



United States Department of Agriculture

NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

DELAWARE FY 2019 Accomplishments Report



Helping People Help the Land

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State Conservationist's Message

It is truly a privilege for me to be able to highlight the accomplishments of our agency in fiscal year 2019. This is because, it reinforces what I know to be true; that we are an agency which puts our farmers and forest landowners first.

Whether meeting in-person with our conservationists on the ground or talking with our Chief through a video conference at National Headquarters, the desire to help our farmers get conservation on the ground rings loud and true—and most importantly, it is consistent. Which is why in fiscal year 2019, the agency and state expanded its efforts to improve our processes to provide our customers the optimal customer service. As a result of those efforts, we created 26 projects across the agency to address the needs and concerns that were elevated from the grass roots level.

One such effort is the Partnership Capacity & Training project. We have been working at the National level with our own partner leaders, Mike Brown with the National Association of State Conservation Agencies and Tim Riley with the National Association of Conservation Districts Employee Association. Together, we are building and expanding partnerships that will help the Conservation Partnership accomplish its mission, goals and objectives. We developed a national training curriculum that is teaching employees and conservation partners alike the knowledge and skills to cultivate partnerships—with Delaware as the example.

In addition to building partnerships at every level, we made a tremendous impact on the ground in FY19. We helped our Delaware farmers plant more than 21,000 acres of cover crops. Furthermore, they have implemented conservation systems to manage nutrient applications and limit soil disturbance on 6,300 acres of land. These achievements have all been done through—the Environmental Quality Incentives Program (EQIP). As a result, there has been a reduction of 150,000 lbs. of nitrogen, removing its potential to enter ground or surface waterways.

As we look forward to 2020, I am first reminded how currently our overall efficiency, productivity, expansion and innovation here in the state has allowed for more engaged dialogues on conservation opportunities in the state. Delaware will continue to lead the charge for voluntary conservation here in the State and at the national level. This will be done through expansion of technical assistance to address the critical resource concerns in the State.

Our strategy, both at the National level and within the State, to deliver the best conservation results to our customers will focus on the following core areas:

Mentoring - Increase employee internal mentoring, training opportunities and experiences that collectively involve staff, customers and partners employee development.

Outreach - Expand focused outreach effort to increase agency awareness of agency services and resources. The 2018 Farm Bill is intended to provide support, certainty, and stability to all our Nation's farmers and forest managers.

Soil Health - Elevate the importance of soil health across the Agency and State through the outreach and communication efforts to further enhance and promote the delivery of soil health in all decisions.

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

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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 results¹ of three essential NRCS-funded² conservation systems that are improving water quality within the state in FY2019:

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



Results: Cover Crops³

Delaware farmers have planted 21,122 acres of cover crops which has resulted in the following:

- 122,392 lbs. of Nitrogen reduced
- 47 lbs. of Phosphorus reduced
- 50,809 lbs. in sediment reductions

Animal Waste Management Systems include Heavy Use Area Pads (HUAP), Animal Mortality Facilities and Waste Storage Structures. 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.

Results: Animal Waste Management Systems

Delaware farmers have applied 216 HUAPs, 37 Animal Mortality Facilities and 24 Waste Storage Structures, which have resulted in the following:

- 23,183 lbs. of Nitrogen reduced
- 603 lbs. of Phosphorus reduced



Cropping Systems include No-Till, Mulch-Till and Nutrient Management. This suite of practices works to effectively manage the application of nutrients and limit the disturbance of the soil to improve crop nutrient uptake, increase infiltration, and reduce sediment transport—ultimately, improving water quality.



Results: Cropping Systems

Delaware farmers have implemented 2,011 acres of Mulch-Till and installed Nutrient Management practices on 4,365 acres. Together, these practices have made the following impact:

- 6,367 lbs. of Nitrogen reduced
- 249 lbs. of Phosphorus reduced
- 14,862 lbs. in sediment reductions (Mulch-Till only)

¹Nutrient and sediment reduction rates for the practices are taken from the Chesapeake Bay Model. ² Funding through NRCS' Environmental Quality Incentives Program. ³Cover crop analysis based on a rye mix.



