DELAWARE
FY 2021
Accomplishments Report

Helping People Help the Land
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Fellow Conservationists and Friends,

I am pleased to highlight the unwavering commitment to conservation solutions that was completed by the USDA Natural Resources Conservation Service (NRCS) and our conservation partners in Delaware for fiscal year (FY) 2021.

While there have been ongoing challenges due to the pandemic; through it all, we have persevered with the management and support of conservation investments totaling $14.8 million in FY21 alone.

The investments have focused our efforts on our two most critical resource concerns, the People and the Land as outlined in the Delaware Strategic Plan.

The People - Support our valued external and internal stakeholders in service to Delaware’s natural resources.

In harnessing the opportunities to achieve our vision for delivery of conservation solutions, we have achieved the following:

- We partnered with the Delaware Association of Conservation Districts to assist with development of resource management systems, or whole farm plans, in the state. This multi-year project has expedited the application process for the working lands programs in the state.
- Identified strategies to improve efficiency within the workplace related to Communications and Guidance, Policy and Procedure, Training, Technology and Line and Staff. By empowering the field and providing employees with the necessary tools and resources to drive scientific, technical, and operational innovation, we are continuously improving how we serve our customers and work with our partners.
- We have focused on the employees’ competencies to continuously increase their knowledge, skills, and abilities. The goal is to increase employee certification and job approval authorities, resulting in expanded adoption of conservation practices.
- Harnessed the power of partnership and shareholders. The core conservation partnership meets monthly to increase efficiencies for working lands and restoration programs. The results of these efforts are additional boots on the ground, improvement for technology exchange and transfer that is occurring on federal and local levels. The increased training collaborations will focus on technical certification and leveraging of funds to aid with the implementation of prescribed practices throughout the state.

The Land — Support the resilience of Delaware agricultural landscapes.

In our shared goal to increase the sustainability of agricultural and forest land, we have achieved the following:

- Developed a strategy to identify and reduce other agricultural impacts to surface and groundwater sources. Delaware prioritized funding for projects in groundwater basins identified by the Source Water Protection Program (SWP) where 10% of the funds have been allocated to move this effort forward.
State Conservationist’s Message (continued)

- Integrated soil health into the conservation planning process and program delivery. We have partnered with the Delaware Association of Conservation Districts (DACD) to increase the promotion of soil health benefits and methods to customers and partners through field days, focused dialogues for new scientific innovations and the Delaware Soil Summit.

- We have partnered with the Delaware Department of Natural Resources and Environmental Control (DNREC) and the US Fish and Wildlife Service (US FWS) for the return of the bobwhite quail 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 2022, we will focus our efforts on addressing the following: Evolving agricultural landscape in the state; 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 the continued leveraging for innovative partnerships to expand NRCS’s ability to get conservation on the ground effectively and efficiently to ensure a viable resource base within the state.

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!

In Delaware, farmers and landowners are using conservation systems to protect and improve water quality. These systems utilize conservation practices that are proven to reduce nutrient and sediment transport to surface water and groundwater. In addition to improved water quality for all, this comprehensive approach 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.

Here are the direct results\(^1\) of three essential NRCS-funded\(^2\) conservation systems that are improving water quality within the state in FY2021:

**Results: Cover Crops\(^3\)**

Delaware farmers have planted 7,795 acres of cover crops which has resulted in the following:
- 125,499 lbs. of Nitrogen reduced
- 86,524 lbs. in sediment reductions

**Results: Animal Waste Management Systems**

Delaware farmers have applied 100 HUAPs, 14 Animal Mortality Facilities and 17 Waste Storage Structures, which have resulted in the following:
- 16,703 lbs. of Nitrogen reduced
- 576 lbs. of Phosphorus reduced

**Results: Cropping Systems**

Delaware farmers have installed Nutrient Management practices on 4,150 acres. Together, these practices have made the following impact:
- 6,640 lbs. of Nitrogen reduced
- 83 lbs. of Phosphorus reduced

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\(^1\)Nutrient and sediment reduction rates for the practices are taken from the Chesapeake Bay Model. \(^2\) Funding through NRCS’ Environmental Quality Incentives Program. \(^3\) Cover crop based on a rye mix disked in by 10/30.
Agricultural Conservation Easement Program (ACEP)

ACEP provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits.

