

2023 USDA EXPLANATORY NOTES – NATURAL RESOURCES CONSERVATION SERVICE

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AGENCY-WIDE**PURPOSE STATEMENT**

The mission of the Natural Resources Conservation Service (NRCS) is “Helping People Help the Land.” The agency accomplishes this mission by providing products and services that enable people to be good stewards of the Nation’s soil, water, and related natural resources on non-Federal lands. The establishment of the Soil Conservation Service (SCS) marked the beginning of the Federal government’s enduring commitment to assisting in the conservation of natural resources on private lands. Originally authorized by Congress in 1935, the agency was later renamed NRCS in the Department of Agriculture Reorganization Act of 1994 (P.L. 103-354, 7 U.S.C. 6901 et seq.) to better reflect the broad scope of the agency’s mission. From the beginning, the agency brought a national focus to the emerging resource issues of the Dust Bowl era: prevention of wind and water erosion. Desperate to retain its productive soils, the Nation turned to SCS for technical guidance and advice on minimizing the impacts of erosion. Although the Dust Bowl has passed, the relationship between landowners and the agency remains.

Over time, the agency’s suite of programs expanded and NRCS is now a conservation leader for all natural resources: soil, water, air, plants, and animals. NRCS supports the Nation’s communities by helping urban and rural agricultural landowners and producers protect the natural resource base on their lands. Technical assistance provided to farmers, ranchers, and other private landowners supplies the knowledge and tools they need to conserve, maintain, and restore the natural resources on the lands they manage. Financial assistance partially offsets the cost to install conservation practices necessary to safeguard natural resources and improve wildlife habitat.

About 70 percent of the land in the United States is privately owned, making stewardship by private landowners and land managers critical to the health of our Nation’s agricultural economy. These are the people who make day-to-day decisions about natural resource use and management on non-Federal lands, and NRCS offers them the technology, technical and financial assistance needed to benefit the resources, sustain productive lands, and maintain healthy ecosystems.

Science and technology are the critical foundation for effective conservation. NRCS experts from many disciplines come together to help landowners conserve natural resources in efficient, smart, and sustainable ways. Whether developed in a laboratory or on the land, NRCS science and technology helps landowners make the right decisions for every natural resource concern.

NRCS’s Conservation Delivery System provides services directly to the landowner or land manager in cooperation with conservation districts. Conservation districts are units of local government created by State law and exist in every county and territory of the United States. Conservation districts are responsible for providing guidance to the agency on local resource concerns and serving as the voice of the local community on resource issues. NRCS also works in partnership with State and local agencies, locally elected or appointed farmer committees, Federal agencies, tribal governments, and private sector organizations to encourage cooperation and facilitate leveraging of the financial and technical resources these groups can offer. By bringing together groups that have a common and vested interest in the local landscape, community, or watershed, NRCS facilitates collaboration among groups that collectively support sustainable agriculture and maintain natural resource quality.

Under this umbrella of agency mission and local cooperation, NRCS employees help landowners and land managers understand the natural processes that shape their environment, how conservation measures can improve the quality of that environment, and what conservation measures will work best on their land. NRCS employees provide these services directly to the customer. Field offices at USDA Service Centers are in nearly every county and territory of the United States. NRCS employees’ technical expertise and understanding of local resource concerns and challenges result in conservation solutions that last. *In the words of the first NRCS Chief, Hugh Hammond Bennett – “If we take care of the land, it will take care of us.”*

Private Lands Conservation Operations

The programs funded in the Private Lands Conservation Operations account are authorized by the Conservation and Domestic Allotment Act of 1935, P.L. 74-46 (16 U.S.C. 590a-590f) and the Soil and Water Resources Conservation Act of 1977 (16 U.S.C. 2001-2009), as amended. The purpose of Private Lands Conservation Operations is to provide technical assistance supported by science-based technology and tools that help people conserve, maintain, and improve the Nation’s natural resources. Private Lands Conservation Operations has four major program components: Conservation Technical Assistance Program; Soil Survey Program; Snow Survey and Water Supply Forecasting Program; and Plant Materials Centers.

Conservation Technical Assistance Program (CTA). The CTA Program has a long history as NRCS’s conservation planning program, helping to develop and deliver conservation technologies and practices to private landowners, conservation districts, tribal, and other organizations.

Through the CTA Program, NRCS helps land managers develop comprehensive conservation plans that include activities that reduce soil loss from erosion; address soil, water quality, water conservation, air quality, and agricultural waste management concerns; reduce potential damage caused by excess water and sedimentation or drought; enhance the quality of fish and wildlife habitat; improve the long-term sustainability of all private lands, including cropland, forestland, grazing lands, coastal lands, and developed or developing lands; and facilitate changes in land use as needed for natural resource protection and sustainability.

CTA Program funding is used to:

- Provide conservation technical assistance to individuals or groups of decision makers, and to communities, conservation districts, units of State, tribal and local government, and others to voluntarily conserve, maintain, and improve natural resources.
- Provide collaborative community, watershed, and area-wide technical assistance with units of government so they can develop and implement resource management plans that conserve, maintain, and improve our natural resources at appropriate scales.
- Provide conservation technical assistance to help agricultural producers comply with the highly erodible land conservation (HELC) and wetland conservation (WC) compliance provisions required by the Food Security Act of 1985, as amended.
- Provide conservation technical assistance to aid private landowners in complying with other Federal, State, tribal, and local environmental regulations, and related requirements, and prepare them to become eligible to participate in other Federal, State, and local conservation programs.
- Collect, analyze, interpret, display, and disseminate information about the status, condition, and dynamic properties of soil, water, and related natural resources so people can make informed decisions for natural resource use and management.
- Assess the level of carbon sequestered in terrestrial soils through voluntary conservation practices.
- Assess the effects of conservation practices and systems on the condition of natural resources; and
- Develop, adapt, and transfer effective science-based technologies and tools for assessment, management, and conservation of natural resources.

