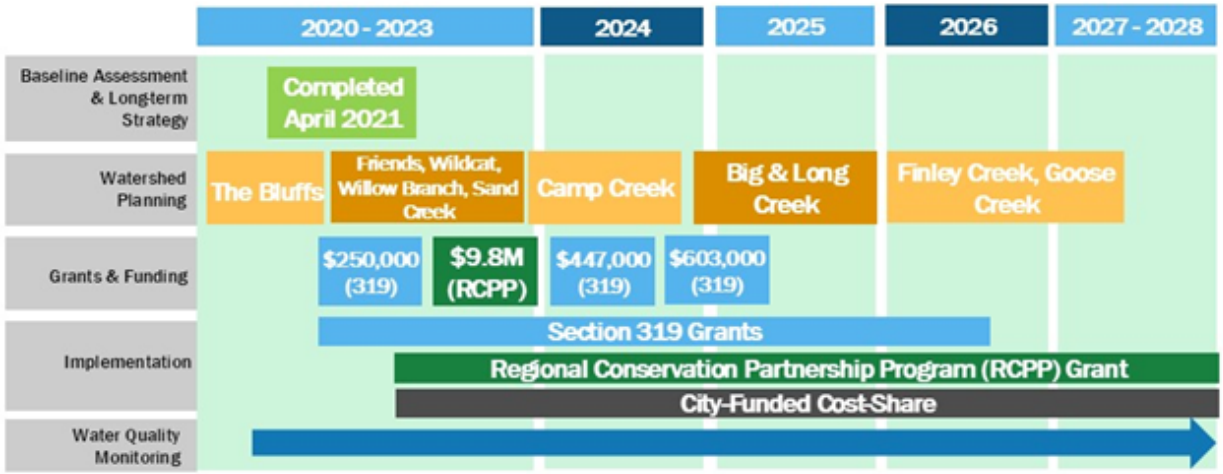


Figure 1. Key Strategies and Actions of Lake Decatur watershed-based plan since 2020.

Grant funding has been a key element of watershed efforts. Decatur received numerous Illinois EPA Section 319 grants as well as a $9.8 million USDA Natural Resources Conservation Service Regional Conservation Partnership Program, RCPP, award. The RCPP is underway and includes an additional $10 million in partner contributions.

Watershed Conservation Implementation



Cover crops planted in a corn field.

USDA Natural Resources Conservation Service Regional Conservation Partnership Program awarded in late 2022 completed its second round of grower and landowner contracting in 2025. In 2024, $5.89 million was obligated covering 31 applications out of 51 submitted. In 2025, $754,514 was obligated across eight growers. Conservation practices implemented in 2024 and 2025 included:

- Cover Crops: 16,552 acres out of 42,413 contracted.
- No-Till/Reduced Till: 1,930 acres out of 34,432 contracted.
- Nutrient Management: 9,517 acres out of 33,114 contracted.
- Harvestable perennial grasses: 154 acres out of 221 contracted.
- Conservation Cover: 1 acre.
- Critical Area Planting: 3.2 acres.

Nutrient and sediment load reductions achieved in 2024 and 2025 through the RCPP:

- 121,924 lbs of nitrogen.
- 3,160 lbs of phosphorus.
- 2,940 tons of sediment.

Three completed Illinois EPA Section 319 grants and one underway have resulted in a series of sub-watershed plans that are guiding implementation efforts and helping fund practices that result in measurable improvements to water quality. The city also manages a complimentary cost-share program, largely focused on structural practices and guided by the sub-watershed plans.

To date, the following has been achieved through both funding mechanisms:

- Actionable plans for Sand Creek, Willow Branch, Wildcat Creek, Camp Creek, Friends Creek, Big Creek, and Long Creek. A plan for the “bluffs,” or the area immediately adjacent to the lake, was developed without grant funding in 2021.
- Numerous practices, including streambank and bed stabilization, wetland creation, shoreline stabilization, water and sediment control basins, ponds, grade control structures, floodplain re-

connection, and grassed waterways, generate the following annual nutrient and sediment reductions to Lake Decatur:

- 5,903 pounds nitrogen.
- 698 pounds phosphorus.
- 1,085 tons of sediment.

