



SOIL PIT DEMO, COURTESY OF OLIVIA WINTERS, CONSERVATION PLANNER.

NOVEMBER 2024 NEWSLETTER

AGROECOLOGY + INNOVATION MATTERS

The Capacity Building Initiative promotes bottom-up agroecology, fostering sustainable innovation at the local level, and sharing progress through Agroecology + Innovation Matters (AIM) initiative communications.



AIMING FORWARD

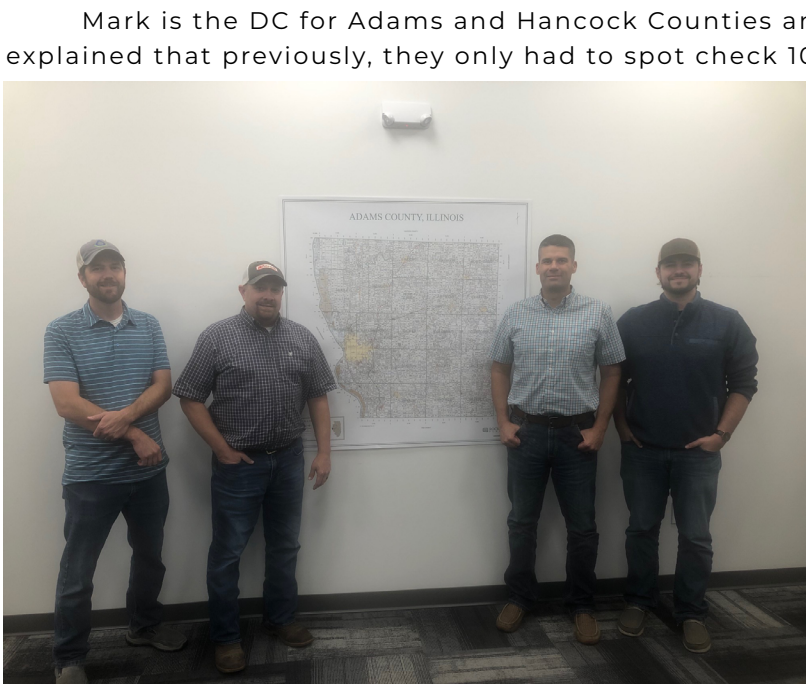
CONSERVATION PLANNER SPOTLIGHT

When he's not fishing, hunting, or caring for his family's 25 Nigerian Dwarf dairy goats, Andrew Parks has a true passion for working in the field of conservation. Born and raised in Quincy, he lives about half a mile down the road from his parents on a family farm with his wife and 10-month-old son. Ever since he graduated from high school, he has been working outdoors, including jobs in landscaping and grounds maintenance. Three years ago, Andrew began studying conservation management at John Wood Community College, and he's currently completing his final course requirement. He was one of the first Conservation Planners (CP) to be hired when the program officially launched in January 2023. He was working for the Quincy Park District when he heard about it and called his NRCS District Conservationist (DC) Mark Hitz to ask where the positions would be located. Later that year, after learning their office would host a CP, Mark e-mailed him. Andrew completed his application on Christmas Eve in 2022 and received a call for an interview a week or so later.



IDOA Conservation Planner
Andrew Parks

Along with his DC, Andrew also works very closely with NRCS Soil Conservationist Zach Rasche and Pheasants Forever (PF) Senior Farm Bill Biologist Brodie Eddington. PF Farm Bill Biologists each cover 5 to 7 counties, helping to lessen the Conservation Reserve Program (CRP) workload. Brodie's counties include Hancock, Adams, McDonough, Schuyler, and Brown. Andrew and Brodie conduct a lot of their field visits together, primarily focusing on CRP acreage, which frees up a lot of Mark and Zach's time to work on other farm bill programs. Referring to Andrew and Brodie, Mark said, "These guys are our eyes and ears in the field, really." According to Andrew, he and Brodie have jointly performed 477 site visits since Andrew started in his CP position. Mark said, "We were behind... We did not have the people or the time to do it, so they got us caught up."



