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*PROJECT SUMMARY: 2021
LIMITED PILOT OF THE
ILLINOIS SOIL HEALTH
INCENTIVE PROGRAM*

MARCH 2022

THE
CONSERVATION FUND



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As a 501c3 nonprofit with a 2020 Platinum Seal of Transparency from GuideStar, Delta serves as a trusted advisor, technical provider, and project implementation expert for partners across the public, private, nonprofit, and community sectors. We rely on both philanthropic and earned revenue, specifically through grants, charitable contributions, and fee-for-service contracts.

Our work takes us to cities like Chicago, St. Louis, Gary, and Milwaukee; to Great Lakes coastal towns; and to rural communities with thousands of acres of farmland and waterways.

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At The Conservation Fund, we believe in conservation that makes economic sense. Every project places conservation at its center, and our entrepreneurial staff create and implement innovative, practical ways to benefit the natural world and the well-being of Americans from every walk of life. We inspire new, innovative models that prove strategic conservation is good for both people and the environment.

ACKNOWLEDGMENTS

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PROJECT OVERVIEW

With funding support from the Lumpkin Family Foundation, The Conservation Fund, Delta Institute, and Champaign County Soil and Water Conservation District (CCSWCD) collaborated to develop and test a framework for an Illinois-centric program that would offer farmers financial incentives to implement soil health practices under a ‘pay-for-outcomes’ model. The programmatic framework was based on research of existing soil health programs in other states, with an emphasis on California’s Healthy Soils Initiative, along with an evaluation of existing soil health protocols being developed for compliance and voluntary carbon markets.

The Illinois program was designed to provide financial incentives to Illinois farmers and producers to implement conservation management practices that sequester carbon, reduce atmospheric greenhouse gases (GHGs), and improve soil health, with incentive payments based on greenhouse gas reductions estimated by using modeled county-level quantification methods. The program was intended to align with the state’s GHG reduction goals and advance other statewide objectives, such as the Nutrient Loss Recovery Strategy targets.

The resulting Illinois Soil Health Incentive Program (SHIP) was designed to:

- Provide a simple and transparent program framework to increase adoption of soil health practices on Illinois farmland and mitigate climate change;
- Offer financial support for farmers based on anticipated results rather than payment for practices; and
- Ensure local technical assistance capacity by partnering with Soil and Water Conservation Districts (SWCDs) and using existing contracting pathways that are already familiar to farmers, such as Partners for Conservation (PFC).¹

SHIP was offered to farmers in Champaign County under a limited pilot in Fall 2021, and all participating farmers agreed to an exit interview to discuss their experience. This Project Summary shares the learning from this work to help inform broader efforts in Illinois to provide financial incentives to farmers for improving soil health and sequestering carbon in the soil. Appendix A describes this project’s methodology.



Overview of the SHIP Framework for the Champaign County Limited Pilot

After an initial baseline evaluation and research component, the SHIP project team focused on program design. The team selected a suite of Eligible Practices from among the approved Natural Resources Conservation Service (NRCS) Conservation Practices (except for the Avoided Conversion category, discussed in more detail below). Eligible Practices were organized in four categories:

Table 1. Eligible Practices by Category

Category	Practice
Soil Health	<ul style="list-style-type: none"> • Cover Crops • Tillage • Critical Area Planting • Combinations
Cropland to Herbaceous Cover	<ul style="list-style-type: none"> • Contour Buffer Strips • Filter Strips • Grassed Waterways
Cropland to Woody Cover	<ul style="list-style-type: none"> • Riparian Forest Buffer
Avoided Conversion	<ul style="list-style-type: none"> • Avoided Conversion of Expiring Conservation Reserve Program (CRP) Ground to Cropland • Avoided Conversion of Cropland to Development

Each Eligible Practice was associated with a specific Commitment Term. Soil Health practices required a three-year Commitment Term; Herbaceous Cover required five years; and Woody Cover and Avoided Conversion required either three or five-year commitments.

The GHG benefit for each Eligible Practice (except Avoided Conversion) was modeled using the Carbon Management & Emissions Tool (“COMET”)-Planner, developed by the U.S. Department of Agriculture (USDA) and Colorado State University. The GHG benefit for the Avoided Conservation practices were set at 6.3 tonnes Mt CO₂e per acre per year after a comprehensive review of the literature, including one study that suggested a range of 6.3-16.5 tonnes per acre for Warm Temperate Moist Climates.² One Mt CO₂e is defined as the warming impact of one tonne of emitted CO₂ in the atmosphere over a period of 100 years.