Soil Survey Program. NRCS’s Soil Surveys provide the public with information on the properties, capabilities, and conservation treatment needs of their soils through the use of soil maps and interpretive analyses. Soil Surveys help people make informed land use and management decisions that take into consideration various soil characteristics, such as soil carbon, and capabilities to ensure soil is healthy and productive. In addition, it provides soils information and interpretation to individuals or groups of decision-makers, and to communities, States, and others to aid sound decision-making in the wise use and management of soil resources; NRCS conducts Soil Surveys cooperatively with other Federal agencies, Land Grant Universities, State agencies, tribes, and local governments. NRCS’s major Soil Survey Program objectives are to:

- Inventory and map the soil resource on all lands of the United States;
- Keep soil surveys relevant to meet emerging and ever-changing needs to mitigate the impacts of climate change and increase the resiliency of working agricultural lands;
- Interpret the data and make soil survey information available to meet public needs;
- Lead the Dynamic Soil Properties for Soil Health project (formerly known as the Science of Soil Health) and other related collaborative efforts to advance the science of the soil survey;
- Contribute to all aspects USDA soil carbon and soil health monitoring and assessment efforts including the soil health monitoring network);
- Provide technical assistance in the use of soil survey information to maximize conservation outcomes; and
- Lead the National Cooperative Soil Survey Program.

Soil Survey information is the foundation of resource planning conducted by land-users and policy makers. Soil Surveys provide vital information needed to support sustainable and productive soils in the United States. Emerging environmental issues (e.g., soil carbon measurement, nutrient management, and soil health initiatives) require that the soil survey collect and interpret new data to best inform decision makers.

In addition to providing Soil Survey data to the public, NRCS also maintains a National Soil Survey Center that integrates and adds to the current soil science and provides information for the effective application of the Soil Survey to help make good land management possible. The National Soil Survey Center develops national soil policy, technical guidance, procedures, and standards. It conducts soil research investigations, operates a soil survey laboratory, develops handbooks and manuals, provides training, develops, and maintains soil survey data systems; and plans regional work conferences.

Dynamic soil properties (DSPs) are soil properties that change with natural and anthropogenic disturbances and stressors including agricultural and wildland management. DSPs are indicators of soil function and soil change. Information about how soils change due to management and how those changes impact soil functions are crucial to sustainable soil management on all kinds of lands. The soil survey program initiated a nationwide DSP data inventory initiative in 2021 to deliver scientifically defensible soil information to support conservation management for healthy soils and sustainable ecosystems. An important, but often overlooked, component DSPs is biological diversity. The soil survey program will be expanding the capacity to perform biological analysis in NRCS' world class soil survey laboratory and in the field. This requires development of methods and procedures for the collection, storage, and analysis of biological diversity and applying this new data to existing soil survey information for predicting and monitoring soil carbon storage to apply to resiliency of ecosystems in response to climate change.

Snow Survey and Water Supply Forecasting (SSWSF) Program. Program and partners collect high elevation snow, weather, and climate data in the western United States providing snowpack data for water supply forecasts. Snowmelt in the West accounts for approximately 70 percent of the region's water supply for agriculture, municipal, and other needs. NRCS staff and cooperators collect and review snowpack data at more than 1,100 mountain sites across the West. Presently, 932 of these remote sites referred to as SNOTEL or SnoLite are automated providing near real-time publicly available information on snow depth, snow water equivalent (SWE), and other parameters such as precipitation, air temperature, and soil moisture. Snow courses and aerial markers supply snowpack information on a monthly basis primarily between January and June (i.e., snow melt season). Data are analyzed to assess annual water availability, drought conditions, and flooding potential. Many stations have sensors to measure soil moisture conditions useful for predicting likelihood for runoff or avalanche potential.

The SSWSF Program has operated under USDA in 12 western States, including Alaska, since 1935 providing seasonal water supply forecasts essential for the national economy and resource management. Program importance exponentially increases as water management in the West adapts to stresses such as population increase, rapid urbanization, flooding, droughts, fires, increased proximity to avalanche, and competing needs over limited water resources.

Snow and climate data and water supply forecasts are used by farmers, ranchers, and irrigation districts; municipal and industrial water providers; hydroelectric power utilities; fish and wildlife management; reservoir managers; recreationists; Tribal Nations; Federal, State, and local government agencies including transportation departments; and for International treaties.

Program objectives:

- Provide reliable, accurate, and timely seasonal surface water supply forecasts for agricultural producers, water managers, and water users in the West.
- Obtain, manage, and disseminate high quality data and related information on snow, water, climate, and hydrologic conditions.
- Provide climate data supporting NRCS conservation planning tools.

Additionally, the Soil Climate Analysis Network (SCAN) provides climate information as well as soil moisture and temperature data at relatively lower elevations across the country. SCAN consists of 210 sites in the 48 contiguous United States, Alaska, Hawaii, Puerto Rico, and U.S. Virgin Islands.