NRCS Soil Conservationist Zach Rasche, IDOA Conservation Planner Andrew Parks, NRCS District Conservationist Mark Hitz, Pheasants Forever Senior Farm Bill Biologist Brodie Eddington

Mark is the DC for Adams and Hancock Counties and has been with NRCS for 19 years. He explained that previously, they only had to spot check 10% of the CRP contracts once during the life of the contract. Several years ago, that was increased to 100% of the contracts, three times during the life of the contract. He said, "We were just not staffed for that as an agency, so they went out looking for partners." NRCS has several different partners they work with on CRP specifically, and each office is different based on their needs and who is working on what. According to Mark, Hancock and Adams Counties have around 1,900 active CRP contracts. Referring to Andrew and Brodie, Zach said, "Honestly, we wouldn't be able to get done what we have to get done without them."

Andrew expressed that Mark, Zach, and Brodie were all very helpful as he was transitioning into his position. Along with being able to just



THE ILLINOIS STAR REPORT

SAVING TOMORROW'S AGRICULTURE RESOURCES

WELCOME NEW SCIENCE COMMITTEE MEMBERS



Illinois STAR is thrilled to announce that Rob Rykherd, Shani Golovay, Stacy Zuber, and John Jones have accepted invitations to join the science committee in October.



This year, Illinois STAR partnered with Siemer Milling Company and The Nature Conservancy to offer a Producer Rewards Payment Program to Siemer growers. The Illinois STAR Verification is a key piece of this program and must be completed for funds to be distributed. Siemer Milling Company is committed to connecting growers with opportunities to help preserve their land and legacy. The program identifies eligible fields and compensates growers who are implementing conservation practices that result in improved or outstanding (5-STAR Rating) environmental outcomes. In 2024, 13 growers submitted fields and 10 growers were eligible to receive payment; all together, \$65,421.95 is slated to go out the door in December to those producers after the November verification is completed. More information on the program, eligibility, and verification can be found here: <https://illinoisstar.org/producer-reward-payments>.

WHAT IS STAR VERIFICATION?

Farmers deserve to be recognized and rewarded for their stewardship of the land - their hard work results in many conservation benefits but often the only benefit that gets talked about is related to carbon sequestration. The STAR Score communicates that hard work and the resulting benefits much more comprehensively than an individual metric because it is based on local science and incorporates a broader range of natural resource impacts. A field's STAR score is calculated based on the practices reported by farmers on their field so it is critical that STAR conduct a verification process to confirm the implementation of those practices to ensure credibility of the program. STAR Verification is the process of confirming farmers' reported practices on a random selection of fields by reviewing field form answers and collecting evidence of implementation. STAR prides itself on being farmer-led and farmer-focused, so our verification process is designed to be useful and quick for the farmer, while being robust enough to demonstrate STAR's integrity. STAR is committed to providing value to the producer, and maintaining the reputation of the STAR Score as a reliable indicator of conservation benefits is part of that.

The STAR Score is generated through STAR's Web Tool (www.STARTool.ag). The Illinois STAR Field Form questionnaire is intended to be completed directly in the WebTool. Alternatively, a PDF field form is available for farmers to record their information and acknowledge that their fields may be randomly selected for verification. Ultimately, the answers on the PDF Field Form are copied into the WebTool under the farmer's profile by a trained Illinois STAR Navigator who has signed a strict Data Use

IL STAR – 2024 Field Form

*If you can't measure it, you can't improve it.™ Peter Drucker



Farmer/Owner Information

1. Name: _____ Phone: (____) _____
2. Email: _____
3. Street/City/Zip: _____
4. Field name: _____
5. County where field is located: _____
6. Field ID: FSA Farm #: _____ FSA Tract #: _____
7. Is this field owned or rented by you? Owned Rented
8. Is this field tile drained? Yes - random tiles No

I understand this field may be randomly selected for verification. To the best of my knowledge, this information is correct.