Payment rates were then established per metric tonne of CO₂ equivalent (Mt CO₂e).³ It is used as a standard to compare the climate impacts of different greenhouse gases. For the Limited Pilot, we priced the GHG benefit as follows:

- \$10 per Mt CO₂e for a 3-year commitment;
- \$20 per Mt CO₂e for a 5-year commitment; and,
- \$30 per Mt CO₂e for a 10-year commitment and for all Avoided Conversion practices.

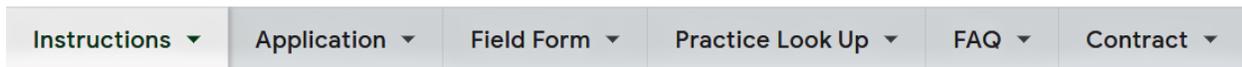


The Formula Used to Calculate GHG Benefit

$$\text{Incentive Payment} = (\text{GHG Benefit} \times \text{Commitment Term}) \times (\text{Price Per Acre} \times \text{Number of Acres Enrolled})$$

The Avoided Conversion of CRP Ground category was offered to producers who did not renew expiring CRP contracts in Fall 2021. Under this option, farmers were paid for the GHG benefit of keeping existing carbon stocks via perennial grasses and other cover in the ground after their CRP contract commitment to do so expired. Once a CRP contract expires, farmers are free to start cropping and may destroy any perennial cover. The Limited Pilot was not able to offer Avoided Conversion of Farmland to Development as part of this project. More detail about the Avoided Conversion practices can be found in Appendix B.

The SHIP program application form (“Application”) was set up as an interactive Excel spreadsheet. The Application consisted of six tabs:



After reading the Instructions Tab, a farmer filled out the Application Tab with contact information, operation size, and producer category. Next they completed a Field Form tab for each field being enrolled. The Field Form tab consisted of an interactive spreadsheet that allowed each farmer to select different practices on different acreage amounts and see the resulting GHG benefit and resulting Incentive Payment. Once the producer completed the Field Form for each field being enrolled, the producer would sign and date the Contract Tab and submit the Application to the CCSWCD, along with a completed Saving Tomorrow’s Agriculture Resources (STAR) Field Form for each field, to capture additional information. By signing the SHIP Application, the Applicant agreed to implement the Eligible Practices for the Commitment Term(s) in a manner consistent with program requirements and within a set time frame, and the CCSWCD subsequently agreed to make the Incentive Payment.

All applications required implementation of at least one of the 18 Eligible Practices listed on the Payment Table. Applicants were allowed to use cost share from other programs (such as USDA’s Environmental Quality Incentive Program (EQIP) or Illinois Partners for Conservation) to support costs to implement Eligible Practices. Applicants could not be paid under SHIP for carbon storage on the same field that was already enrolled in another carbon payment program, such as those privately managed by Indigo, Nori, and others.

The CCSWCD made incentive payments by mailing checks to SHIP participants in December 2021. This step required CCSWCD to solicit W-9 forms from all payees. Applicants were notified in mid-October 2021 that their applications were selected for funding. The Limited Pilot was able to award all SHIP applicants at least partial funding, by using a cap of \$7,000 per operation, because the total requested in all SHIP applications received (\$61,000) exceeded the project budget for Incentive Payments.

For the Limited Pilot, SHIP participants were solicited through webinars, email blasts from NRCS, the Farm Bureau, and others; a website page on the CCSWCD website; postcards; and word of mouth. Between June and September 2021 the project team conducted farmer outreach through a series of emails, webinars, and direct outreach. It is not possible to quantify the exact number of farmers reached, because agency and non-profit partners independently forwarded the opportunity to their networks. However, as a result of this outreach, at least 17 farmers inquired to CCSWCD about enrolling in the program.

SHIP Enrollment and Results

From the 17 farmers who inquired about the program, we had 11 farmers covering 40 fields enroll in the SHIP Champaign County Limited Pilot. With this enrollment, the project was able to impact 2,228 acres in aggregate, with a greenhouse gas benefit of 6,096.1 Mt CO₂e stored or emissions avoided.