Section 319 Grant Funded Shoreline Stabilization



A shoreline stabilization in Lake Decatur.

EcoMetrics, a company specializing in measuring and valuing the impact of nature-based solutions analyzed the watershed management program to quantify "co-benefits." The analysis concluded $55,048,280 of additional environmental, economic, and social benefits achieved through 2025.

The city is partnering with producers, academic institutions, state and federal agencies, local conservation groups and private industries to work collaboratively to implement conservation practices and conduct complimentary research in the Lake Decatur watershed. These partnerships support science-based decisions to protect Lake Decatur and its watershed. A farmer advisory board meets regularly to discuss and develop outreach strategies and provide technical assistance to producers adopting new management systems. Partnerships with University of Illinois and the Illinois State Water Survey help support the monitoring program and have led to new research projects.

Decatur's conservation programs are active, and the city continues to seek additional watershed partners and participating producers to expand watershed conservation efforts and results beyond 2025. To learn more about Lake Decatur's watershed management efforts, please visit decaturil.gov/547/Protecting-Lake-Decatur.

Metropolitan Water Reclamation District of Greater Chicago's Fulton County Nutrient Loss Reduction Research and Demonstration Program

Since initiating the Nutrient Loss Reduction Research and Demonstration Program at the Fulton County site, Metropolitan Water Reclamation District of Greater Chicago, MWRDGC, has continuously tested best management practices to reduce nutrient loss from agricultural fields in partnership with agricultural research and extension entities, including the University of Illinois at Urbana-Champaign's and Illinois Farm Bureau. In 2025, work continued on in-field and edge-of-field best management practices, BMPs, including cover crops, riparian vegetation buffer, and denitrifying bioreactors in reducing nutrient loss from agricultural fields. Under the cover crop project, we interseeded cereal rye and alfalfa cover crop in a 60-acre corn field as one paired field for evaluating and demonstrating the

effectiveness of cover crops in reducing nutrient loss. Cover crops were also seeded in another two fields: one with cereal rye only and the other with a cereal rye and alfalfa mixture. We maintained the continuous field-based watershed measurement of perennial grass at the edge of a field for reducing runoff and nutrient export. We collected data that demonstrated the perennial grasses are effective for soil carbon sequestration, which add value to the BMP. To contribute to the Illinois Nutrient Loss Reduction Strategy, the district also requires contracted farmers at its the Fulton County site to increase the implementation of cover crops and vegetated waterways in selected fields to reduce loss of nutrients from those fields. Find more at mwrd.org/what-we-do/protecting-water-quality/nutrient-reduction-research.

Nitrogen Rate Trials

Illinois Fertilizer and Chemical Association, IFCA, continued statewide nitrogen rate research in 2025 to evaluate corn yield response across a range of nitrogen application rates under varying field and environmental conditions. Through collaboration with University of Illinois, agricultural retailers, and growers, these trials provide both replicated research data and on-farm validation of nitrogen management practices. These trials support improved nitrogen use efficiency and provide data to guide economically and environmentally optimal fertilizer recommendations.

In 2025, 73 nitrogen response trials were completed across Illinois. These trials provide both controlled research data and real-world validation of nitrogen management practices. Results continue to demonstrate that economically optimal nitrogen rates vary by region and crop rotation, with generally higher rates required in southern Illinois and for corn following corn.

The 2025 growing season across Illinois was characterized by periods of drought, with annual precipitation more than 30% below the 30-year average. Despite these conditions, crop yields remained strong. Nitrogen response data from 2025 trials indicated that, in many cases, applying nitrogen above Maximum Return To Nitrogen, MRTN, rate recommendations did not result in additional yield, reinforcing the importance of economically optimal nitrogen rates. In several trials, optimum nitrogen rates were at or below MRTN recommendations, further supporting the use of MRTN as a reliable guideline for nitrogen management.

Regional differences in nitrogen response were also observed, reflecting variations in soil characteristics, cropping systems, and weather patterns across Illinois. In general, nitrogen requirements tended to be higher in southern Illinois and in corn following corn systems, while responses in northern and central Illinois were more variable depending on seasonal conditions.