Signature: _____ Date: _____

IMPORTANT! Before proceeding, please review these instructions. Accurate responses will help ensure your field is awarded the correct point total and STAR rating.

- This form documents field activities beginning immediately after harvest in 2023 and concluding with 2024 harvest. Cover crops implemented prior to the 2023 harvest should be included in this timeframe.
- Read every item under each category. More than one selection is possible, but sometimes no items will be selected. For example, if you planted a cover crop mix of cereal rye and tillage radish, you would select "Winter hardy - single species" and "Winter kill - single species" in the Cover Crops section.
- Completely read each statement. Several have more than one qualifier that needs to be met. For example: Spring tillage section: "Any full width operation on a single pass, where no fall tillage was performed."

9. Crop Rotation. Use an "X" to indicate the 5-year crop history on this field.

Crop	2024	2023	2022	2021	2020
Corn					
Soybean					
Small Grains					
Hay/Forage					
Other:					

Example: A field has been in corn/soybean rotation for over a decade. In 2024 a soybean was planted to corn. Place an "X" adjacent to corn for the years 2024, 2023, and 2020. Soybean would have an "X" for 2021 and 21. If your crop is not listed, i.e., Grain Sorghum, write your crop on the Other line and mark "X" in the year(s) planted. Do not record cover crops here.

10. Conservation and Management Practices. Check all that apply on this individual field.

- Nutrient Buffer
- Biosolids
- Terrace/Contour/PAWS/COBS
- Grass Filter Strip/Riparian Buffer
- Crossed Waterway
- Pollinator Planting (1/2 acre minimum)
- Windbreak
- Attended a soil health or nutrient management meeting or field day within the last year

11. Cover Crops (Summer 2023-Fall 2024). Check all that apply. Cover crops must be established according to NRCS guidelines and must have some growth.

- Winter hardy - 2 or more species
- Winter hardy - single species
- Winter kill - 2 or more species
- Winter kill - single species
- Cover crop was terminated AFTER spring 2024 cash crop planting

Note: This time period starts slightly later. Any cover crop established in 2023 either prior to harvest or after a summer crop was harvested count. Examples: aerial application into standing corn or during after vine harvest. Wheat is not considered to be a cover crop.

12. Soil Sampling for Nutrient Management. Check all that apply. Use the previous 6-year field history.

- No sampling in the last 6 years
- Sampled every 4 years or less in Spring or Summer for the following crop year
- Sampled every 4 years or less in the Fall
- GPS mapped by grid or rows

Note: Nitro is a great example of why you should read every item in each category. If a respondent simply marked "Sampled every 4 years or less in the Fall" they may have missed items they didn't indicate if GPS was used.

13. Fall Tillage - Starting after harvest of the 2023 crop

- No tillage or low-impact tillage (roller)
- Strip tillage or field is classified as non-till
- Shallow type tillage bar and no other tillage performed
- Any full width operation not exceeding 3" depth
- Any full width operation exceed 3" depth
- Any full width operation on soybean at 2023

Note: With no-till or low-impact tillage on soybean, we do not expect to keep the soybean field a field. No tillage and strip tillage are crop dependent. Full width tillage can be tricky. In the fall, focus on the depth of machine operation, and select a "soybean" checkbox in the spring. How many passes were made and was full tillage performed?