The Conservation Practices selected by SHIP Applicants and incentivized through SHIP include:

- Cover Crops - 1,036 acres
- Conversion to Reduced or No-tillage - 560 acres
- Combination of Cover Crops and Reduced Tillage - 611 acres
- Avoided Conversion of Expiring CRP Ground - 21 acres



Source: The Conservation Fund



TOTAL SHIP IMPACT



**6,096.1 METRIC TONS
OF CO2E STORED OR
EMISSIONS AVOIDED**



**2,228
ACRES
IMPACTED**

WHICH EQUATES TO...

**9.9 MILLION
MILES DRIVEN**



**4.3 MILLION
POUNDS OF COAL
BURNED**



**718 HOMES'
ELECTRICITY
USE FOR ONE
YEAR**



**4,841 ACRES OF
U.S. FORESTS
GROWTH IN ONE
YEAR**



The SHIP participants collectively farm 8,178 acres in Champaign County. In addition to the SHIP participants enrollment data, the project team analyzed other management trends for the enrolled acreage. From data provided from STAR. applications, the following trends in the enrolled acreage were observed:

- 78 percent was enrolled in an existing conservation program
- 68 percent had a nutrient management plan
- 53 percent had a conservation plan
- 48 percent had a grassed waterway, filter strip, or riparian buffer
- 92 percent were not planted with the same crop for more than 2 consecutive years
- 92 percent had soil sampling occur within the past four years, and used GPS-based sampling.
- 75 percent were enrolled in the STAR. program before SHIP
 - Average STAR. rating was 4.61 (out of 5)



EMERGING THEMES

A key part of the SHIP Limited Pilot was conducting individual interviews in early 2022 with each SHIP participant, to better understand their experience applying for and participating in the SHIP program. From the interviews, the following themes emerged:

Need for Efficiency When Program Stacking

Many farmers are stacking different financial assistance programs on top of each other on the same acres because, as they say, “every little bit helps.” However, many of the programs in which farmers enroll require the same information be provided by farmers during each enrollment period. Some farmers stated a desire for improved coordination between programs and a streamlined application process to reduce duplicative paperwork requirements. Farmers appreciated that the SHIP program was able to use the information provided through STAR applications rather than requiring SHIP applicants to submit the same information a second time.

Alignment with Partners for Conservation Program

The SHIP goal of aligning with existing contracting pathways revealed some significant challenges in building a pay-for-outcomes model on top of the Partners for Conservation (PFC) program, including:

- The timing and amount of PFC funding provided to counties varies year to year. There is no consistency on the payment timeline or transparency on the formula.
- There is no alignment between when farmers must make decisions (for example, reserving cover crop seed) and when PFC contracting decisions are made. PFC is not a ‘mind-changer’ – most farmers install practices without knowing whether PFC reimbursement is available.
- Every county runs PFC a bit differently, prioritizing different practices, establishing different award decision processes, and allocating funding differently per county. There is no consistency around prioritizing first-time conservation adoption, for example.
- Currently, the program is not widely promoted and has low participation rates.⁴

Timing

According to the SHIP participants, ideally farmers should be making decisions on practices like cover crops and fall tillage in mid-summer. Accordingly, financial assistance programs that want to incentivize change should make funding awards by mid-summer or earlier. If a financial incentive is intended to drive new conservation adoption, farmers should know whether they are receiving the financial incentive prior to incurring costs towards installation.



Verification

There was universal support for the need to verify practices as long as the process was not too cumbersome. Most farmers thought verification was important to weed out bad actors or others who might try to 'game the system'. There was acknowledgment that paperwork is now an everyday part of farming and no SHIP participant said they would not have participated if required to submit proof of adoption.

Durability and Commitment

Even farmers who had been using cover crops or other soil health practices for many years on other fields were not comfortable with contractually committing to a practice for more than three to five years. Part of this reflected the inherent need for flexibility in farming. In addition, we heard some sentiment that 'a better offer might come along,' so the farmer did not want to over commit to a payment structure - and risk not being able to take advantage of higher payments through a different program down the road. Despite this, farmers were very receptive to the idea of a three-year contract that would automatically renew for an additional one or two terms, with the option to opt out. This type of automatic renewal would reduce additional time, process, and paperwork if the farmer intended to maintain the practice.

