



United States Department of Agriculture

DELAWARE

FY2022

Natural Resources Conservation Service ACCOMPLISHMENTS REPORT



Natural Resources Conservation Service

nrcs.usda.gov/de

November 2022



Helping People Help the Land

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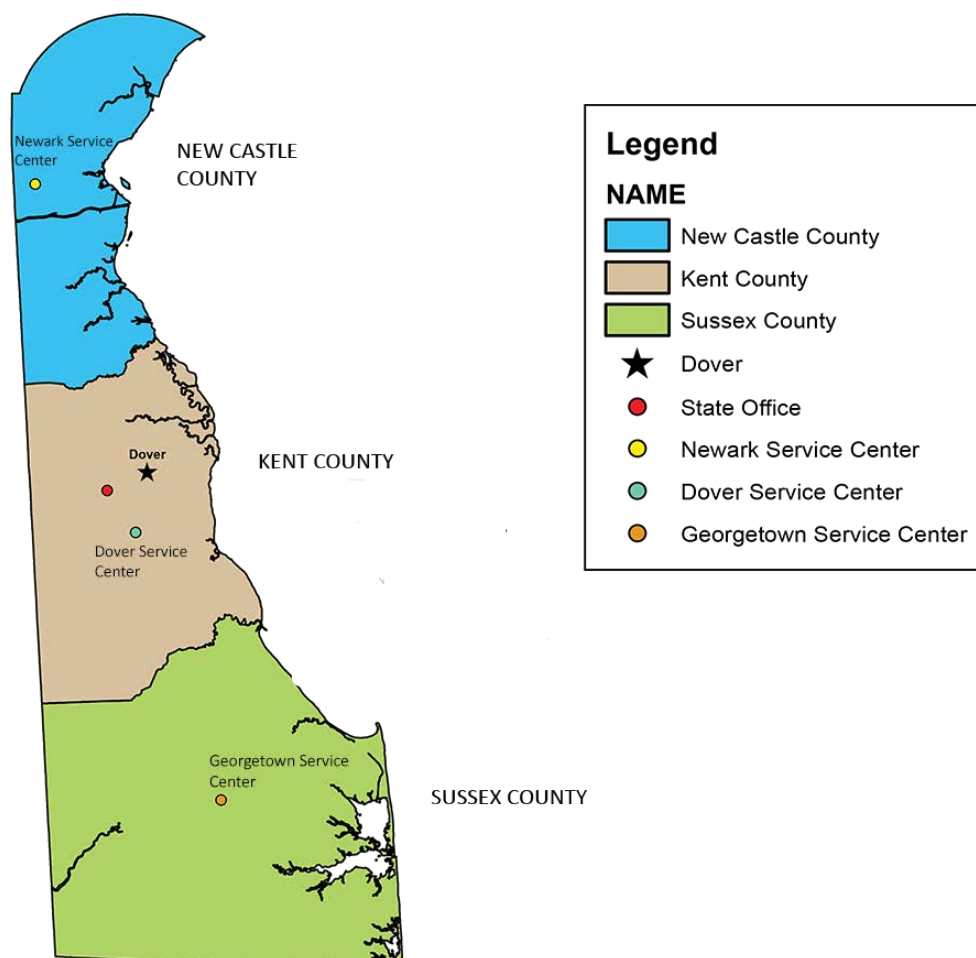
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DELAWARE



Inside NRCS in Delaware - Fiscal Year (FY) 2022

Farmers and forest landowners are the backbone of Delaware's strong agricultural industry. The USDA Natural Resources Conservation Service (NRCS) in Delaware is committed to helping these agricultural producers achieve their conservation goals on privately-owned lands.

Conservation systems are helping Delaware's agricultural operations be more efficient, productive, and profitable. These systems also help landowners reduce off site impacts, comply with environmental regulations, and protect their eligibility for most USDA programs, including crop insurance.

There is tremendous demand by Delaware's farmers and agricultural producers for NRCS' technical and financial assistance. Each year, NRCS is consistently able to use all of the allocated funds of its flagship program, the Environmental Quality Incentives Program (EQIP), in the first application cutoff period. In FY2022, Delaware funded nearly 100 percent of eligible EQIP applications.