14. Spring Tillage - 2024 field operations

- No tillage or low-impact tillage (roller)
- Strip tillage or strip tillage on non-till field, or shallow type tillage bar and no other Spring tillage
- Any full width operation, limited to a single pass, where no fall tillage was performed
- Any full width operation, two or more passes, where no fall tillage was performed
- Any full width operation, one or more passes, where full tillage was performed

15. Fall Nutrient Management (Fall 2023 - February 2024)

- No nitrogen was applied in this time frame or no prior Fall 2023 data, any 2024 nitrogen other than HMP or DAP
- Urea or liquid N
- HMP or DAP was applied before December 1st
- No more than 50% of the total nitrogen program (from all sources) was applied as liquid with an application rate that was below 50 degrees
- More than 50% of the nitrogen program was applied during the time frame
- HMP or DAP was applied or applied and incorporated at an soil temperature was below 50 degrees
- HMP not applied, but not incorporated

16. Spring/Summer Nutrient Management (March 1st - Summer 2024)

- No nitrogen was applied in this time frame and no prior Fall 2023 data, any 2024 nitrogen other than HMP or DAP
- Spring/Summer nitrogen application(s) amounted to 50-74% of the total nitrogen program (from all sources)
- Spring/Summer nitrogen application(s) amounted to at least 75% of the total nitrogen program (from all sources)
- No nitrogen application (from all sources) was at least 60% of total nitrogen program (from all sources)
- HMP or DAP was applied or applied and incorporated
- HMP not applied, but not incorporated

Note: If you are growing soybeans on this field this year and did not apply nitrogen, be sure to select "No Nitrogen" in both the Fall and Spring Nutrient Management sections.

17. Additional Nutrient Activities

- Total nitrogen application corn that followed a different crop was 100 to 200 lbs./acre, OR corn-on-corn was 200 lbs. or LESS/acre
- Total nitrogen application corn that followed a different crop was 180 lbs. or LESS/acre, OR corn-on-corn was 200 lbs. or LESS/acre
- Phosphate and/or Potassium application was based on renewal rates and/or soil samples WHENEVER applied (Note: this may mean that zero P or K was applied)
- At least 50% of total applied phosphorus was based on subsoil samples
- Used Triple Super Phosphate (0-45-0)
- Used plan table rate technology and did not exceed application rates recommended in the Illinois Agronomy Handbook
- Any fertilizer source containing Nitrogen or Phosphorus was broadcast on frozen or snow-covered ground

Illinois STAR 2024 Field Form. [Download Here.](#)

Agreement - currently this is either a SWCD employee or Illinois STAR staff. Fields are grouped into three distinct geographic regions and then the square root of the total number of STAR fields from each region determines the number of fields to be randomly selected for verification.

The November Illinois STAR Verification will include all fields scored between June 1, 2024, and October 31, 2024, and will be performed by the AIM CPs. This includes fields submitted to the Siemer program, fields applying to the Illinois Department of Agriculture's (IDOA) Partners For Conservation Cost-Share program, and those submitted for personal or landlord-driven reasons. IDOA requires applicants to have a STAR Score because of its usefulness as a soil health assessment tool. Coordinating the verification process for multiple programs provides a valuable benefit to participants because practice verification is streamlined and efficiently distributed. Verification also is intended to provide value to the farmer by combining the review of documentation with technical conversation between the verifier and the farmer about conservation more broadly and to identify potential new practices; it becomes an opportunity to review records and do future planning.

A second round of verification will happen in Spring 2025 for fields submitted and scored between November 1, 2024, and the launch of the CY25 Field Form (release date TBD). All Illinois STAR Field Forms are scored through the secure STAR WebTool, and a Web Tool verification process feature is currently under development. This will streamline the verification process and will be a useful tool for organizing and planning from a business perspective.

What to expect if your field is selected for the November verification:

- You will receive a phone call from Natalie Kerr, the Illinois STAR Coordinator, to let you know you have been selected and answer any questions. She will provide an overview of the process steps and a checklist of verification documentation specifically required for your field.
- Natalie will send an email to you, the AIM Conservation Planner (CP) assigned to verify your field, and your local SWCD Resource Conservationist (RC).
- The CP will first call the SWCD RC to ask them if they can confirm any of the practices noted on your CY24 Field Form, and will then follow up with you.
- You can send documentation to the CP over email if you would like, or the CP will work with you to schedule a time to review the documentation in person.
- Once your field has been successfully verified, you will receive \$50/field thanks to the Siemer Producer Reward Payment Program support of the verification process!