Perception and Trust

Several interesting issues were raised related to carbon markets, government funding, the private sector, quantification, and pricing:

- Many farmers said they would take any payments offered to support conservation adoption. However, farmers do not always connect the payments with a specific environmental outcome. At least one farmer signed up for payments through a different pay-for-performance mechanism, but they could not identify what performance metric or desired outcome was being awarded.
- One farmer raised significant distrust of the accuracy of carbon calculators. Another said that he would not take public dollars for 'doing the right thing;' however, he was interested in SHIP because it was private dollars.
- As noted above, several farmers said that they would not commit to implementing a conservation practice for longer than three years because "a better offer might come along" from future ecosystem marketplace activity.



Innovative Payment Structures

The idea of financial assistance paid through a transferable tax credit widely resonated. Farmers liked the idea that this could create a good amount of efficiency for both the farmer and program administrators. Farmers especially approved a tax credit that would not be considered taxable revenue, because they would net more from the financial incentive. One farmer shared that a financial incentive offered as tax credit could be complicated for farm fields with multiple owners, as deciding how to split a tax credit between the landowner and the farmer, and/or among different landowners, could be a burden. However, if the tax credit included transferability as part of the structure, this challenge is resolved: cash revenue from the transfer is easily divisible. Pennsylvania REAP program provides a good example of a transferable tax credit.⁵

Payment Cap

The limited pilot for SHIP applied a payment cap of \$7,000 per operator. The idea of a low cap on the payment amount was appealing. Carbon markets are designed to work for the largest farms, so many smaller farms are going to be left out. Small scale, diversified, and mid-sized farms will likely be at a disadvantage. A payment cap set at a modest level may make the program less attractive to the larger farms, leaving room for the others.

Avoided Conversion

There was strong enthusiasm for a perennial cover option other than CRP. Some farmers were not eligible to continue with CRP due to program changes, even after years of participation. One farmer said that CRP helps pay the property taxes on that ground and, without the payment, finding another income source was required even if it meant cropping marginal land.

Program Delivery

The Limited Pilot re-affirmed that conservation for most farmers is a face-to-face information exchange. Any statewide program needs to address the inequities in capacity at the County staff level, to create equal opportunity for everyone to participate. We heard significant concerns about a program like SHIP being run by the State without a County-level implementation partner, such as a Soil and Water Conservation District.



LESSONS LEARNED AND RECOMMENDATIONS

From the research and analysis conducted to create the SHIP framework, the results of the Limited Pilot, and the feedback from the participating farmers, the following lessons learned may help inform the current and ongoing soil health policy conversations in Illinois. The following observations and recommendations are broken into three categories:

- Pay for Outcomes Programs - general aspects to be taken into consideration to standardize and scale programs that incentivize carbon programs.
- Partners for Conservation Recommendations - based on farmer feedback and the project team's review of how to align PFC with climate goals.
- Avoided Conversation as an Approved Practice - the importance of considering the climate benefits and positive alignment with farmers' objectives.

Pay for Outcomes Programs

The Champaign County Limited Pilot for SHIP required some tactical decisions related to the project timeline and budget. Future exploration on pay-for-outcomes soil health incentive programs could include the following adjustments from the Limited Pilot:

GHG Benefits

The SHIP GHG benefits can be calculated based on any widely accepted, science-based model.

Eligible Practices

The SHIP Practices Table can be updated, and additional practices can be added as modeling/data become available. Counties could select a specific subset of Eligible Practices from the Payment Table to encourage activity that is relevant to that particular geography.

Buffer Pool

Producers could be paid for 90 percent of the carbon capture, with the remaining 10 percent representing a buffer pool to acknowledge risk of unavoidable loss of carbon stock.

Enrollment

A more formal and standardized process for promoting SHIP could be adopted, including a Notice of Funding Opportunity and target dates and timelines.

Monitoring and Verification

Applicants could be required to complete a monitoring and verification plan template (“Plan”) as part of their application, consenting to site access and soil testing for the duration of the SHIP Agreement and extending five years after the SHIP Agreement term ends. SHIP Participants could also be required to submit project-related financial records and documentation (such as receipts for services/goods; photographs) to ensure SHIP funds are used in compliance with the SHIP Agreement terms and conditions. If a Recipient is found to be in non-compliance with a SHIP Agreement, the Recipient could be required to return the Incentive Payment received together with a 15 percent penalty. These funds could then be available for new SHIP contracts. Project Verification including soil testing could be managed by a program administrator, or sub-contracted to SWCDs or a third-party contract entity. Core verification activities could include desktop review, site visit, and sampling plan. This includes on-farm evaluations on specific fields to verify program compliance during the SHIP Agreement term. Additional verification methods include video conferencing, aerial surveys and satellite imagery, and soil testing.