NRCS has and continues to work closely with local soil and water conservation districts, state agencies, nongovernmental entities, and other federal agencies and partners to meet local needs on a grassroots level. Through partnerships, NRCS coordinates public and private resources to implement scientifically based, locally-led voluntary conservation efforts. Using this comprehensive approach, farmers and forest landowners are able to help the land function as a living, sustainable system which provides a high standard of living and quality of life now and for future generations.



Message from the State Conservationist

Fellow Conservationists and Friends,

It brings me great pleasure to share the fiscal year 2022 accomplishments in conservation delivery by the USDA Natural Resources Conservation Service (NRCS) and our conservation partners in Delaware. This report is an opportunity to recognize the tremendous work of our collaborative efforts and the impact that conservation has had on Delawareans this year. Through the demonstrated commitment of voluntary conservation, we have continued the implementation of proven conservation solutions that will “help people help the land.”



As we continue the implementation of the Delaware Strategic Plan, our focus remains rooted in our two most critical resource concerns, the People and the Land.

The People – We will support our valued internal and external stakeholders in service to Delaware’s natural resources.

The Land — We will support the resilience of Delaware agricultural landscapes.

Shown throughout this report are the specific actions and achievements instrumental in reaching our vision for clean and abundant water, healthy soils, resilient landscapes and thriving agricultural commodities. Several key achievements in FY 2022 include the following:

- Implemented strategies to increase employees’ competencies and technical leadership to ensure timely service to Delawareans for prescriptive conservation solutions. By empowering employees and providing them with the necessary tools and resources to drive scientific, technical, and operational innovation, we are continuously improving the adoption of conservation practices and expanding our services to our customers and partners.
- Expanded conservation tools and support to address the unique needs of urban and small farmers. The Urban Agriculture and Small Farms Subcommittee (of the Delaware State Technical Advisory Committee) has worked to better guide the state in addressing urban agriculture needs, while expanding outreach efforts. As a result of this leadership, Delaware has adopted new conservation practices standards and payment scenarios that are specific to small and urban farmers to address concerns related to plant production, inefficient water use, pest management and soil health.
- Launched the Delaware environmental assessment to expand service and support for new and expected resource concerns for poultry producers in the state. The assessment’s goal is to allow new poultry producers to apply for financial assistance in advance of placement of birds in poultry houses.
- Ensured equity in the delivery and implementation of all NRCS programs and services. As such, Delaware NRCS provided nearly \$4.5 million or 60% of funds for beginning, socially disadvantaged and urban farmers.
- Prioritized Climate Smart Agriculture and Forestry practices in several existing conservation programs to help producers build healthier soils, improve nutrient stewardship, and increase energy efficiency to adapt to changes in climate.



- Worked with federal, state, and local partners to establish the Riparian Forest Buffer (RFB) Coordinating Committee, which has identified opportunities to increase riparian forest buffers numbers statewide. This effort is key to meeting Delaware's current goal to install 65 acres of RFBs as outlined in the Chesapeake Bay Watershed Implementation Plan (WIP).
- Partnered with Quail Forever to target outreach efforts to increase populations of the northern bobwhite through a national Working Lands for Wildlife (WLFW) initiative. We recognize the critical need to address conservation challenges contributing to a downward trend in bobwhite numbers.

As we look towards 2023, we will focus our efforts on addressing the following:

Ensuring that all customers have a seat at the conservation table by expanding outreach to underserved populations; increasing assistance for climate-smart agriculture and forestry; expanding conservation tools and support to address the unique needs of urban farmers and communities nationwide; cultivating a complete and diverse workforce that has the right tools, technologies, and training to uphold the scientific integrity of NRCS; and leveraging innovative partnerships to expand NRCS' ability to get conservation on the ground effectively and efficiently.

I encourage you to review this report to gain a better insight into our delivery of technical and financial assistance to our customers and the importance of voluntary conservation for all Delawareans.