DEBUNKING COMMON VERIFICATION MYTHS

Myth #1: Verification is just a waste of my time.

Reality: Verification should only take about an hour of your time. This year, thanks to the Siemer Producer Rewards Payment Program, we are continuing the \$50/field payment to thank producers for their time. However, the value of verification extends beyond immediate compensation! Illinois STAR's verification process ensures that the practices used to generate your STAR Score are recognized, which strengthens the program's effectiveness and credibility. That way, your STAR Score carries more weight and communicates value to interested parties like conservation funders,



Verification Report Evidence List

Only one (1) item needs to be selected for each section

Conservation and Management Practices

- Cost-share program documentation
- Enrollment Verification (PCM, EQUIP, CSP, etc)
- Conservation Plan on file in Service Center
- Plans and results from trial(s)
- Dated photo, aerial image, Google Map coordinates, GIS, etc.

- Residue check
- HEL compliance check
- Dated drone imagery confirmation

Crop Rotation

- FSA 578 or Crop Insurance APH summary
- Planter or Harvest Log

Spring Tillage (2024 field operations)

- Local person to confirm (SWCD or NRCS staff, retailer, neighbor)
- Residue check
- HEL compliance check
- Dated drone imagery confirmation

Cover Crops (Summer, 2023-Spring 2024)

- Local person to confirm (SWCD or NRCS staff, retailer, neighbor)
- FSA 578 crop acreage report or NRCS Cost Share
- Receipts and seed tags
- Dated pictures of growing cover crops
- Dated drone imagery confirmation

Nutrient Management (Fall 2023-February 2024)

- Dated spread maps as applied or application logs
- Invoices of products and amounts billed
- Manure application rate and sample test results
- Copy of MRTN plan

Soil Sampling

- Dated copies of soil test results and maps

Nutrient Management (March 1-Summer 2024)

- Dated spread maps as applied or application logs
- Invoices of products and amounts billed
- Manure application rate and sample test results
- Copy of MRTN plan

Fall Tillage (starting after harvest of 2023 crop)

- Local person to confirm (SWCD or NRCS staff, retailer, neighbor)

Additional Nutrient Activities

- Dated spread maps as applied
- Copy of MRTN plan

landowners, buyers, and lenders - without sharing any sensitive information directly. The STAR Score serves as a reliable, private endorsement of your practices.

Myth #2: Verification implies you don't trust my Field Form.

Reality: Verification isn't about doubting anyone's word; it's a necessary step to confirm practices are in place. Many funders require proof of some sort as part of responsible funding, and the Illinois STAR verification process means that your STAR Score alone can function as the only proof that they need. That way, your private information never goes further than the Illinois STAR team, and with a credible program we can open doors to future funding opportunities to support voluntary conservation practices. We appreciate farmers' honesty, commitment, and integrity - verification is just a structured acknowledgment of that.

Myth #3: Verification is an invasion of my privacy.

Reality: We respect your privacy and use a secure, farmer-first process to collect only essential information directly relevant to the practices described on the field form. All data collected remains confidential and is used solely to maintain program quality. The AIM Conservation Planners not only sign strict Data Use Agreements that ensure confidentiality, but they are also members of your community who have both a personal and professional commitment to conservation. When reviewing the verification documentation with them, you may find them to be a useful resource when discussing your management practices and planning for the future!



SOIL HEALTH

NUTRIENT MANAGEMENT

WHICH CONSERVATION PRACTICES CAN INCREASE NUTRIENT EFFICIENCY WHILE REDUCING LOSSES?