Agricultural Conservation Easement Program (ACEP)

The Agricultural Conservation Easement Program (ACEP) has two components: one for agricultural lands (ACEP-ALE); and one for wetlands (ACEP-WRE), in which financial and technical assistance is provided to conserve these lands 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.

2019 Accomplishments

Delaware NRCS entered into an agreement with the Delaware Department of Agriculture (DDA), Delaware Agricultural Lands Preservation (DALP) Foundation to purchase easements on 18 farms in Delaware.

ACEP-ALE provided funds of \$1.9 million to the DALP Foundation to help purchase these farmland easements, which total \$3.85 million. The total acreage enrolled into the preservation easements were approximately 2,110 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.

2019 Accomplishments

Delaware completed restoration on two wetland reserve easement sites totaling 401 acres in FY 2019.

Although no new WRE applications were funded in FY 2019, an expanded outreach effort will continue into FY2020 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.

2019 Accomplishments

Delaware received six AMA applications in FY 2019. Delaware approved all for contracts, which cover 57.4 acres for a financial assistance total of \$59,229.

Conservation Stewardship Program (CSP)

The Conservation Stewardship Program (CSP) helps agricultural producers maintain and improve their 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.

2019 Accomplishments

In FY 2019, Delaware NRCS provided \$226,344 in financial assistance through three new contracts on 1,882 acres.

Delaware NRCS extended five CSP contracts which were up for expiration in 2019. They totaled \$226,285 in financial assistance and covered 2,249 acres.

All CSP contracts are for a term of five years. Overall, DE NRCS is currently providing technical and financial assistance to 86 active CSP contracts on 71,178 acres totaling \$1.253 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.

Wildlife

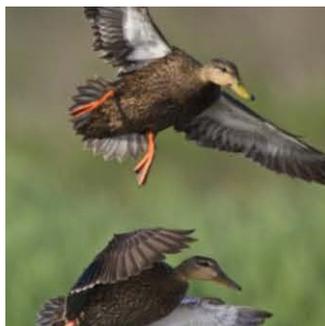
In FY2019, NRCS partnered with Ducks Unlimited to hire a biologist, Chase Colmorgen, to lead an NRCS initiative, Working Lands for Wildlife, to enhance and restore habitat for the American Black Duck. The agreement allowed the biologist to work closely with NRCS staff and Ducks Unlimited biologists, engineers, and other agency and NGO staff to deliver waterfowl conservation programs on the Delmarva. As a result, there was an increase in interest and participation, including five signups, specific to installing conservation practices beneficial to waterfowl habitat.

Cultural Resources

NRCS signed a Prototype Programmatic Agreement (PPA) in FY2019 with the Delaware State Historic Preservation Office to complete cultural resources reviews. NRCS protects cultural resources with the same consideration it does for protecting natural resources on private lands. 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. The Cultural Resources Specialist completed 34 reviews and field investigations through 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 FY2020, efforts will focus on addressing barriers through partner and agency resources.



Engineering

The Delaware NRCS Engineering staff provides sound technical leadership and guidance to producers and customers to implement conservation systems and practices on the land. Assistance for practices to solve resource concerns is provided through site evaluations, survey, design, construction layout, construction supervision and certification of proper completion.