Treatment of Early Adopters

The Limited Pilot required all projects to implement at least one of the 18 Eligible Practices listed on Payment Table; however it allowed practices on fields where said practice had previously been implemented. The SHIP program could be adjusted to target eligibility for new practice adoption. Ideally the program would include an upfront payment for existing carbon above a baseline, together with an additional payment reflecting management over time in a way that increases soil carbon levels even further above the baseline. In this way, early adopters are not penalized; rather their early adoption is recognized.

Contract Period

SHIP Agreements could renew automatically for an additional two terms, unless the Recipient opts out.

Illinois Partners for Conservation Program

Some basic changes to the Illinois Partners for Conservation Program could help it become a better framework for expansion:

- Consistent timing of payments from the State to SWCDs, on a schedule aligned with producer decision-making;
- Standardized, transparent, and consistent formula for calculating amounts distributed to SWCDs;
- Mechanisms to ensure equity in capacity across counties;
- Drivers to ensure dollars are generating results rather than paying for activity that would otherwise already happen;
- Provide for longer contracting period or automatic contract renewals as a way to decrease administrative load, thereby expanding capacity of SWCDs



Avoided Conversion as a Climate Strategy

Illinois would benefit from including the concept of Avoided Conversion into the important work to advance climate-smart agriculture across the farming landscape. This project explored two Avoided Conversion strategies: Avoided Conversion of CRP Ground to Cropland; and Avoided Conservation of Farmland to Development.

There are some advantages to anchoring a soil carbon program with a perennial cover option. With perennial cover, it is easier to calculate and to verify the climate benefits. The benefits per acre are also greater than in-field practices, and they are not subject to the same pressure for operational flexibility that prevents producers from making long-term commitments. Many producers stay with the Conservation Reserve Program for decades for this reason.

In addition, the concept of Avoided Conversion of Farmland to Development should also be considered as a climate-smart agricultural strategy for Illinois. Past research has shown that agricultural land emits 50 to 70 times less greenhouse gas emissions than developed land. Accordingly, the GHG benefit of keeping at-risk farmland in agriculture rather than having it developed is substantial. Moreover, most often farmland is protected from development via a one-time investment through purchase of development rights from willing sellers. In contrast, payment for in-field practices requires ongoing investments every year or every few years. Over time, annual or biennial payments add up as do the transactional costs associated with regular re-enrollment and contracting.

In Illinois, loss of farmland from conversion to urban and rural residential, commercial and industrial uses undermines the investments being made to decrease emissions and increase carbon storage in agricultural lands. A “both/and” climate strategy for Illinois would simultaneously enhance carbon storage on agricultural lands and include an option to avoid conversion of important at-risk agricultural lands to non-agricultural uses.



Source: The Conservation Fund

CONCLUSION

The SHIP Limited Pilot was successful in many aspects, but more work remains to create a program that is scalable throughout Illinois and aligns with existing programs and goals such as those in the Nutrient Loss Reduction Strategy.

The project was able to create a streamlined application, quantification, and payment process. Payment timing and stacking application requirements can be improved to align with farmer needs and reduce administrative burden. The SHIP framework can be aligned with existing or future programs and objectives, but it must be done thoughtfully and with assurance of consistent funding for required programmatic infrastructure. The program should also be designed to align with broader priorities, such as reducing the pressure for farmland conversion to non-agricultural uses, and increasing farmer participation independent of farm size.



Source: The Conservation Fund



APPENDIX A: PROJECT METHODOLOGY

The project methodology included:

Baseline Evaluation

- Review Existing Soil Carbon Protocols
- Explore Emerging Market-based Carbon Incentive Programs
- Review Compliance-Market Offsets verified for Illinois
- Identify Existing State “Soil Health” Programs

Develop Proposed Programmatic Framework

- Solicit feedback from stakeholders through outreach

Generate Application

- Select Eligible Conservation Practices
- Using COMET-PLANNER, calculate Greenhouse Gas Benefit for the Selected Practices
- For the Avoided Conversion practice, establish Mt CO₂e
- Select price per Mt CO₂e
- Generate Application, Instructions, FAQ
- Conduct Outreach and Enrollment
- Contract, Rank, and Make Payments

Assess Results and Lessons Learned

- Analyze and Aggregate SHIP contracting data
- Exit Interviews

Refine and Share Written Programmatic Framework



APPENDIX B: AVOIDED CONVERSION OPTIONS UNDER SHIP

The SHIP program explored two different potential incentive payment options based on avoided conversion: Avoided Conversion of Expiring CRP Ground to Cropland; and Avoided Conversion of Farmland to Development.