With fall fertilizer applications underway, it's a good time to review the NRCS recommendations for nutrient management. According to NRCS, farmers can save **nearly \$30 per acre on fertilizer costs** with a **nutrient management plan**. Other in-field conservation practices, like **no-till** and **cover crops**, can also decrease your fertilizer needs by increasing soil organic matter over time. **Edge of field practices** can significantly reduce nutrient runoff as well. There are several additional nutrient-related conservation practices promoted by NRCS, including:

- **Filter strip**
- **Riparian forest buffer**
- **Riparian herbaceous cover**
- **Reduced till**
- **Conservation cover**
- **Pasture and hay planting**
- **Denitrifying bioreactor**
- **Saturated buffer**
- **Water and sediment control basin**
- **Wetland creation**
- **Terrace**

NRCS also endorses the 4Rs of nutrient stewardship.

According to the **Nitrogen Management for Corn** chapter of the **Illinois Agronomy Handbook**, the International Plant Nutrition Institute developed the 4R approach to fertilizer management in the early 2000s to address the challenges of navigating between economic returns and minimizing environmental harm. Although many variables affect what is "right" for a specific field in any given season, the 4Rs provide general guidelines that can be very helpful to farmers when making these decisions. On the Illinois Sustainable Agriculture Partnership's

(ISAP) [Conservation Story Map](#), users can search for Certified Crop Advisors who are certified in 4R nutrient management. ISAP also has a nutrient management chapter in their [Introduction to Soil Health Practices](#), which provides helpful information on how the 4Rs can be applied specifically to nitrogen and phosphorus and features farmers who have benefited from these practices.

Right Source: Soil testing is recommended to determine which nutrients are needed. Whether you're using commercial fertilizers, manure, compost, or other amendments, each source needs to be analyzed to determine what is best for your specific soil. Cover crops, soil organic matter, and crop residues all contribute to the soil nutrients and should be taken into consideration when deciding what fertilizer to apply.

Right Rate: Check individual field fertility to determine exactly how much nutrients are needed. If using manure, perform analysis to make sure nutrient levels are not too high. Assess crop nutrient demand, soil test results, and runoff risk when choosing what rate is appropriate. Midwest land-grant universities teamed up to create a [maximum return to nitrogen \(MRTN\) calculator](#) based on corn nitrogen rate trial data over a period of years in each individual state, considering crop rotation and soil productivity in their recommendations. This model was created to improve profitability while addressing the negative consequences of over-application.

Right Time: Consider when your crop will have the highest demand for nutrients. Is the nutrient source available immediately after application or is there a delay? Check weather to make sure field conditions are optimal for uptake and try to avoid runoff as much as possible. Late season application can be more susceptible to runoff due to snowmelt and rain on snow. A [Journal of Environmental Quality study](#) conducted by researchers from the University of Illinois has indicated that split spring nitrogen applications, along with including an overwintering grass cover crop, may be an effective method for reducing nitrogen loss to tile drainage without decreasing crop yield. Although it is ideal to reduce the amount of time between application and plant uptake, if using fall anhydrous, ISAP recommends using a stabilizer and applying after the soil temperatures reach 50 degrees and are continuing to fall.

Right Place: Apply fertilizer in the root zone to make sure crops can access the nutrients. Also consider specific field characteristics like soil type, slope, P-Index, and presence of nearby surface waters. The nutrient demand may vary across different locations in an individual field as well. Variable rate input applications can be used to adjust fertilizer rates across the field based on site specific needs. According to the USDA, the [use of these technologies has increased](#) in recent decades, particularly with corn and cotton.



UPCOMING EVENTS

EVENTS FOR ALL LEVELS OF CONSERVATION

NOVEMBER

- Nov. 8-9 Southern Illinois Beginning Forest Landowner Program Weekend 2 ([Information Here](#))
- Nov. 13 Illinois Cover Crop on Farm Network Monthly Call ([Information Here](#))
Virtual
- Nov. 13 Starting Native Plants from Seed ([Information Here](#))
Virtual

DECEMBER

- Dec. 11 Illinois Cover Crop On Farm network Monthly Call ([Information Here](#))
- Dec. 17 Illinois Soybean Growers Farm Futures Business Summit ([Contact Ashley Barry](#))
Malta, IL

CONSERVATION IN THE CLASSROOM

PREPARING THE NEXT GENERATION

We need to inspire, educate, and provide more opportunities for the next generation to enter the agroecology workforce. From elementary school to college, we need to foster interest in natural resources, teach the importance of conservation, and provide young people with the requisite tools and pathways to pursue further education or professional opportunities in related education, trade, science, etc. fields.