Yours in conservation,



KASEY L. TAYLOR
State Conservationist, Delaware



Conservation Results Delivered - FY2022



Delaware farmers and landowners are using conservation systems to protect and improve water quality. These systems use conservation practices proven to reduce nutrient and sediment transport to surface water and groundwater. This comprehensive approach also benefits soil health, air quality, wildlife habitat and strengthens the profitability of agricultural operations. Conservation applied on any acre delivers an environmental benefit, but when conservation is approached comprehensively, the results are greater.

Listed here are the direct results¹ of three essential NRCS-funded² conservation systems focused on improving water quality within the state in FY2022 along with practices proven to address additional resource concerns.

Cover Crops³

Play a major role in improving water quality by scavenging residual nitrogen, reducing erosion and sedimentation, and improving infiltration.

Delaware farmers have planted 7,428 acres of cover crops which has resulted in the following:

- 118,848 lbs. of Nitrogen reduced
- 81,708 lbs. in sediment reductions

*4,320 acres of cover crop enhancements were applied through the Conservation Stewardship Program (CSP) to improve soil health, increase soil organic matter, suppress excessive weed pressures, and break pest cycles.

Animal Waste Management Systems

The application of this conservation system ensures effective storage and management of animal manure until the nutrients from the manure can be properly applied to a growing crop.

Delaware farmers have applied 169 Heavy Use Area Pads, 25 Animal Mortality Facilities and 29 Waste Storage Structures, which have resulted in the following:

- 28,433 lbs. of Nitrogen reduced
- 980 lbs. of Phosphorus reduced

Results: Cropping Systems

Includes No-Till, Mulch-Till and Nutrient Management. These practices effectively manage the application of nutrients and limit soil disturbance to improve crop nutrient uptake, increase infiltration, and reduce sediment transport.

Delaware farmers have installed Nutrient Management practices on 5,725 acres. Together, these practices have made the following impact:

- 9,160 lbs. of Nitrogen reduced
- 115 lbs. of Phosphorus reduced

*7,940 acres of nutrient management enhancements were applied through CSP to improve nutrient uptake efficiency and reduce risk of nutrient losses to surface water and to air quality

¹ Nutrient and sediment reduction rates for the practices are taken from the Chesapeake Bay Model.

² Funding through NRCS' Environmental Quality Incentives Program. ³Cover crop based on a rye mix disked in by 10/30. *CSP numbers were not included in the nutrient and sediment reductions above.



Conservation Results Delivered - FY2022

High Tunnel Systems

Delaware farmers installed 12,828 sq.ft. to cover and protect crops from sun, wind, excessive rainfall, or cold, to extend the growing season in an environmentally safe manner.

Windbreak Shelterbelt/Hedgerow Planting

Delaware farmers installed 14,816 ft of trees, shrubs and grasses which will result in improved air quality, energy efficiency, and water quality.

Soil Carbon Amendment

Delaware farmers contracted to implement 1,500 acres using compost, biochar or other organic carbon amendment to improve soil organic matter, aggregation and soil organism habitat.

Sprinkler System

Delaware farmers contracted to install 11 systems covering 558 acres, which will result in improved efficient and uniform application of water on irrigated lands.