Results also highlighted variability in nitrogen response driven by weather conditions, particularly rainfall distribution throughout the growing season, emphasizing the continued need for adaptive nitrogen management strategies across Illinois.

The data generated from these trials, detailing yield response to varying nitrogen rates, will continue to update the University of Illinois MRTN recommendation tool for fertilizer nitrogen application rates in Illinois for corn. For more information, see cornnratecalc.org.

The program is led by John Jones with the University of Illinois Crop Sciences Department in the College of Agricultural, Consumer, & Environmental Sciences and is performed by IFCA staff working with agricultural retailers and growers throughout the state.

Perennial Bioenergy Crop Diversification Project

American Farmland Trust collaborating with Argonne National Laboratory to broaden crop diversification and farm resiliency efforts in Illinois. This project explores opportunities to support the Illinois agricultural community through the adoption of perennial bioenergy crops. These opportunities aim to provide economic and environmental resiliency to farms while reducing nutrient loss.

This project repurposes marginal or low return on investment lands using perennial crops to provide additional economic opportunities while reducing non-point source pollution. The crops recommended for this transition include switchgrass, miscanthus, native prairie mixes, shrub willow, and poplar. These perennial bioenergy crops are harvested for their biomass feedstock to generate fuel for heating, electricity, and biochar. This feedstock offers farmers the opportunity to sell biomass to biorefineries in the region or process biomass on their own farms using energy-producing technologies. Additionally, Argonne National Lab developed an analysis tool called SUPERBEEST to assess the ecosystem services and economics of these crops. This tool is available to support farmer decision-making around crop selection and suitability to address various environmental characteristics like nitrate, pesticide leaching, runoff, flooding, and more.

American Farmland Trust hosts a quarterly Midwest Bioenergy Crop Coalition meeting, convening over 30 members, including researchers, farmers, biomass processors, economists, and nonprofit representatives who support the development of Midwest bioeconomy. The group meets to discuss outreach and events, grant opportunities, and learn about emerging markets and USDA NRCS programs relevant to bioenergy crop production. The project also conducts farmer surveys to support Argonne in the development of decision-making tools for farmers. The project continued in-person workshops and hosted the *Power of Perennials* webinar series, highlighting SUPERBEEST and the state of bioenergy crops and their end use opportunities.

For more information, see farmland.org/midwest-perennial-bioenergy-crop-diversification.

Southern Illinois University Research – Willard and Schoonover Laboratory

Several projects at Southern Illinois University support nutrient loss reduction in Illinois. In 2025, some projects were funded by Illinois Nutrient Research & Education Council, NREC, and more information can be found at illinoisnrec.org or by reaching out to the Willard Schoonover Laboratory at SIU. NREC-funded projects in 2025 included:

- Assessing Water and Sediment Control Basins, WASCoBs, on Trapping Sediment and Nutrients in Southern Illinois: Influence on Water Quality

- The Implementation of Innovative Practices for Dry Dams/WASCoBs to Address Water Quality Concerns in Southern Illinois Row-Crop Agriculture

Utilizing Runoff Management Zone Systems to Address Concentrated Flow Paths

Another project, not funded by NREC, took place in 2025 called *Utilizing Runoff Management Zone Systems to Address Concentrated Flow Paths and their Effects on Water Quality, Soil Loss, and Agricultural Productivity.* In southern Illinois, agricultural runoff is dominated by overland flow, making the mitigation of concentrated flow path, CFP, formation with best management practices, BMPs, essential to preventing yield loss, sediment transport, and nutrient loss at field edges. Farmers incur a range of financial and environmental costs depending on the CFP management strategies they adopt, and the absence of BMPs, or improper maintenance, accelerates soil loss and impedes field accessibility. Frequent tillage repairs act as annual maintenance, increase field entry, and redistribute soil in ways that reduce yields, while nutrient- and sediment-laden runoff threatens nearby waterways. Current BMPs tend to be reactive and may not adequately address the spatial extent of CFPs across agricultural fields.