Plant Materials Centers (PMCs). NRCS's network of 25 PMCs identify, evaluate, and demonstrate the performance of plants and plant technologies to solve natural resource problems and improve the utilization of our nation's natural resources. PMCs continue to build on their long and successful history of releasing plants for resource conservation that have been instrumental at increasing the commercial availability of appropriate plant materials to the public. PMC activities contribute to reducing soil erosion; adapting to climate change; increasing cropland soil health and productivity; restoring wetlands, improving water quality, improving wildlife habitat (including pollinators); protecting streambank and riparian areas; stabilizing coastal dunes; producing forage; improving air quality; and addressing other conservation treatment needs.

The results of studies conducted by PMCs provide much of the basis for NRCS vegetative recommendations and conservation practices. This work ensures that NRCS conservation practices are scientifically based, improves the knowledge of NRCS field staff through PMC-led training sessions and demonstrations, and develops recommendations to meet new and emerging natural resource issues. PMCs carry out their work cooperatively with State and Federal agencies, universities, tribes, commercial businesses, and seed and nursery associations. PMC activities directly benefit private landowners as well as Federal and State land managing agencies.

Watershed and Flood Prevention Operations

Through the programs funded in the Watershed and Flood Prevention Operations account, NRCS cooperates with State and local agencies, tribal governments, and other Federal agencies to prevent damage caused by erosion, floodwater, and sediment, to further the conservation, development, utilization, and disposal of water, and advance the conservation and utilization of the land. Authorization includes the Watershed Operations Program authorized by the Flood Control Act of 1944 (P.L. 78-534) and the Watershed Protection and Flood Prevention Program authorized by P.L. 83-566 (16 U.S.C. 1001-1008), as amended.

Congress established the Watershed Program by enacting the Flood Control Act of 1944 (Public Law 78-534) and the Watershed Protection and Flood Prevention Act of 1954 (Public Law 83-566). Under these authorizations, the USDA Natural Resources Conservation Service (NRCS) has assisted watershed project sponsors in the construction of more than 11,850 flood control dams in 1,271 watersheds in 47 States since 1948 with a maximum individual watershed size of set at 250,000 acres. These projects provide an estimated \$2.2 billion in annual benefits in reduced flooding and erosion damages, recreation, water supplies and wildlife habitat.

Emergency Watershed Protection Program. The program reduces hazards to life and property in watersheds damaged by severe natural events. An emergency exists when a watershed is suddenly impaired by flood, fire, drought, wind, or other natural causes that result in threats to life and property. The emergency area need not be declared a national disaster area to be eligible for assistance; however, a Presidential disaster declaration is one method for establishing eligibility. The program is authorized by Section 216 of the Flood Control Act of 1950 (33 U.S.C. 701b-1), as amended, and Sections 403-405 of the Agricultural Credit Act of 1978 (16 U.S.C. 2203-2205), as amended.

The program provides technical and financial assistance for disaster cleanup, restoration of watershed conveyance, and subsequent stabilizing of streambanks and levees. The program also allows for relocation of properties outside floodplains in lieu of restoration in cases where it is more cost effective. Local people are generally employed on a short-term basis to assist with disaster recovery. Activities include: 1) establishing quick vegetative cover on denuded land, sloping steep land, and eroding banks; 2) opening dangerously restricted channels; 3) repairing diversions and levees; 4) purchasing floodplain easements; and 5) other emergency work. Over the past decade, the program has provided relief assistance for 243 disaster events across all 50 states.

Watershed Rehabilitation Program

This dam rehabilitation program provides both financial and technical assistance to communities for addressing public health, safety concerns, and environmental impacts of aging dams. The program is authorized under Section 14 of the Watershed Protection and Flood Prevention Act (16 U.S.C. 1012), as amended.

Local communities have constructed 11,850 watershed dams with assistance from NRCS from 1948 to 2021. These dams protect America's communities and natural resources with flood control, offer recreation, wildlife benefits, and some many also provide the primary source of drinking water for the area. Funding is used for rehabilitation projects to bring the dam up to current safety standards through planning, design, and construction of the rehabilitation project, but may also be used for dam removal. The program may provide up to 65 percent of the total project cost of rehabilitation not to exceed 100 percent of the construction cost; Federal funds cannot be used for operation and maintenance.

Water Bank Program

The Water Bank Program (WBP) is authorized under Section 748 of the Water Bank Act (16 U.S.C. 1301-1311). The program focuses on technical and financial assistance on flooded cropland, flooded hay and pasture land, and flooded forestland. Under the program, landowners and operators have non-renewable ten-year rental agreements to receive annual payments to protect wetlands and provide wildlife habitat by preventing adverse land uses and activities, such as drainage, that would destroy the wetland characteristics of those lands. Program participants who wish to establish or maintain conservation practices may also apply for financial assistance through other NRCS or State financial assistance programs where available.

Mandatory-Farm Bill Programs:**Environmental Quality Incentives Program (EQIP)**

EQIP advances the voluntary application of conservation practices to promote agricultural production, forest management, and environmental quality as compatible uses. Conservation practices funded through EQIP help producers improve the condition of soil, water, air, and other natural resources. The program assists owners and operators of agricultural and forest land with the identification of natural resource problems and opportunities in their operation and provides assistance to solve identified problems in an environmentally beneficial and cost-effective manner. The program is authorized by Sections 1240 through 1240G and Section 1241(a) of the Food Security Act of 1985. The program was further enhanced by the Agriculture Improvement Act of 2018 (2018 Farm Bill) and funded through 2023. The 2018 Farm Bill enhancements include soil testing and remediation as EQIP practices, supporting further advance payments for certain producers, lowering the livestock set-aside to 50 percent, raising the organic EQIP payment limit, and allowing identified water management entities to participate in certain EQIP projects.