**Agricultural Land Easements (ACEP - ALE)** - Under this component, the Natural Resources Conservation Service (NRCS) helps partners protect working agricultural lands and limit non-agricultural uses of the land.

NRCS works with approved state or local units of government and certain nongovernmental organizations who arrange for the purchase of development rights through conservation easements on private lands. The entity holds and manages these conservation easements in perpetuity.

NRCS may contribute up to 50 percent of the fair market value of the agricultural land easement on approved parcels. All parcels are ranked individually on their own merit. Funds are awarded to the highest ranked eligible parcels through a statewide competitive process. Partner entities must bear the cost of appraisals, surveys when needed, title search, legal and closing costs, and monitoring and enforcement of the easement.

**2021 Accomplishments**

Delaware NRCS entered into an agreement with the Delaware Department of Agriculture (DDA), Delaware Agricultural Lands Preservation Foundation (DALPF) to purchase easements on 11 farms in Delaware.

ACEP-ALE provided funds of $1.5 million to the DALP Foundation to help purchase these farmland easements, which totaled $3 million. The total acreage enrolled into the preservation easements were approximately 1,428 acres.

**Wetlands Reserve Easements (ACEP - WRE)** - Under this component, NRCS helps to restore, protect and enhance enrolled wetlands. Through the wetlands reserve enrollment options, NRCS may enroll eligible land through:

- **Permanent Easements** – Permanent easements are conservation easements in perpetuity. NRCS pays 100 percent of the easement value for the purchase of the easement. Additionally, NRCS pays between 75 to 100 percent of the restoration costs.

- **30-year Easements** – 30-year easements expire after 30 years. Under 30-year easements, NRCS pays 50 to 75 percent of the easement value for the purchase of the easement. Additionally, NRCS pays between 50 to 75 percent of the restoration costs.

- **Term Easements** - Term easements are easements that are for the maximum duration allowed under applicable State laws. NRCS pays 50 to 75 percent of the easement value for the purchase of the term easement. NRCS also pays between 50 to 75 percent of the restoration costs.

**2021 Accomplishments**

Delaware initiated restoration on two wetland reserve easement sites totaling 83 acres in FY 2021.

There was one WRE application that was funded in FY 2021, which totaled $199,293. The total acreage enrolled was approximately 71 acres. An expanded outreach effort will continue into FY2022 to identify potential areas for restoration and preservation in the future.
Agricultural Management Assistance (AMA)

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).

Historically underserved producers (limited resource farmers, beginning farmers, socially disadvantaged producers, and Veterans who are beginning farmers) may be eligible for a higher practice payment rate for the implementation of conservation practices and conservation plans.

AMA is available in 16 states where participation in the Federal Crop Insurance Program is historically low: Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia and Wyoming.

2021 Accomplishments
Delaware received 98 AMA applications in FY 2021. Delaware’s approved contracts cover 433 acres for a financial assistance total of $224,403.

Conservation Stewardship Program (CSP)

The Conservation Stewardship Program (CSP) helps agricultural producers build on existing conservation systems and adopt additional conservation activities to address priority resource concerns. CSP participants are maintaining and enhancing the treatment of soil quality, soil erosion, water quality, water quantity, air quality, plants, animals and energy. Eligible lands include cropland, grassland, improved pasture land and nonindustrial private forestland.

Due to improvements, CSP is easier to understand, more flexible and more accommodating to local priorities. NRCS also added a significant number of enhancements and practices.

CSP is available to all producers nationwide, regardless of operation size or crops produced. Applications are accepted on a continuous basis with announced ranking cut-off dates when the ranking and funding of applications on file will occur. Applications need to include the applicant’s entire operation and are evaluated and ranked relative to other applications that address similar resource concerns in Delaware. In the ranking process, applicants receive credit for both - conservation measures they have already implemented and for new measures they agree to add. Applications addressing the most resource concerns to the highest degree will receive the highest rankings.