In 2025, five agricultural fields managed in a corn-soybean rotation on the Southern Illinois University Research Farm were scouted to identify and characterize dynamics of unmanaged CFPs. The selected fields ranged from 27 to 68 acres and 15 total CFPs were identified. The CFPs were divided into three size categories based on drainage area, small (0.5-4.1 ac), medium (4.1-8.0 ac), and large (8.0-14.0 ac) (Fig. 1). Preliminary field surveys were conducted to measure the length, width, and depth of CFPs. These in-field measurements were used to establish baseline soil loss rates (tons per acre per year) for each CFP, presented in Table 1. Preliminary results showed that these areas can lose substantial amounts of soil, with erosion ranging from less than 0.1 to more than 3 tons per acre per year. Soil in the upper portions of the flow paths was more compacted than at the outlets, while soil texture was generally similar across the sites. Yield maps showed lower soybean yields within and around concentrated flow paths, highlighting their impact on crop productivity. The findings will help guide better management practices to reduce erosion, protect water quality, and improve farm profitability.



Figure 1. Map showing the location of 15 drainage areas containing identified concentrated flow paths.

Table 1. Preliminary soil loss data in tons per acre per year from each CFP based on watershed areas.

CFP	*Watershed Area (ac)*	*Soil loss/CFP (tons)*	*Tons/acre/yr*
1	0.53	0.05	0.09
2	1.11	3.09	2.78
3	2.2	4.84	2.2
4	3.93	-	-
5	4.06	8.07	2.05
6	4.4	13.7	3.11
7	4.53	6.54	1.44
8	4.59	6.77	1.48
9	4.94	16.95	3.43
10	7.78	15.1	1.94
11	8.01	2.57	0.32
12	9.71	13.7	1.41
13	10.86	6.26	0.58
14	12.72	4.38	0.34
15	13.71	22.8	1.66

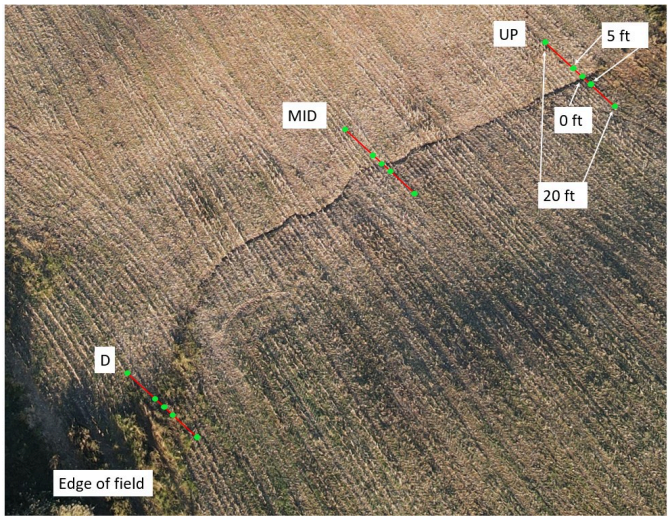


Figure 2. Soil sampling locations in concentrated flow path showing longitudinal (UP = upper portion, MID = middle portion, D = outlet) and cross sectional (0 ft., 5 ft., 20 ft.) transects.

properties from five CFPs are presented in Table 2.

Initial soil physical properties of bulk density and texture were analyzed in 2025. Sampling was conducted along longitudinal and cross sectional transects within each CFP watershed to evaluate changes in soil properties from the upper portion to the outlet (Fig. 2). Preliminary bulk density values are significantly higher in upper portions of CFPs when compared to bulk density at CFP outlet (Fig. 3). There were no significant differences in soil texture along either longitudinal or cross sectional transects of CFPs. A textural change observed in CFP 5 is a clay percentage of over 28, making it a silty clay loam rather than the mapped silt loam expected in the field. Baseline soil