Although EQIP specifically addresses resource concerns on working farms and ranches, implementation of the program can create benefits that extend well beyond the farm. Conservation practices funded through EQIP contracts accrue significant environmental benefits, including improved grazing lands, improved air quality, enhanced fish and wildlife habitat, sustainable plant and soil conditions, improved water quality and quantity, reduced soil erosion, and energy conservation that provide important ancillary economic and social benefits.

Conservation Stewardship Program (CSP)

The purpose of CSP is to encourage producers to address resource concerns in a comprehensive manner by undertaking additional conservation activities and improving, maintaining, and managing existing conservation activities. The program is authorized by Sections 1240I through 1240L-1 and Section 1241(a) of the Food Security Act of 1985, as amended, by the Agriculture Improvement Act of 2018 (the 2018 Farm Bill). The 2018 Farm Bill eliminated the program authorized by Agricultural Act of 2014 (the 2014 Farm Bill) and established CSP as a dollar-capped program and not acre-based program. Moreover, the new CSP is authorized to be more closely aligned with EQIP. The new CSP expands the definition of conservation activities by adding comprehensive conservation plan, soil health planning (including organic), and fosters the use of predictive analytical tools to measure conservation improvement more accurately.

CSP encourages agricultural and forestry producers to maintain existing conservation activities and to adopt additional ones on their operations. CSP provides opportunities to both recognize excellent stewards and deliver valuable new conservation. The program helps producers identify natural resource problems in their operation and provides technical and financial assistance to solve those problems in an environmentally beneficial and cost-effective manner. CSP addresses seven natural resource concerns (soil quality, soil erosion, water quantity, water quality, air quality, plant resources, and animal resources) as well as energy.

CSP is a voluntary program available through a continuous sign-up process, with announced cut-off dates for ranking and funding applications. This allows producers to submit their applications at any time. Applications are evaluated relative to other applications within similar geographic areas to facilitate a competitive ranking process among applications that face similar resource challenges. The 2018 Farm Bill prescribed the following factors for evaluating and ranking applications:

- Requires that at least two resource concern categories meet or exceed a science-based stewardship threshold at the time of contract offer, and meet or exceed one additional resource concern category by the end of the contract.
- Level of conservation treatment on all applicable natural resource concern categories at the time of application.
- Degree to which the proposed conservation activities increase natural resource conservation and environmental benefit.

Agricultural Conservation Easement Program (ACEP)

The Agricultural Conservation Easement Program (ACEP) is authorized by subtitle H of title XII of the Food Security Act of 1985, as amended by Section 2301 of the 2014 Farm Bill (P. L. 113-79) and sections 2601-2605 of the Agriculture Improvement Act of 2018 (2018 Farm Bill). ACEP consolidates the purposes and functions of three former easement programs that are no longer authorized: Farm and Ranch Lands Protection Program (FRPP), the

Grassland Reserve Program (GRP), and the Wetlands Reserve Program (WRP). Lands enrolled under these former easement programs are enrolled in ACEP. ACEP is funded by the Commodity Credit Corporation (CCC) and administered by NRCS. ACEP is a voluntary program through which NRCS provides financial and technical assistance to help conserve agricultural lands and wetlands, and their related benefits by directly acquiring or funding the acquisition of conservation easements on private or tribal lands. ACEP has two components - ACEP-Agricultural Land Easements (ACEP-ALE) and ACEP-Wetland Reserve Easements (ACEP-WRE).

ACEP-ALE helps farmers and ranchers keep their land in agriculture. The program also protects grazing uses and related conservation values by conserving or restoring grassland, including rangeland, pastureland and shrubland. Eligible entities include Indian tribes, State governments, local governments, or nongovernmental organizations, which have farmland or grassland protection programs that purchase agricultural land easements for the purpose of protecting agriculture use, grazing uses, and related conservation values, by limiting conversion to non-agricultural uses of the land. To enroll land through agricultural land easements, NRCS enters into agreements with eligible entities that include the terms and conditions under which the eligible entity is permitted to use ACEP cost-share assistance.

Through ACEP-WRE, NRCS provides technical and financial assistance directly to private landowners and Indian tribes to restore, protect, and enhance wetlands through the purchase of a wetlands reserve easement or 30-year contract. Wetlands restored and protected on wetland reserve easements provide habitat for fish and wildlife, including threatened and endangered species, improve water quality by filtering sediments and chemicals, reduce flooding, recharge groundwater, protect biological diversity, and provide opportunities for educational, scientific, and limited recreational activities.

To enroll land through wetland reserve easements, NRCS enters into a purchase agreement with eligible private landowners or Indian tribes that includes the right for NRCS to develop and implement a wetland reserve restoration easement plan. This plan restores, protects, and enhances the wetlands functions and values of the land. NRCS may authorize enrolled land to be used for compatible economic uses, including activities such as hunting and fishing, managed timber harvest, or periodic haying or grazing if such uses are consistent with the long-term protection and enhancement of the wetland resources for which the easement was established.

Between 2014, when ACEP was established by the Farm Bill, and 2021, ACEP has been used to enroll approximately 3,288 unique easements. Through these projects, ACEP-ALE has protected the agricultural productivity of more than 1,300 properties and 925,000 acres while ACEP-WRE has restored the wetland functions and values of approximately 1,950 easements and 375,000 acres.