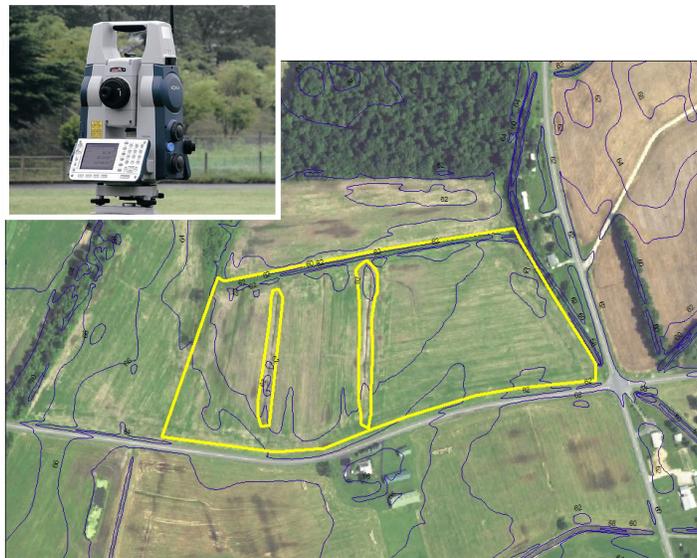
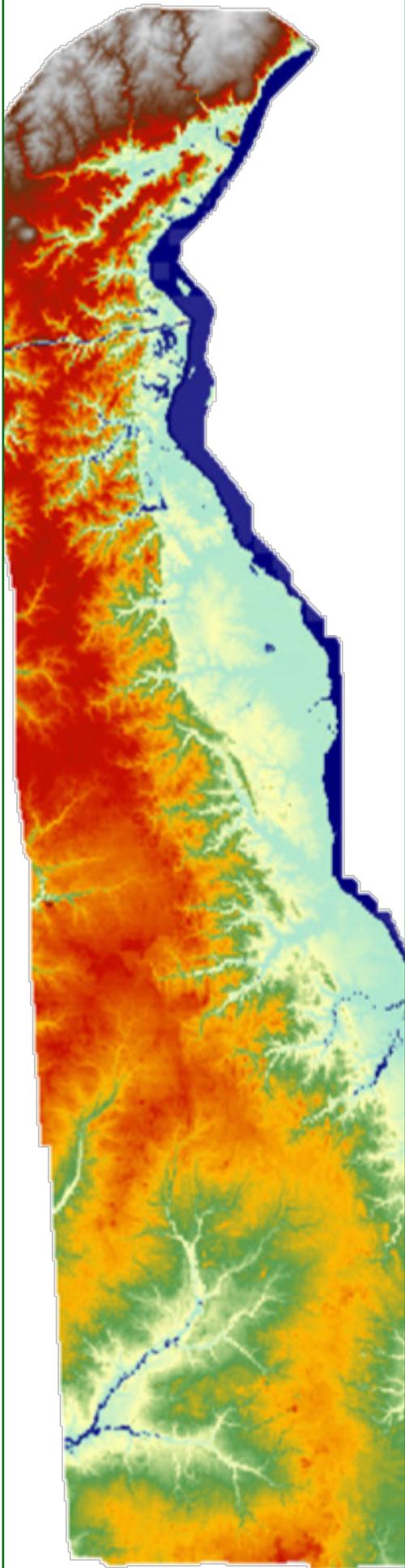
Quality assurance is an important role of the Delaware Engineering Team. Engineering oversight of projects implemented through public funding ensures they meet NRCS Standards and Specifications and function properly to solve the resource concern as intended. This ensures that the customers receive a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

Engineering staff stays committed to improving efficiency to deliver technical assistance through tools such as Global Positioning System (GPS) surveying, Computer Aided Drafting and Design (CADD), and Light Detection and Ranging (LiDAR). For example, LiDAR images, as shown on the left, provide preliminary elevation data on large projects allowing staff to concentrate field survey work to areas needing more accuracy and detail obtained using survey grade GPS equipment.

Engineering standards, guidance documents, drawings and details are continuously reviewed and updated to keep current with industry standards and technology. In 2019, 20 standard drawings were developed or updated.

As conservation program funding increased in 2019, so did the need for engineering technical assistance. Five of the top seven EQIP funded practices are engineering practices including Waste Storage Structures, Heavy Use Area Pads, Animal Mortality Management, Energy and Irrigation Water Management Practices.

Engineering staff provided construction layout and supervision for several wetland easement restoration projects, including one over 300 acres in size, and designs were completed for other projects to benefit wildlife such as shallow ponds. Staff also assisted with implementing erosion control projects such as grassed waterways, grade stabilization structures and streambank stabilization.