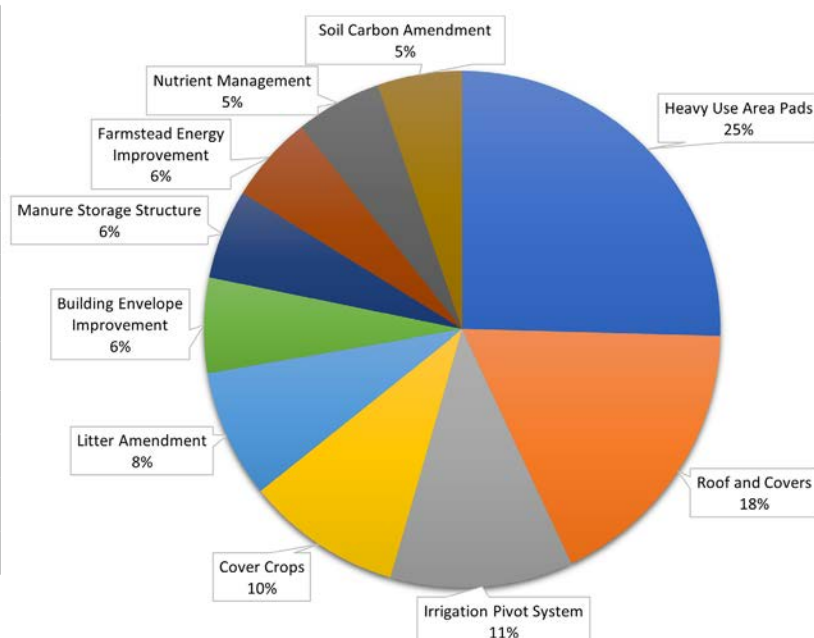
Top 10 Practices

Top 10 Conservation Practices Installed in FY2022

Conserving natural resources on privately owned lands requires a diverse approach. A variety of options and solutions are needed to address and mitigate natural resource concerns while helping landowners achieve their land-use goals.

Conservation practices are utilized to address and treat natural resource concerns. The most utilized conservation practices in FY2022 through NRCS' Environmental Quality Incentives Program by dollars obligated in Delaware include:

PRACTICE	FUNDING APPLIED
Heavy Use Area Pads	\$1,290,000
Roof and Covers	\$894,783
Irrigation Pivot System	\$580,590
Cover Crops	\$495,825
Litter Amendment	\$408,627
Building Envelope Improvement	\$300,547
Manure Storage Structure	\$285,108
Farmstead Energy Improvement	\$278,442
Nutrient Management	\$273,297
Soil Carbon Amendment	\$269,732



CTA

Conservation
Technical Assistance
(CTA)

The Resources staff provides technical leadership to internal and external customers, including producers, conservation planners, agencies, universities, and non-profits, on ecological sciences including agronomy, forestry, wildlife, soil health, and water quality. Staff is responsible for ensuring these practices are installed correctly and managed according to NRCS standards and specifications.

Conservation Planning

The Resources staff has the lead for conservation planning and related training activities. Conservation planning is a process from which conservation plans are developed by working with the landowner to first understand the resource needs and the landowner's desired land use goals. Based on sound scientific practices, NRCS provides hands-on assistance to help the landowner develop a conservation plan. In FY2022, Conservation Assessment Ranking Tool (CART) continued to be improved to assist conservation planners as they assess site vulnerability, existing conditions, and identify potential resource concerns on a unit of land. CART results are used to support conservation planning for the client. CART information helps to prioritize programs and report outcomes of NRCS investments in conservation.

Cultural Resources

NRCS continues to work with the Delaware State Historic Preservation Office to complete cultural resources reviews through a Prototype Programmatic Agreement. Keeping cultural resources provides the basis for understanding our human past while keeping natural resources in balance helps provide the basis for a healthy and profitable farm environment. In FY2022, the Cultural Resources Specialist completed 50 reviews and field investigations throughout Delaware. NRCS is working with federally recognized tribes to develop a Prototype Programmatic Agreement for cultural resource reviews beginning in 2023.



Urban

In FY2022, NRCS focused its efforts on addressing barriers of urban farmers to access agency and partner resources. This included tailoring NRCS traditional practices for small and urban farmers and utilizing multiple agency programs to fund them. NRCS also created a ranking pool to specifically target and fund Urban Agriculture. Since 2020, NRCS has funded nine urban projects for over \$50,000.

NRCS has partnered with the New Castle Conservation District to develop an urban farmer training program to provide hand-on trainings, educational materials, and increased networking. A website, <https://www.deuffc.org/>, has been developed to serve as a hub for urban farming resources. Small and urban farmers can access information on funding opportunities, local events, ways to get involved with the urban community and much more.

Wildlife

NRCS continues its partnership with Ducks Unlimited (DU) to lead NRCS' Working Lands for Wildlife initiative to enhance and restore habitat for the American Black Duck. In FY2022, Delaware NRCS approved five contracts to benefit waterfowl habitat. In addition, farmers treated 1,031 acres of phragmites to improve wildlife habitat through invasive species control.