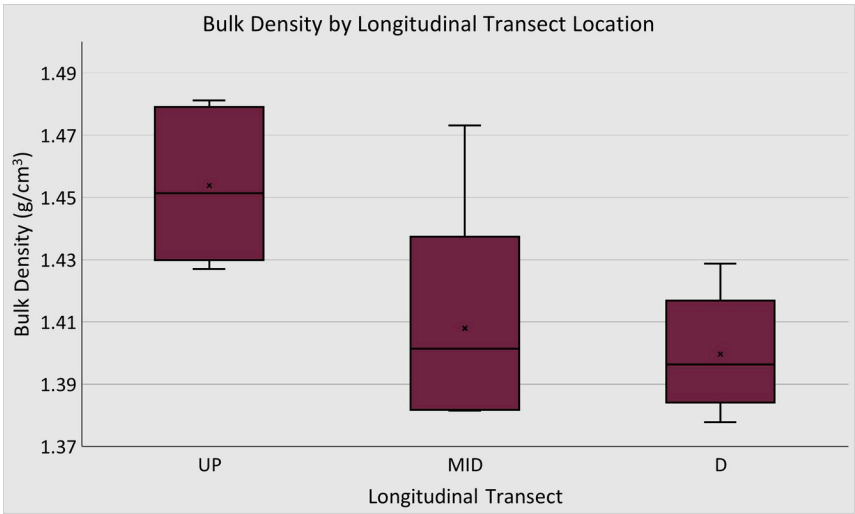


Figure 3. Bulk density values along cross sectional transects of CFPs.

Table 2. Mapped soil series from NRCS Web Soil Survey alongside average values obtained from laboratory bulk density and particle size distribution using hydrometer method.

CFP	*Soil Series (NRCS Web Soil Survey)*	*Sand %*	*Silt %*	*Clay %*	*Bulk Density (g/cm^3)*
3	Hosmer	7.3	67.5	25.2	1.45
5	Hosmer, Belknap	9	62.3	28.7	1.39
6	Hosmer	10.6	66.4	26.7	1.47
13	Hosmer	6.9	71.6	20.4	1.35
15	Hosmer, Belknap, Stoy	8.1	69.5	19.9	1.45

Yield data obtained from John Deere Operations Center shows poor yields in CFP areas and CFP adjacent areas. Figure 4 displays two soybean fields and their corresponding yield map for the 2025 season.

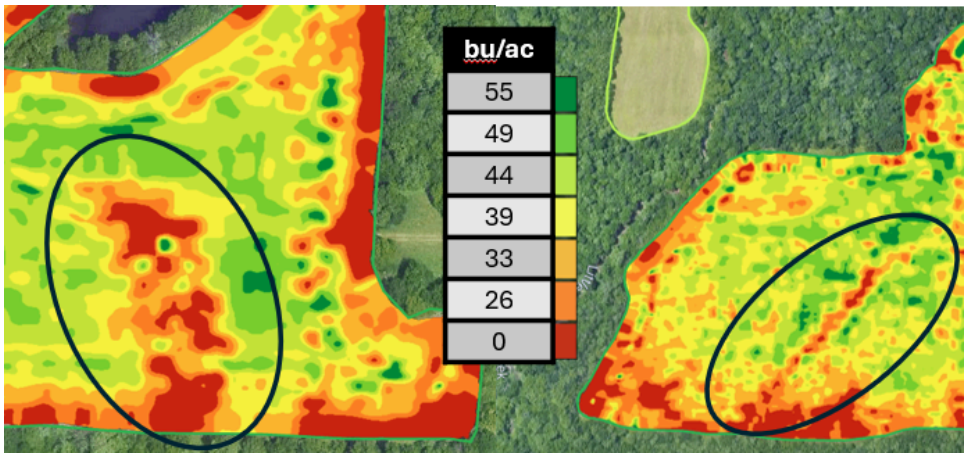


Figure 4. CFPs influence on 2025 soybean yield in bushels/acre, visualized by John Deere Operations Center.

Tree Buffer Program

The Illinois Pork Producers Association offers pork producers the opportunity to take part in a tree buffer grant program. Tree buffers are just one of the current best management practices that Illinois pork producers are embracing to benefit the environment. A tree buffer is an area of trees that are strategically placed to provide a wind break, recycle clean air, and provide fresh landscaping and curb appeal to a farm and landscape. Tree buffers improve water quality by absorbing nutrients, trapping sediment, reducing runoff, stabilizing streambanks, and supporting natural nitrogen removal processes.

To date, the program has assisted producers in planting over 4,800 trees. This grant program is available each year and is offered on a first-come, first-served basis. Funding aids the purchase of trees and shrubs, as well as design and tree placement. For more information, contact Illinois Pork Producers at ilpork.com/tree-buffer-grant-application.