Regional Conservation Partnership Program (RCPP)

The Regional Conservation Partnership Program (RCPP) promotes coordination of NRCS conservation activities with partners that offer value-added contributions to expand our collective ability to 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.

Through agreements with partners and conservation program contracts directly with producers, RCPP helps implement conservation projects that may focus on water quality and quantity, soil erosion, wildlife habitat, drought mitigation and flood control or other regional priorities. RCPP is authorized by Sections 1271 through 1271F of the Food Security Act of 1985, as amended by the Agriculture Improvement Act of 2018 (the 2018 Farm Bill). The 2018 Farm Bill reauthorized RCPP as a stand-alone program and increased annual funding to \$300 million. It provided expanded Alternative Funding Arrangement authority, authorizing the funding of up to 15 projects through a more grant-like approach with lead partners accepting nearly all project implementation responsibilities. It also directs the Secretary to allocate 50 percent of funds to a State/Multistate pool, and 50 percent to projects in Critical Conservation Areas.

RCPP partners include agricultural or silvicultural producer associations or other groups of producers, State or local governments, Indian tribes, farmer cooperatives, municipal water treatment entities, irrigation districts, conservation driven nongovernmental organizations, and institutions of higher education are eligible. RCPP projects must be carried out on agricultural and nonindustrial private forest lands, or associated lands. RCPP projects may consist of any combination of five eligible conservation activities—land management, land rental, entity-held easements, U.S.-held easements, and public works activities.

RCP is administered through funding announcements. Lead partners submit proposals that are evaluated based on four criteria – impact, partner contributions, innovation, and partnership and management. All lead partners must report on the environmental outcomes of their projects.

Agricultural Management Assistance Program (AMA)

AMA provides technical and financial assistance in 16 States: Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming. AMA is funded through the Commodity Credit Corporation. The program is permanently authorized by Section 524(b) of the Federal Crop Insurance Act (7 U.S.C. 1524(b)), as amended. Section 524(b)(4)(B) provides \$10 million each year for the program, of which 50 percent is allocated to NRCS. Under the program, NRCS provides technical and financial assistance to producers to construct or improve water management structures or irrigation structures; plant trees for windbreaks; and take actions to improve water quality. In addition, the Risk Management Agency has collaborated with NRCS to provide financial assistance for producers to implement high-tunnel conservation practices. The Agricultural Marketing Service also provides AMA financial assistance to program participants receiving certification or continuation of certification as an organic producer.

Voluntary Public Access and Habitat Incentive Program (VPA-HIP)

The Voluntary Public Access and Habitat Incentive Program (VPA-HIP) was authorized by Section 1240R of the Food Security Act of 1985 (P.L. 99-198), as amended (16 U.S.C. 3839bb-5). The program was reauthorized by the Agriculture Improvement Act of 2018. The program encourages private landowners to voluntarily make their land available to the public for wildlife-dependent recreation, such as hunting, fishing and wildlife viewing. States and tribes are eligible for VPA-HIP and compete for funding by submitting proposals to NRCS. VPA-HIP funding can be used both to expand public access to private lands and to improve or enhance wildlife habitat on lands enrolled in the program. The overall goal of VPA-HIP is to enhance wildlife habitat and management and to boost local economies through activities that attract wildlife enthusiasts.

Feral Swine Eradication and Control Pilot Program

The program is authorized by Sections 2408 of the Agriculture Improvement Act of 2018 (P.L. 115-334). The program is implemented by NRCS and the Animal Plant Health Inspection Service to address the threat that feral swine pose to agriculture, native ecosystems, human health, and animal health.

Healthy Forests Reserve Program (HFRP)

The Healthy Forests Reserve Program assists private and Tribal landowners in restoring, enhancing, and protecting forest ecosystems to: promote the recovery of threatened and endangered species; improve biodiversity; conserve forest land that provides habitat for at-risk species, and enhance carbon sequestration. The program is authorized by Sections 501 through 508 of the Healthy Forests Restoration Act of 2003 (P.L. 108-148) as amended by the Agriculture Improvement Act of 2018 (the 2018 Farm Bill). The 2018 Farm Bill made changes to HFRP to expand enrollment and eligibility options including providing that permanent easements are an enrollment option for acreage owned by an Indian Tribe and adding that eligibility of land may include considerations for a species of greatest conservation need as identified by a State wildlife action plan.

HFRP offers to forestry landowners four enrollment options including 10-year restoration agreements, 30-year or permanent easements, or 30-year contracts on acreage owned by an Indian tribe. Land enrolled in HFRP must restore, enhance, or measurably increasing the likelihood of recovery of an at-risk species, improve biological diversity, or increase carbon sequestration. For all enrollment options, a restoration plan is developed that includes practices necessary to restore and enhance habitat for at-risk species. Technical assistance is provided to help landowners develop and comply with the terms of their HFRP restoration plans.

Landowners may receive “safe harbor” assurances from the regulatory agencies for land enrolled in HFRP if they agree, for a specified period, to protect, restore, or enhance their land for threatened or endangered species habitat. In exchange, landowners avoid future regulatory restrictions on the use of that land under the Endangered Species Act.

HFRP applicants must provide proof of ownership, or an operator (tenant) must provide written concurrence from the landowner of tenancy for the period of the HFRP restoration agreement in order to be eligible. Land enrolled in HFRP easements must be privately owned or be acreage owned by Indian tribes.

The 2018 Farm Bill authorized annual appropriations of \$12 million from 2018 through 2023.