In FY2022, NRCS in Delaware along with partners trained conservation planning staff and reached out to farmers to reverse Northern Bobwhite declines. Over the next five years, NRCS is setting aside funds for wildlife practices to benefit nesting cover, brood-rearing habitat, forage habitat and escape cover for bobwhites in priority areas throughout the state.

NRCS continues to provide technical assistance for the Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP) to establish wildlife habitat and improve water quality. In partnership with the Farm Service Agency and the Delaware Department of Natural Resources and Environmental Control, landowners enrolled one new CRP site and reenrolled nine CREP sites in FY2022.



Geographic Information System (GIS)

NRCS in Delaware uses GIS applications to produce farm maps and plans for their customers. Farmers.gov is a web-based tool that gives farmers and landowners the ability to access NRCS products and services. Farmers.gov is able to handle any financial or technical requests that farmers or landowners may have and gives customers another option if they are unable to make it to their local USDA Service Center. GIS functionality is present in this application. Spatially, farmers can see their land displayed on the latest aerial imagery that NRCS has to offer.

Conservation Compliance

Highly Erodible Land Conservation and Wetland Conservation Compliance (HEL/WC) also known as conservation compliance reviews are conducted as part of the NRCS Food Security Act responsibilities. Conservation compliance requests are sent to NRCS from the Farm Service Agency, which manages all conservation compliance requests and decisions. Conservation compliance is a requirement for all USDA program participation including easement programs. In 2022, NRCS completed 245 requests for HEL/WC, this included field investigations and data collection to complete determinations and delineations.

Each year, randomly selected tracts are identified for HEL/WC compliance assurance reviews. This includes employees, operators, and FSA county committee members operated tracts. Twenty-one tracts were reviewed and all found compliant in 2022.





ACEP

Agricultural
Conservation
Easement Program

The **Agricultural Conservation Easement Program (ACEP)** provides financial and technical assistance to help landowners conserve agricultural lands and wetlands and their related benefits.

Under the **Agricultural Land Easements (ALE)** component, NRCS in Delaware works with partners to protect working agricultural lands and limit non-agricultural uses of the land.

- In FY2022, DE NRCS continued to collaborate with partners to expand and enhance the ALE component. As a result, efficiency improvements were identified which led to a process improvement project to better align partnership goals and timelines. During this comprehensive undertaking, no ALE applications were funded; however, 15 applications were approved for funding in FY2023.

Under the **Wetlands Reserve Easements (WRE)** component, NRCS helps to restore, protect, and enhance enrolled wetlands through permanent, 30-year or term easements.

- In FY 2022, NRCS in Delaware did not receive any eligible applications; however, an expanded outreach effort will continue into FY2023 to identify potential areas for restoration and preservation in the future.





AMA

Agricultural Management
Assistance (AMA)

The **Agricultural Management Assistance** provides financial and technical assistance to farmers to voluntarily address issues such as water management, water quality and erosion control by incorporating conservation into their farming operations.

Farmers may construct or improve water management structures or irrigation structures; plant trees for windbreaks or to improve water quality; and mitigate risk through production diversification or resource conservation practices (including soil erosion control, integrated pest management or transition to organic farming).

- In FY 2022, NRCS approved 10 AMA contracts for \$218,800 covering 185 acres.



CSP

Conservation
Stewardship
Program (CSP)

The **Conservation Stewardship Program (CSP)** helps farmers, and forest landowners earn payments for expanding conservation activities while maintaining agricultural production on their land. CSP also encourages the adoption of new technologies and management techniques.

CSP participants maintain and enhance the treatment of soil quality, soil erosion, water quality, water quantity, air quality, plants, animals and energy.

- In FY2022, Delaware NRCS provided \$514,500 in financial assistance through six new contracts on 4,340 acres.
- Delaware NRCS renewed three CSP contracts which were expiring in 2022. They totaled \$149,000 in financial assistance and covered 1,205 acres.
- All CSP contracts are for a term of five years. Overall, DE NRCS is currently providing technical and financial assistance to 35 active CSP contracts on 35,560 acres totaling more than \$3.2 million.