2021 Accomplishments
In FY 2021, Delaware NRCS provided $239,540 in financial assistance through two new contracts on 3,458 acres.

Delaware NRCS renewed seven CSP contracts which were up for expiration in 2021. They totaled $970,465 in financial assistance and covered 8,685 acres.

All CSP contracts are for a term of five years. Overall, DE NRCS is currently providing technical and financial assistance to 51 active CSP contracts on 46,595 acres totaling more than $1 million annually.

(Note: CSP payments are administered on an annual basis.)
Conservation Technical Resources

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 FY2021, Conservation Assessment Ranking Tool (CART) was 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.

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 FY2021, there was a continued increase in interest and participation, including ten signups to install conservation practices beneficial to waterfowl habitat. Two projects began construction in the fall of 2021.

Beginning in FY2021, NRCS in Delaware with assistance from it’s partners is hoping to reverse Northern Bobwhite Quail 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. Historically, land use favored bobwhite, but changes in agricultural practices, land use and how lands are managed have caused the bird’s numbers to dip by more than 80 percent over the last 60 years.

Eligible landowners can now receive technical and financial assistance to implement a variety of conservation activities to restore northern bobwhite quail habitat.

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, one new CRP site was enrolled and 16 CREP sites were re-enrolled in FY2021.

Cultural Resources
NRCS continues to work with the Delaware State Historic Preservation Office to complete cultural resources reviews through a Prototype Programmatic Agreement. Keeping
Conservation Technical Resources (continued)

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 FY2021, the Cultural Resources Specialist completed 63 reviews and field investigations throughout the State of Delaware.

Urban Conservation
NRCS continued to build upon its strategic outreach effort on urban conservation. Urban farming is one way to provide local, healthy produce to “food desert” communities. Food deserts are areas with limited access to affordable and nutritious food. Helping these farmers properly manage the natural resources on their farm is critical to the productivity and sustainability of their operation. Working with local partners, NRCS engaged and visited with a diverse number and variety of urban growers to understand their barriers. In FY2021, NRCS continued efforts focused on addressing barriers through partner and agency resources including tailoring our traditional practices for small/urban farmers and utilizing the EQIP and AMA programs to fund those practices. NRCS also created a ranking pool to specifically target and fund Urban Agriculture. An Urban Ag Subcommittee was established this year to better lead the state in addressing urban agricultural needs and expand outreach efforts. Since efforts began in 2020, NRCS has funded 7 urban projects for over $31,000.

Geographic Information Systems (GIS)
Conservation Desktop (CD) was introduced in 2019 and continues to add functions to enable NRCS field staff to do their conservation planning effectively and efficiently. It is loaded with GIS functionality and integrated with a lot of applications that NRCS uses on a daily basis. Web-based GIS layers are the wave of the future for GIS, and are constantly being added to Desktop’s user-friendly interface.

Farmers.gov is another web-based tool that gives our 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 our customers another option if they are unable to make it to their local USDA Service Center. GIS functionality is present in this application as well. Spatially, the farmers can see their land displayed on the latest aerial imagery that NRCS has to offer.
Engineering

The Delaware NRCS Engineering Staff 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 proper completion of practices.

Engineering standards, guidance documents, drawings and details are continuously reviewed and updated to keep current with industry standards and technology.

Technical assistance is also provided to staff through training to increase technical knowledge and skills towards providing better assistance to producers.

Quality assurance is an important role of the Delaware Engineering Team. Engineering oversight of projects implemented using public funding ensures they meet NRCS Standards and Specifications and function properly to solve the resource concern as intended. This ensures that the customers receive quality products that last beyond the expected life of the practice.

The engineering team works with conservation partners to increase the opportunities to apply conservation to the land. In FY 2021, the staff worked with partners to provide designs for energy practices and conservation drainage practices and continued working with a contractor to provide a watershed plan for the Upper Nanticoke River Watershed to address the aging tax ditch systems.