The Avoided Conversion options reflect an acknowledgment of the inherent contradiction in paying farmers to create new carbon storage, while doing nothing to keep existing carbon storage intact. The challenge of climate change requires strategies that both prevent activity that will release current carbon storage and increasing carbon storage.

Under the “Avoided Conversion of CRP to Cropland” practice, the SHIP Limited Pilot offered applicants an innovative opportunity to be paid for maintaining carbon stocks that had accrued in the soil over decades under the USDA’s Conservation Reserve Program (CRP), rather than tilling the ground and releasing the carbon once the CRP contracts expired.

The project team also explored an “Avoided Conversion of Farmland to Development” practice, which could be offered to farmers whose land is under threat of conversion from agriculture to more intensive development (such as urban or rural residential, commercial, or industrial uses). Under this type of payment structure, farmers would be able to sell the future development rights to their land, while maintaining the current agricultural and other ongoing uses. The legal mechanism used to sell development rights is a farmland conservation easement.

Avoided Conversion of Expiring CRP Ground

USDA’s Conservation Reserve Program (CRP) is one of the largest federally administered private land retirement programs. Under CRP, in exchange for annual per-acre rental payments, farmers and landowners voluntarily remove environmentally sensitive land from agricultural production to conserve soil, water, and wildlife resources. CRP contracts generally run for a 10- or 15-year term, with annual payments reflecting lost income from taking land out of production. In 2021, CRP is capped at 25 million acres; currently 20.8 million acres are enrolled. The cap will gradually increase, to 27 million acres by 2023.

In Illinois, CRP enrollment is generally in the 800,000 to 900,000-acre range statewide. This amount represents close to one million acres of land that is currently in perennial cover and providing climate and multiple other co-benefits. The table below shows the number of acres under CRP contracts in Illinois that are set to expire each year from 2020 to 2027.

Table 2. Expirations (acres) by Year in Illinois

Year	2020	2021	2022	2023	2024	2025	2026	2027+
Acres	138,046	67,918	67,242	95,544	34,431	72,007	122,983	100,617

Source: USDA Farm Service Agency



Overall, Illinois had 7,053 CRP contracts set to expire on September 30, 2021 that covered 67,053 acres. In 2020 approximately 47,897 acres that had been enrolled in CRP left the program, out of a total 138,046 acres under expiring contracts. Although the 2020 figures show that approximately 30% of expiring CRP contracts were not renewed in that year, the number of acres that leave the program every year fluctuates widely due to a number of variables.

The Project Team included an Avoided Conversion of CRP Ground option to the Illinois SHIP Champaign County Limited Pilot, for a number of reasons. First, an understanding that Illinois producers' demands for CRP contracts cannot be fully met through the current program. Second, there are some advantages to anchoring a soil carbon program with a perennial cover option. With perennial cover, it is easier to calculate and easier to verify the climate benefits. The benefits per acre are also greater than in-field practices, and they are not subject to the same pressure for flexibility that prevents producers from making long-term commitments. Also, USDA is currently experimenting with new ways to implement CRP to address climate change. These include:

- The addition of a new CRP Climate-Smart Practice Incentive to incentivize practices that sequester carbon and reduce emissions. Climate-Smart CRP practices include establishment of trees and permanent grasses, and the development of wildlife habitat and wetland restoration. Incentive payment is based on the benefit of each practice type.
- The new Clean Lakes, Estuaries, And Rivers initiative (CLEAR30) offers 30-year CRP contracts to install certain water quality practices.
- A new \$10 million initiative to sample, measure, and monitor soil carbon on CRP acres to better quantify the climate outcomes of the program. These practices include perennial grasses, tree plantings, and wetlands.
- The USDA's Soil Health and Income Protection Program (SHIPP) Pilot, which allows for a maximum of 50,000 acres in the prairie pothole states of Iowa, Minnesota, Montana, North Dakota, and South Dakota to be enrolled in a shorter term (3, 4, or 5 years) CRP contract to plant cover on less productive agricultural lands while improving soil health and carbon sequestration.