LiDAR data is combined with survey data (total station inset) to develop site plans.



Environmental Quality Incentives Program (EQIP)

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.

Historically underserved (HU) producers (limited resource farmers, beginning farmers, socially disadvantaged producers, and Veterans who are beginning farmers) may be eligible for a higher practice payment for the implementation of conservation practices and conservation plans. HU producers may also be eligible for advance payments up to 50 percent of the estimated contractual payment to begin installation of approved conservation practices with an NRCS approved design.

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.

2019 Accomplishments

Delaware received 440 EQIP applications for FY 2019.

Delaware approved 178 contracts covering 37,441 acres for a financial assistance total of \$7.1 million. Included in these numbers are 21 approved contracts covering 446 acres assisting beginning farmers, socially disadvantaged and limited resource producers with financial assistance totaling \$2.5 million.

EQIP funding options:

- Beginning Farmers
- Cooperative Conservation Partnership Initiative (CCPI)
- Energy Initiative
- Limited Resource Farmers
- National Water Quality Initiative
- Organic Initiative
- Seasonal High Tunnel Initiative
- Socially Disadvantaged Producers
- Veterans

Top 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 a number of 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 2019

The fiscal year 2019 program signup for the updated Regional Conservation Partnership Program opened September 3 - December 3, 2019.

RCPP projects selected for funding in FY2019 will offer innovative conservation solutions, leverage partner contributions, provide impactful and measurable outcomes, and will be implemented by capable partners. (Note: As of publish date, RCPP selections for FY19 had not been made.)

FY2019 Accomplishments from Prior Year Projects - Since fiscal year 2015, Delaware NRCS has contributed funding to nine RCPP projects. All of these partnership projects focus on expanding conservation efforts on agricultural lands—targeting water quality improvement and energy efficiency.

All RCPP projects extend across multiple years and result in increased accomplishments over time. In FY 2019 alone, there were a total of four contracts implemented on 559 acres for a financial assistance total of \$187,001.

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 and Geographic Information Systems (GIS)

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 146,049 acres of soil information to more accurately reflect our understanding of these soils. In addition, a new Sub-aqueous Soil Survey (SASS) was initiated with the Major Land Resource Area (MLRA) office in Hammonton NJ, to finish mapping the last Tidal Bay in Sussex County. Completion of this project is targeted for October 2020, with digital data publication in 2021.

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](#), [SoilWeb apps](#), [Geo-Spatial Data Gateway](#) and the electronic [Field Office Technical Guide \(eFOTG\)](#).

Technical Soil Sciences (TSS)

Technical Soil Services (TSS) remain the largest workload for the 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, 283 sites have been analyzed with our portable X-ray Florence (XRF) equipment to quantify soil heavy metal contents across the state and region. Furthermore, three geophysical investigations have been conducted with our Ground Penetrating Radar (GPR) unit to locate subsurface soil features without the typical disturbance of digging test pits. One of the projects was run in cooperation with the University of Delaware field archeology class assessing the spatial distribution of settlement adjacent to the Delaware Bay.

Geographic Information Systems (GIS)

GIS has many tools, which help to serve our many customers, landowners, and partners. It continues to evolve every year as tools are created, so that everyone can enjoy the full functionality of GIS. An example of such a tool, is the HEL (Highly Erodible Land) Determination Tool. Wetlands are an important part of the Delaware landscape, and we have an ideal tool, to be able to determine them. This tool features advanced elevation data, such as LiDAR, and is designed to streamline the determination process. The tool creates a wetland map and transmittal letter, when run.

There is also a geographic data portal in Delaware, called FIRST Map, which is open to the public. NRCS supplies that data portal, with the latest soil data and NAIP (National Agricultural Imagery Program) imagery layers. Data that resides in this portal, is web-based, and is tailored to the non-GIS user. GIS technology is ever-changing, and NRCS will continue to take advantage of its functionality, to ensure that we give the best products and results to our farmers and landowners.

**The Natural Resources Conservation Service is an agency of
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**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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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.