University of Illinois Extension Watershed Outreach Team

The University of Illinois Extension watershed outreach team serves as a bridge between research, conservation programs, local communities, and on-the-ground action to improve water quality throughout Illinois. Through education, outreach, technical assistance, watershed planning support, and partnership development, the team helps farmers, landowners, conservation professionals, educators, and community members better understand nutrient loss challenges and implement practical, science-based conservation practice solutions to reduce nitrogen and phosphorus losses from the landscape. These efforts strengthen local capacity to improve water quality while supporting productive, profitable, and resilient agricultural systems. The team's work also helps advance the goals of the Illinois Nutrient Loss Reduction Strategy by connecting people with information, resources, and conservation opportunities.

Continuing in 2025, watershed outreach associates and an Extension educator delivered workshops, presentations, the Watershed Game (Minnesota Sea Grant & University of Minnesota Extension, 2006), technical assistance, communications campaigns, and conservation-focused networking opportunities across priority watersheds and statewide. Team members worked directly with Soil and Water Conservation Districts, Illinois Farm Bureau, County Farm Bureaus, Illinois Sustainable Ag Partnership, American Farmland Trust, The Nature Conservancy, local watershed groups, and numerous community and commodity organizations to expand access to conservation information and increase awareness of conservation practices, including cover crops, nutrient management, constructed wetlands, woodchip bioreactors, saturated buffers, and soil health practices.

A major focus of the team's work is supporting implementation of the Illinois NLRS in priority watersheds while strengthening the relationships and networks necessary for long-term conservation success. Staff assisted with watershed planning efforts, provided local technical support, conducted stakeholder needs assessments, helped coordinate a cover crop incentive program, facilitated farmer-to-farmer learning opportunities, and supported grant development and conservation practice implementation. These activities help identify local barriers to adoption, connect producers with resources, and ensure conservation efforts are responsive to community needs.

Beyond watershed-specific work, the watershed outreach team contributes to a larger Illinois Extension effort to increase statewide awareness, understanding, and support for the Illinois NLRS. The outreach team and communications staff develop podcasts, blogs, newsletters, videos, educational publications, media stories, webinars, conference presentations, and outreach campaigns that translate complex nutrient loss science into actionable information for diverse audiences. Through programs such as the Illinois Nutrient Loss Reduction Podcast and Blog, the Watershed Game, farmer discussions, landowner conservation programs, and statewide outreach campaigns, Illinois Extension helps build public understanding of how individual management decisions contribute to broader water quality outcomes across Illinois and the Mississippi River Basin.

Extension's role extends beyond education alone. The organization serves as a trusted convener that brings together agricultural producers, conservation organizations, researchers, government agencies, and community stakeholders to advance collaborative solutions. Through leadership roles in statewide and regional initiatives, participation in Illinois Sustainable Ag Partnership working groups, support for the NLRS Steering Committee and Science Team, and collaboration with partners across the Mississippi River Basin, Illinois Extension helps align conservation efforts, share emerging research, and support coordinated action toward nutrient reduction goals.

Together, these efforts position Illinois Extension as a statewide leader in conservation education and capacity building. The watershed outreach team's local engagement, combined with Extension's broader communications, partnership, and leadership activities, helps create the awareness, knowledge, trust, and support necessary to advance the Illinois NLRS. By connecting people with science-based information, supporting collaboration, and providing educational programming on conservation practice adoption, Illinois Extension continues to play an important role in improving water quality, strengthening watershed health, and advancing a more sustainable future for Illinois agriculture and communities.

USDA NRCS and ISA Outreach and Education Partnership Agreement Update

In August 2024, USDA – Natural Resources Conservation Service, NRCS, and Illinois Soybean Association, ISA, began a matching agreement with goals of increasing producer understanding and implementation of agricultural conservation practices on cropland in Illinois, enhancing NRCS staff knowledge of agricultural conservation practices, and improving engagement among Illinois producers and NRCS staff. The total grant budget is $2,907,000 through August 2029. ISA leads the execution of grant deliverables.

In 2025, completed grant deliverables included, but were not limited to:

- Hired two personnel to lead grant execution.
- Developed and administered a farmer feedback survey to collect detailed producer perspectives on challenges working with NRCS local field offices and opportunities to help with engagement and outreach.
- Identified priority areas of the state to target outreach.