Champaign County has hovered around 10,000 acres enrolled in CRP in any given year from 2003 to 2018. The project team was curious to see if any of the landowners with expiring CRP contracts would be interested in an incentive to keep their land in perennial cover even after the CRP contracts expired.

CCSWCD was able to identify 55 CRP contracts in Champaign County that expired on September 30, 2021, without re-enrollment. Because the CRP contracts had expired, the perennial cover could have been cut down and/or tilled under, releasing carbon stores that had been accruing, in some instances for many decades. These contracts totaled 303 acres. SWCD found addresses for 15 people with expired CRP contracts and sent a postcard to each landowner letting them know that if they did not plan to re-enroll in CRP but wanted to keep doing the conservation practice, the SHIP program was an option for them. Three landowners responded and enrolled in the Avoided Conservation SHIP option.



Avoided Conversion of Farmland to Development

Past research has shown that agricultural land emits 50 to 70 times less greenhouse gas emissions than developed land, with urbanized land averaging 51 Mt CO₂e per acre per year. In rough terms this means that keeping one acre of farmland from conversion to urban uses for 100 years equals 5,000 acres in cover crops for one year. For this reason, keeping Illinois' prime agricultural lands in productive farming uses when that land is otherwise threatened with development and conversion can be a strong climate strategy for the state.

According to the Illinois Department of Agriculture, Illinois has lost 3.6 million acres of farmland since 1950, and that trend continues. Farmland in Illinois is vulnerable to pressures from climate change and shifting land use patterns, including urban and rural residential growth, and renewable energy development. On average, one acre is developed for every two new people added to the state's population. This loss is magnified because Illinois has some of the most productive, versatile, and resilient soils in the nation. Directly and indirectly, the business of farming employs one million Illinoisans and 20 million others nationwide. Marketing of Illinois' agricultural commodities generates about \$8 billion annually. Agriculture-related industries, such as farm machinery manufacturing, agricultural real estate, and production and sale of value-added food products, contribute billions more to the state's economy.

Recent research from American Farmland Trust shows that Illinois ranks in the bottom 25% of all states in terms of policy responses to conversion of farmland to development. Recommended policy responses include adoption of state-level farmland protection programs that compensate farmers for voluntarily selling their development rights and ensuring that the farmland remains available for farming even as population expands.

Incentive payments for avoided conversion to development are currently being successfully offered through California's Sustainable Agriculture Lands Conservation (SALC) program, which is funded by the state's cap and trade program revenue. The SALC program fights climate change by protecting productive farmlands from conversion to other more carbon-intensive uses, such as urban or rural residential use, while simultaneously protecting food security. Protecting farmland avoids increased emissions associated with development and retains an opportunity to capture carbon in the land base. The SALC program calculates the greenhouse gas emissions avoided through farmland protection using a quantification method certified by the California Air Resources Board. This methodology uses calculations to estimate avoided emissions from reduced vehicle miles traveled (VMT), reduced utility use, and avoided loss of soil organic carbon. By keeping land in farming, SALC also promotes the retention of local jobs and agricultural revenue. Other co-benefits include the protection of wildlife habitat, biodiversity, and improved human health.

Based on the limited scope of this pilot, the project team was unable to offer this as an option for the Champaign Limited Pilot. However, The Conservation Fund has currently engaged consultants to translate the SALC quantification methodology to the Midwestern agricultural landscape. Once this research project is completed (estimated Fall 2022), a quantification methodology to calculate the greenhouse gas emissions benefits from permanently protecting at-risk farmland will be available for Illinois and could support an expanded pilot of the SHIP program or other efforts.



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- ⁵ Pennsylvania Department of Agriculture. (2022). Resource Enhancement & Protection (REAP) Grant Program. Retrieved March 21, 2022, from https://www.agriculture.pa.gov/Plants_Land_Water/StateConservationCommission/REAP/Pages/default.aspx



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Delta Institute works with communities throughout the Midwest to solve complex environmental challenges. We envision a region in which all communities and landscapes thrive through an integrated approach to environmental, economic, and social challenges.

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