Technical assistance was provided by the team for some of the State’s top-funded practices including Waste Storage Structures, Heavy Use Area Pads, Animal Mortality Management, Energy Conservation and Irrigation Water Management Practices. In addition, technical assistance was provided to our newer urban customers to address their conservation needs such as composting and runoff management. The technical assistance spans most of the NRCS funding programs including the Environmental Quality Assistance Program (EQIP), Wetland Reserve Easement (WRE) Program, Agricultural Management Assistance (AMA) and Regional Conservation Partnership Program (RCPP).

Small composter designed for garden waste at the Delaware Food Bank’s urban farm.
The Environmental Quality Incentives Program is a voluntary program that provides financial and technical assistance to agricultural producers to help address and improve soil, water, plant, animal, air and other related natural resources on agricultural land and non-industrial private forestland. In addition, EQIP can help producers meet Federal, State, Tribal and local environmental regulations.

EQIP provides financial assistance payments to eligible producers based on a portion of the average cost associated with practice implementation. Technical assistance is available to help producers develop conservation plans, which are required to obtain financial assistance. A conservation plan is the record of the landowner’s decisions and supporting information for treatment of one or more identified natural resource concerns as a result of the planning process.

NRCS offers incentives for Historically underserved (HU) producers (limited resource farmers, beginning farmers, socially disadvantaged producers, and Veterans who are beginning farmers) including a higher practice payment for the implementation of conservation practices, advanced payment options and dedicated funding pools.

Producers may use a certified Technical Service Provider (TSP) for technical assistance needed for certain eligible activities, services and the development of conservation plans.

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. Ranking worksheets for each program option include evaluation questions that reflect national, state and local priorities.

2021 Accomplishments
Delaware received 225 EQIP applications for FY 2021.

Delaware approved 87 contracts covering 13,424 acres for a financial assistance total of $5.8 million. Included in these numbers are 52 approved contracts covering 2,437 acres to provide financial assistance totaling $4.3 million to beginning farmers, socially disadvantaged and limited resource producers.

EQIP funding options
EQIP funds applications throughout the state that are grouped together into fund pools. Like applications are entered and ranked into eligible fund pools for funding consideration. Through the use of fund pools, we are able to ensure that applications are ranked against each other in a fair and equitable manner. Some of those fund pools include mandatory pools such as our Beginning Farmer and Socially Disadvantaged or Working Lands for Wildlife.

Frequently Used Practices
Heavy Use Area Pads
Waste Storage Structures
Energy
Irrigation (Water Management)
Cover Crops
Nutrient management
Composters
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.

RCPP allows partners the opportunity to design and invest in conservation projects that are specifically tailored to make an impact well beyond what the Federal government could accomplish on its own.

The 2018 Farm Bill made several changes to the Regional Conservation Partnership Program (RCPP):

- RCPP is now a standalone program with its own funding—$300 million annually.
- There are now two funding pools. Partners must apply to either the Critical Conservation Area (CCA) or State/Multistate funding pool. (Funding pools are explained below.)
- There is increased emphasis on project outcomes. All RCPP projects must now develop and report on their environmental outcomes.

RCPP Funding

Funding for RCPP is allocated to projects in two different categories, which include the following:

Critical Conservation Areas (CCA)- Each CCA has an overarching goal that includes addressing priority resource concerns that are common throughout the area.

There are eight geographic areas chosen by the Secretary of Agriculture as CCAs. These receive 50 percent of funding. The Chesapeake Bay Watershed CCA encompasses about a third of Delaware.

State - For projects in a single state or across several states. These receive 50 percent of funding.

RCPP in 2021

Nationwide, USDA invested $330 million in 85 locally driven, private partnerships in FY2021.

RCPP projects selected for funding in FY2021 offer innovative conservation solutions, leverage partner contributions to address climate change, improve water quality, combat drought, enhance soil health, support wildlife habitat and protect agricultural viability.

FY2021 Accomplishments from Prior Year Projects - In FY2021 the following prior years RCPP projects were funded: Cost-Share Opportunities for Beginning Farmers, 2 contracts for $112,411; Chesapeake Bay Farm Stewardship and Preservation, 21 contracts for $312,945 covering 6,042 acres; Protecting Delaware Bay and Inland Bays with Cover Crops 10 contracts for $253,510 covering 4,042 acres.