Programmatic and Landscape Conservation Activities

NRCS and its partners have established programmatic and landscape-scale activities to address regionally important conservation needs by providing additional support for voluntary conservation on private lands. NRCS has targeted funding to support activities through a variety of Farm Bill conservation programs. NRCS provides technical assistance through its CTA Program; partners may also provide technical and financial support.

Each activity is intended to raise awareness of a specific resource concern or opportunity, stimulate interest and commitment for voluntary action, help focus funding, and optimize conservation outcomes. NRCS's coordination efforts with other Federal agencies, state and local governments, and other stakeholder groups optimizes efficiency and effectiveness; generates additional partner resources to expand capacity and accelerate action; and establishes mutual support for core conservation practices and systems that benefit the watershed, ecosystem, or species of concern.

National Water Quality Initiative. NRCS works with farmers and ranchers in small watersheds throughout the Nation to improve and protect water quality where this is a critical concern. NRCS works collaboratively with the Environmental Protection Agency at the national level to facilitate selection of high-priority watersheds and source water protection areas where NRCS and partners target outreach and assistance and demonstrate improvements in water quality. NRCS identifies priority watersheds through the help of local partnerships and state agencies. This strategic approach leverages funds and helps agricultural producers take needed actions to protect drinking water and reduce the runoff of sediment, nutrients, and pathogens into waterways where water quality is a critical concern. Water quality-related conservation practices can benefit agricultural producers by lowering input costs and enhancing the productivity of working lands. Eligible producers receive assistance under EQIP to install conservation systems that may include practices such as nutrient management, cover crops, and filter strips. In 2017, the initiative increased emphasis on and support for watershed assessment and planning to further target conservation efforts and expanded in 2019 to include planning and conservation implementation in source water protection areas (both surface and ground water sources). As of 2019, NRCS recorded 13 Clean Water Act impairments removed or proposed for removal in NWQI watersheds. In 2021 NRCS continued to build on partnerships with drinking water partners and conservation delivery in watersheds across the nation. Through these partnerships, NRCS is now implementing 9 source water protecting projects and is in the planning phase of 22 more. Since the inception of NWQI in 2012, NRCS has provided targeted EQIP assistance through about 5,400 contracts treating approximately 1.15 million acres and obligating almost \$254 million. The agency is working with EPA and state agencies to identify additional impairments that will be removed from the impaired list after implementation of the 2020 and 2021 projects.

Longleaf Pine Initiative. Longleaf pine forests once covered more than 90 million acres in the Southeastern United States. Stretching along Eastern Texas, through Central Florida, and north to Southern Virginia, these forests represent one of the world's most unique and biologically diverse ecosystems. However, 97 percent of the historic forests have been lost. According to Forest Service Forest Inventory and Analysis data, only 3.4 million acres of longleaf pine and mixed longleaf pine/oak forest types remained in 2008. These remaining forests provide critical habitat for 29 threatened and endangered species. In 2009, America's Longleaf Restoration Initiative (ALRI) released the Range-Wide Conservation Plan for Longleaf Pine. The plan calls for restoring, improving, and maintaining eight million acres of longleaf pine by 2024. NRCS is a key partner in ALRI, along with the rest of USDA, Department of Defense, Department of the Interior, National Fish and Wildlife Foundation, and other public and private collaborators. Since the plan's creation, more than 1.3 million acres of longleaf pine forest has been restored through establishment, 12 million acres improved and maintained through prescribed fire and vegetation management (with multiple treatments to some acres), and over 200,000 acres of land has been protected. Over the past ten years, NRCS has enrolled more than three million acres of private lands in longleaf conservation practices. These conservation practices included vegetation management, prescribed fire, planting, conservation easements, and other supporting conservation practices. Continued coordination between public and private partners over the next five years will be critical in achieving the initiative's goal.

Mississippi River Basin Healthy Watersheds Initiative (MRBI). The MRBI activity was established in 2010 and covers Arkansas, Kentucky, Illinois, Indiana, Iowa, Louisiana, Minnesota, Mississippi, Missouri, Ohio, Tennessee, and Wisconsin. It was established to improve the health of watersheds within the Mississippi River Basin through the reduction of nutrient runoff, restoration, and enhancement of wildlife habitat, wetland restoration, and maintenance of agricultural productivity. In 2015, the activity was refined to support the Nutrient Reduction Strategies developed by each state to address nutrient losses to the Mississippi River and the Gulf of Mexico. In 2019, the initiative strengthened its emphasis on and support of watershed assessment and planning to further target conservation efforts for water quality benefit.

Working Lands for Wildlife (WLFW). The WLFW activity is designed to provide targeted financial and technical assistance to improve habitat for identified wildlife species. Two-thirds of the land in the lower 48 states is privately owned, and these working farms, ranches, and forests produce much of the country's food and fiber. These working lands also provide much of our Nation's open space and the habitats that wildlife need. NRCS assists agricultural producers who want to voluntarily make wildlife-friendly improvements on their land. These conservation activities or practices benefit fish and wildlife while boosting the land's resilience and production. Producers have conserved millions of acres of wildlife habitat from the sagebrush and grasslands of the West to forests in the East. This work has led to the rebound and recovery of many species, including the Oregon chub, Louisiana black bear, New England cottontail, and greater sage-grouse.

Technical Service Provider Assistance (TSP)

Under the TSP Program, individuals or entities are certified by NRCS to assist landowners and agricultural producers in applying conservation practices on the land. TSPs expand and accelerate NRCS's ability to plan and apply conservation practices that enhance, restore or conserve the Nation's soil, water, and related natural resources on non-Federal land.