The goal of **Conservation in the Classroom** in the AIM Illinois newsletters is to provide classroom and community engagement resources regarding featured conservation agriculture topics. We “aim” to support educators in discussing these vitally important topics and fostering excitement for the future of agroecology with their students.



This month's lesson plan is **Understanding Climate and Its Impact on Agriculture in Illinois**. The purpose of this lesson is to engage students in exploring Illinois' climate characteristics and the impacts of climate change on agriculture. Through hands-on data collection and analysis of current climate conditions, students will track and interpret key metrics such as temperature and precipitation averages, as well as their departures from historical norms. This lesson will foster critical thinking about the challenges and opportunities presented by climate change and encourage students to formulate hypotheses based on observed trends.

The lesson is estimated to take 60 minutes, and is designed for high school students (grades 9th to 12th). The learning objectives are to understand the key climate characteristics of Illinois, analyze current and historical climate data to identify trends, and evaluate how climate change affects crop selection, farming practices, and agricultural sustainability.

[Understanding Climate and Its Impact on Agriculture Lesson Plane, Packets, PPT - DOXC](#)

Along with the Conservation in the Classroom lesson plan, AIM has developed an Outreach Lesson Plan available for conservation professionals. **Water Cycle in a Bag** is an activity designed to help elementary school aged students understand the water cycle through a hands-on demonstration that illustrates evaporation, condensation, and precipitation. This activity takes 30 minutes, plus time for observation (from 1 hour to 3 days).

[Water Cycle in a Bag Outreach Lesson](#)

IN THE FIELD



On October 3, Conservation Planner Brittany Logan (Calhoun Co.) attended the survey of a farm tract for a basin that will be built to help maintain soil erosion/water run off in Carrollton, Illinois. This survey was completed with Nate Brown and Kreed Lewey.

Pictured to left: Surveying in progress with flag marker to note one of the significant spots for the basin project.

Land Conservation Specialist Anette Marshall (Calhoun, Greene, Jersey, Madison, Monroe, and St. Claire Counties), Dylan Smith (USDA, Edwardsville Office), and Conservation Planner Brittany Logan met with a producer in Kampsville Illinois to discuss a burn plan. They looked at different spots on the property and provided information to create a viable burn plan.



and provided information to create a viable burn plan.

Picture to right: field to be included in burn plan.



On October 3, Kane County Soil and Water Conservation Districts hosted a Soil Pit Demo. Retired Soil Scientist Mark Bramstedt hosted the event.

A soil pit was dug in a forest preserve in Kane County, which Bramstedt used to teach about soil layers, parent material, and indicators of what the area may have looked like historically.



Bramstedt also taught attendees about the characteristics of soil and how to correctly ID the type of soil present.





AGROECOLOGY + INNOVATION MATTERS

The AIM project was initiated through a state/federal leveraged funded Capacity Building Initiative between the Illinois Department of Agriculture and the USDA Natural Resource Conservation Services (NRCS). Our 40 Conservation Planners and Coordinators aim to enhance soil health, reduce nutrient loss, maintain clean waters, and bolster the advancement of best conservation practices by collaborating with NRCS field offices, soil and water conservation districts, producers, and landowners across the state.

Our team strives to communicate best practices stories and provide educational resources for our community. AIM empowers producers and landowners to explore agroecology and innovative infield and edge of field practices like cover crops, conservation tillage, vegetated buffers, grassed waterways, prairie strips, and constructed wetlands.

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