- Developed two educational flyers to distribute at events, “A Guide to NRCS Financial Assistance Programs” and “Let’s Go! What to Know Before Walking into your Local NRCS Field Office.”
- Developed and distributed educational materials for Illinois NRCS field staff and farmers to reference when adopting conservation practices, including “The Midwest Cover Crops Field Guide” and “The Agricultural Weed Control Guide.”
- Illinois Soybean co-hosted the Illinois Cover Crop Field Day on Aug 7, 2025, in Belleville with University of Illinois Extension and Southern Illinois University. NRCS flyers and promotional items were distributed to approximately 50 attendees.
- Highlighted cover crop demonstration plots and educational displays during the 2025 Farm Progress Show.
- Hosted two winter events in December 2025 and engaged over 90 farmers, Certified Crop Advisors and NRCS affiliates. The “Dinner and Data: Cover Crop System Results” event was hosted by ISA and Illinois Extension in Belleville. Results from two trials hosted at the SIU Research Center evaluated how different management decisions influenced cover crop establishment and growth, along with cash crop yields. The “Talk Dirt to Me: Soil Test Interpretation for Profitable Management” workshop was hosted in Bloomington, where soil test guidance and nutrient management recommendations were provided. Attendees were also given NRCS program information and promotional items.
- Conducted a focus group Dec. 17, 2025, to collect producer feedback on attitudes towards NRCS programs, barriers to conservation practice adoption, and recommendations for outreach.

Women for the Land

American Farmland Trust, AFT, expanded our Women for the Land programming in the state to engage with vegetable/specialty crop farmers to explore risk management topics through peer-to-peer learning opportunities and resources. These projects hosted in-person and virtual workshops and expanded learning opportunities through AFT’s Women for the Land Learning Circle model. These events focused on crop insurance, financial recordkeeping and business planning, marketing, diversification, climate adaption and mitigation, and farm family wellbeing. AFT partnered with North Central Extension Risk Management Education, ERME, and North Central Sustainable Agriculture Research and Education, SARE, to strengthen farmers knowledge on risk management strategies and tools to support their farms into the future.

AFT held two in person workshops in northern and southern Illinois and two virtual workshops open to all Midwest growers. Through the workshops, vegetable growers learned risk management strategies related to climate adaptation, marketing, crop insurance, and other ways to boost farm vitality. The Crop Insurance 101 webinars covered the ins and outs of crop insurance options for specialty growers. These webinars provided a baseline understanding of insurance options available to specialty growers as a risk management tool. Following these learning events, the project team put together the Growing Resilience: Risk Management for Specialty Crop Producers Workshop Guidebook.

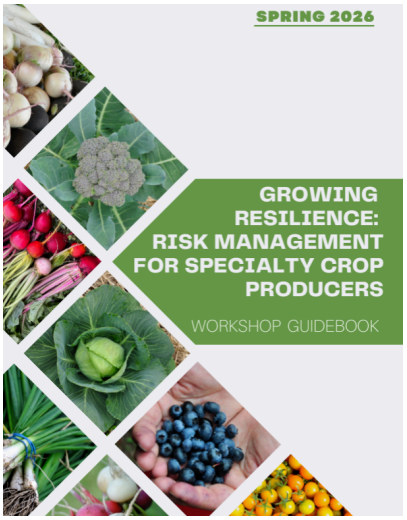


Figure 1. This guidebook was designed to support learning beyond the workshops to support long-term resilience of specialty crop operations.



Figure 2. Farmers gathered with Andy Hazzard at Hazzard Free Farm in January for the first Learning Circle.

Congruently, AFT held three Learning Circles in Illinois focused on building peer-to-peer networks for specialty crop growers. The Learning Circles wove the theme of risk management and climate adaptation throughout the three events. Each agenda of the day was co-created with the lead farmer to best tailor the discussion. Each day included conversations about the challenges and successes of their farm, shared learnings, and a farm tour for fellow farmers to see risk management in action. Following the Learning Circles, participants received a list of resources suggested by their fellow farmers, contact list to continue the conversations, and an invitation to the next learning circle in the series.