Use of third parties to conduct conservation work is authorized under Section 1242 of the Food Security Act of 1985, as amended, which requires the Secretary of Agriculture to provide technical assistance under the Food Security Act Title XII conservation programs to a producer eligible for that assistance 1) directly; 2) through an agreement with a third-party provider; or 3) at the option of the producer, through a payment to the producer for an approved third-party provider, if available. Section 1242 also requires that USDA establish a system for approving individuals and entities to provide technical assistance to carry out conservation programs and establish the amounts and methods for payments for that assistance. Technical assistance includes conservation planning and conservation practice design and implementation

Workforce Status and Locations

As of September 30, 2021, NRCS had 10,262 full time employees with permanent appointments. Of this total, 203 employees were in the Washington, DC metropolitan area, and 10,059 employees were located outside of the Washington, D.C. metropolitan area.

Organizational Structure

NRCS is a line and staff organization. The line of authority begins with the Chief and extends down through the Associate Chief, Regional Conservationists (Northeast, Southeast, Central, and West), Deputy Chiefs, Division Directors, and State Conservationists. Line Officers are responsible for direct assistance to the public. Staff positions provide specialized technical or administrative expertise to line officers.

During 2021, NRCS had 2,539 offices located across the Nation. This represents the number of locations where NRCS performs mission-related activities (e.g., field offices, State offices, Plant Materials Centers, etc.) and reports at least one full time equivalent (FTE) at the location. In addition, this number includes locations used for conservation testing, research, and storage.

National Headquarters (NHQ)

Primarily located in the Washington, DC metropolitan area, NHQ assumes leadership for all programs which are national in scale and other activities assigned by the Secretary of Agriculture through the Under Secretary for Farm Production and Conservation. The Chief, Associate Chiefs, Regional Conservationists, and Deputy Chiefs carry out national headquarters functions such as: 1) planning, formulating, and directing programs, and activities; 2) developing program policy, procedures, guidelines, and standards; 3) leading and coordinating with other agencies, constituent groups, and organizations; and 4) strategic planning and development of strategic initiatives.

NRCS Centers

Technological guidance and direction are also provided through the NRCS Centers, including: National Design Construction and Soil Mechanics Center, National Soil Survey Center; National Water and Climate Center; National Water Management Center; National Agroforestry Center; and East, Central and West National Technology Support Centers (NTSCs). NTSCs acquire and/or develop new science and technology to provide cutting-edge technological support and direct assistance, and to transfer technologies to field offices for service delivery. NTSCs also develop and maintain national technical standards and other technological procedures and references. Centers are co-located with other NRCS offices where possible.

State Offices

State offices provide program planning and direction, delivery, and accountability for comprehensive soil, water, air, plant, and animal conservation programs. State offices also have responsibility for the technical integrity of NRCS activities, technology transfer and training, marketing of programs and initiatives, and program operations and processing. Where possible, State offices partner with other Federal and State agencies to provide solutions to resource concerns. The State Conservationist position leads all activities in each State. The Director position is similar to that of a State Conservationist for the Pacific Islands Area (Hawaii, American Samoa, Guam, Commonwealth of the Northern Mariana Islands, Republic of Palau, Federated States of Micronesia, and Republic of Marshall Islands) and the Caribbean Area (Puerto Rico, U.S. Virgin Islands).

Service Center Offices

Personalized, one-on-one service is provided by NRCS employees located in Service Centers or specialized offices. This service delivery constitutes a majority of NRCS employees who are largely technical in nature. Service Centers and specialized offices support customers to prevent, or solve, natural resource concerns on private lands and in their communities. Service Center staff work side-by-side with employees of local conservation districts and other State conservation agencies to address resource concerns. Service Centers function as a clearinghouse for natural resource information and help customers gain access to knowledge and assistance available from local, State, regional, and/or national sources. These offices are located across the nation in every area where NRCS works and support the delivery of technical or financial assistance to address resource concerns.

Support Offices

Support offices provide critical technical and administrative support for Service Centers and other NRCS offices. Support offices include: offices that provide administrative and technical support to a group of Service Centers; headquarter offices for watershed or river basin planning and construction activities; soil survey and Major Land Resource Areas offices that inventory and map soil resources on private lands; Plant Materials Centers that test, select, and release plants for conservation purposes in selected plant growth regions throughout the United States.

Accountability

NRCS regularly collects program performance data that provides information to support agency strategic and performance planning, budget formulation, workforce planning, and accountability activities. The Accountability Information Management System tracks and evaluates field and State level conservation planning efforts, and practice implementation through the Performance Results System (PRS). In addition to the Accountability Information Management System, the agency implements a suite of actions to monitor program compliance and improve accountability.

Compliance Activities

There were eleven audits, and 45 recommendations open at the start of this year and 23 recommendations added during the year, leaving a total of 62 recommendations in 2021. NRCS closed three of 14 active Office of Inspector General (OIG) and Government Accountability Office (GAO) offices for a year-end closure rate of 21 percent, and closed 37 of 62 recommendations, for a closure rate of 60 percent.