EQIP

Environmental Quality
Incentives Program

The **Environmental Quality Incentives Program (EQIP)** is a voluntary program that provides financial and technical assistance to agricultural producers to implement conservation practices which optimize environmental benefits on working lands. In addition, EQIP can help producers meet federal, state, and local environmental regulations.

Delaware's EQIP incorporates environmental priorities as identified at the state level (State Technical Advisory Committee) and local levels (Local Work Groups) into the selection of what specific program options will be offered, and what factors, questions and screening tools will be used in the application ranking process.

In FY 2022, NRCS approved 159 contracts helping to address resource concerns on 16,405 acres, totaling \$7.57 million.

FY 2022 EQIP Funding Opportunities Include:

- Beginning & Socially Disadvantaged Farmer
- Cropland
- Drainage Water Management
- High Tunnels
- Livestock
- On-Farm Energy
- Organic
- Poultry Headquarters
- Urban
- Wildlife:
 - ✓ American Black Duck
 - ✓ Northern Bobwhite
 - ✓ Pollinators





RCPP

Regional Conservation
Partnership Program (RCPP)

The Regional Conservation Partnership Program (RCPP) promotes coordination of NRCS conservation activities with partners to further address on-farm, watershed, and regional natural resource concerns. Through RCPP, NRCS seeks to co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges and provide measurable improvements and outcomes tied to the resource concerns they seek to address.

In FY2022, Delaware NRCS provided assistance for the following RCPP project:

- **Protecting Delaware Bay and Inland Bays with Cover Crops:**
Four approved contracts for \$43,400 covering 605 acres.

Recent RCPP Projects in Delaware include:

- Chesapeake Bay Farm Stewardship and Preservation
- Cost-share Opportunities for Beginning Farmers*
- Energize Delaware Farm Energy Efficiency Program

* Denotes a renewed project.





ENG

Engineering Solutions

The Delaware NRCS engineering team provides sound technical leadership and guidance to producers and customers to apply conservation on the land. Technical assistance is provided through site evaluations, survey, design, construction layout, construction supervision and certification of properly completed practices.

In the past year, over 60 Delaware engineering and ecological science conservation practice standards (CPS) have been updated including the addition of new standards. Visit the Electronic Field Office Technical Guide (eFOTG) at efotg.sc.egov.usda.gov for the updated CPS and supporting documents.

In FY2022, the engineering team worked with partners to provide designs for energy and conservation drainage practices. A conservation drainage field day was held to educate staff and producers about the environmental and crop production benefits of the practices and to introduce new technologies such as automated water control structures.

Engineering staff continued working with a contractor to provide a watershed plan for the Upper Nanticoke River Watershed to address the aging tax ditch systems.

Staff has continued to assist urban and small farmers by developing designs targeting their needs such as composters, raised beds and irrigation water management.





SOILS

Soil Sciences

NRCS is a leader in soil science, playing a pivotal role in classifying and mapping soils as part of the National Cooperative Soil Survey. Accurate soils information is the foundation on which NRCS and many partners base their resource initiatives on.

- In FY2022, the soils staff in Delaware, in cooperation with the soil survey division updated 16 map units which encompass 25,500 acres of soil information to more accurately reflect our understanding of these soils.

Access to accurate soils information is always available online for the whole state through the [Web Soil Survey](#), [Geo-Spatial Data Gateway](#) and the [electronic Field Office Technical Guide \(eFOTG\)](#).

Technical Soil Sciences (TSS)

The soils team performs Technical Soil Services (TSS) by assisting landowners, partners, and resource managers in using soils information from site specific investigations to more accurately define the types of soil on their farms for specific land uses. Requests range from onsite geo-technical investigations for agricultural structures and best management practices to environmental compliance requirements associated with farm bill programs. More than 400 sites have been analyzed with portable X-ray Fluorescence equipment in FY2022 to quantify soil heavy metal contents across the state and region.





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