Alternative Funding Arrangements (AFA): RCPP offers an additional funding opportunity for partners to consider called Alternative Funding Arrangements or AFA. NRCS Delaware has not funded any AFA projects to date but will continue to work with the partnership and encourage submission of proposals when the program is announced.

All RCPP Projects in Delaware:

Accelerating Chesapeake Bay Watershed Implementation Plans; Delmarva Whole System Conservation Partnership – Field to Stream; Watershed Channel Restoration Project; Assisting Beginning Farmers with Poultry Headquarter (HQ) Best Management Practices (BMPs); Meeting Watershed Implementation Plan (WIP) Goals in the Chesapeake Bay; Cost-Share Opportunities for Beginning Farmers; Energize Delaware Farm Energy Efficiency Program; Protecting Delaware Bay and Inland Bays with Cover Crops; Sustainable Chesapeake.
Soil Sciences

The main goal of the soils staff in Delaware is to provide scientifically defensible and timely delivery of technical soils information to internal and external partners to meet their ever-changing resource challenges. Accurate soils information is the foundation on which NRCS and many partners base their resource initiatives on.

Over the last year the soils staff in Delaware in cooperation with the soil survey division updated 179,000 acres of soil information to more accurately reflect our understanding of these soils. In addition, Provisional Ecological Site Descriptions (PESD) were developed for the state and are available for use in Web Soil Survey.

All updates and maintenance activities to soil survey products are “annual refresh.” In short, that edited data is posted on the web. Access to accurate soils information is always available online for the whole state through [Web Soil Survey](https://websoilsurvey.nrcs.usda.gov/), [SoilWeb apps](https://www.soilionline.com/applications/), [Geo-Spatial Data Gateway](https://data.nrcs.usda.gov/) and the electronic [Field Office Technical Guide](https://soils.usda.gov/technical/fotg/efotg/).

Innovative Soils Staff Projects

The soils staff in conjunction with several universities from across the country, conducted a unique dynamic soil property study which focused on collecting soil carbon samples and measuring base line soil health indicators. The crew sampled 26 soil pits, consisting of 6 different land uses (i.e cash grain, with and without conservation practices, and native woods as a control). The data will be used to develop a baseline carbon budget for different agricultural systems. The results of this study will be useful for determining dynamic soil properties that can and will change based on land use. From this understanding, conservation practices, such as the soil health practices, can be prescribed to reestablish soils properties which will aid in improving soil resiliency, drought tolerance, nutrient cycling, carbon market potential and overall crop production.

Technical Soil Sciences (TSS)

Technical Soil Services (TSS) remain the largest workload for the soils staff in Delaware. TSS is the action of assisting landowners, partners, and resource managers in using soils information from the soil survey or conducting site specific investigation 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. In addition, more than 400 sites have been analyzed with our portable X-ray Fluorescence (XRF) equipment this year to quantify soil heavy metal contents across the state and region.

Innovative TSS Projects

The TSS team is using mobile field data recorders that use cell phone technology to upload all field notes to ArcGis online. This software allows staff to archive, share, and spatially analyze our data in real time while we are in the field, truck, home or office. Data now can be posted online and served to our external partners without a need to be on NRCS network.
The Natural Resources Conservation Service is an agency of The United States Department of Agriculture.

For more information, contact Dastina Wallace, public affairs specialist, at 302-678-4179. Or visit Delaware NRCS online at www.de.nrcs.usda.gov.

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Submit your completed form or letter to USDA by:

(1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410;
(2) fax: (202) 690-7442; or
(3) email: program.intake@usda.gov.

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Note:
All data included in this report has pulled by NRCS’ program specialists through the Program Contracts System, known as ProTracts or through the National Easement Staging Tool (NEST). ProTracts is a web-based system used to manage program data for AMA, CSP and EQIP; NEST is a web-based system used to manage program data for NRCS’ easement programs including ACEP-ALE and ACEP-WRE.

December 2021