OIG AND GAO REPORTS*Table NRCS-1. Completed OIG Reports*

ID	Date	Title	Results
10601-0001-23	07/30/2021	NRCS Conservation Easement Compliance	Completed Report
10601-0007-31	09/26/2019	Agriculture Conservation Easement Program	Completed Report
10403-0001-11	11/15/2018	Natural Resources Conservation Service's Balance Sheet for Fiscal Year 2018	Completed Report

Table NRCS-2. In-Progress OIG Reports

ID	Date	Title	Results
50601-0010-31	04/12/2021	Beginning Farmers	On going

Table NRCS-3. Outstanding OIG Audit Reports & Recommendations

ID	Date	Title	Recommendations
10702-0001-23	09/10/2019	NRCS' Hurricane Disaster Assistance- Emergency Watershed Protection Program	1,2,3,4,5,6,7,8,9
10601-0004-31 (2)	11/13/2017	NRCS Regional Conservation Partnership Program	2
10601-0004-31	06/28/2018	NRCS Regional Conservation Partnership Program	3,4
10403-0002-11	11/26/2019	Natural Resources Conservation Service's Financial Statements for Fiscal Year 2019	2,10,12
10403-0003-11	03/04/2021	Natural Resources Conservation Service's Financial Statements for Fiscal Years 2020 and 2019	9,10,18
10601-0005-31	09/24/2019	NRCS' Environmental Quality Incentives Program Payment Schedule	4,6
11601-0001-12	02/13/2020	USDA's Fiscal Year 2019, First Quarter DATA Act Submission	3

Table NRCS-4. In-Progress GAO Reports

ID	Date	Title	Results
GAO 104241	07/30/2020	Flooding and Erosion in Alaska Native Village	On going
GAO 103431	04/09/2019	Wetland Conservation Compliance	On going
GAO 104449	09/24/2020	Federal Efforts To Address Algal Bloom And Hypoxia	On going
GAO 104436	11/18/2020	Compacts Free Association Grants and Trust Funds Update	On going
GAO 104716	02/09/2021	USDA Civil Rights Mandate	On going
GAO 104326	05/21/2020	Emergency Watershed Protection Program	On going

Table NRCS-5. Completed GAO Reports

ID	Date	Title	Results
GAO-19-543	09/16/2021	Federal Efforts in Environmental Justice	No Recommendation
GAO-20-128SP	11/12/2019	Irrigation Agriculture-Technologies	No Recommendation

LEAD-OFF TABULAR STATEMENT

Table NRCS-6. Lead-Off Tabular Statement (In dollars)

Item	Amount
Estimate, 2022	\$1,021,727,000
Change in Appropriation	+ 147,843,000
Budget Estimate, 2023	<u>1,169,570,000</u>

AVAILABLE FUNDS AND FTEs

Table NRCS-7. Available Funds and FTEs (thousands of dollars, FTEs)

Item	2020		2021		2022		2023	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE
Account 1: Private Lands Conservation Operations:								
Discretionary Appropriations	\$829,628	3,404	\$832,727	3,585	\$832,727	3,519	\$1,001,101	4,054
Mandatory Appropriations	-	-	-	-	1,000,000	-	-	-
Account 2: Watershed and Flood Prevention Operations:								
Discretionary Appropriations	175,000	105	175,000	163	175,000	18	125,000	134
Mandatory Appropriations	50,000	2	50,000	3	50,000	2	50,000	2
Supplemental Appropriations	-	-	-	-	775,000	119	-	29
Account 3: Emergency Watershed Protection Program:								
Supplemental Appropriations	-	-	-	-	300,000	37	-	30
Account 4: Watershed Rehabilitation:								
Discretionary Appropriations	10,000	1	10,000	5	10,000	3	10,000	3
Mandatory Appropriations	-	4	-	12	-	12	-	6
Supplemental Appropriations	-	-	-	-	118,000	10	-	15
Account 5: Water Bank Program:								
Discretionary Appropriations	4,000	1	4,000	1	4,000	1	-	-
Account 6: Healthy Forests Reserve:								
Discretionary Appropriations	-	-	-	-	-	-	20,000	1
Account 7: Urban Agriculture Innovative Production:								
Discretionary Appropriations	-	-	-	-	-	-	13,469	4
Account 8: Farm Security and Rural Investments Programs:								
Discretionary Appropriations	10,000	2	12,000	2	12,000	2	-	-
Mandatory Appropriations	5,160,470	4,993	3,539,115	5,804	3,639,115	7,253	4,014,115	7,353
Total Discretionary Appropriations	1,028,628	3,513	1,033,727	3,756	1,033,727	3,543	1,169,570	4,196
Total Mandatory Appropriations	5,210,470	4,999	3,589,115	5,819	4,689,115	7,267	4,064,115	7,361
Total Supplemental Appropriations	-	-	-	-	1,193,000	166	-	74
Total Appropriations	6,239,098	8,512	4,622,842	9,575	6,915,842	10,976	5,233,685	11,631
Sequestration	-307,418	-	-204,580	-	-210,280	-	-231,655	-
Transfers Out	-61,295	-	-60,228	-	-60,228	-	-60,228	-
Total Adjusted Appropriation	5,870,385	8,512	4,358,034	9,575	6,645,334	10,976	4,941,802	11,631
Balance Available, SOY	3,213,417	-	3,466,923	-	3,512,518	-	2,805,161	-
Recoveries, Other	543,601	-	467,232	-	-65,398	-	-90,758	-
Total Available	9,627,403	8,512	8,292,189	9,575	10,092,454	10,976	7,656,205	11,631
Lapsing Balances	-17,276	-	-21,417	-	-	-	-	-
Balance Available, EOY	-3,466,923	-	-3,512,518	-	-2,805,161	-	-1,547,388	-
Total Obligations	6,143,204	8,512	4,758,254	9,575	7,287,293	10,976	6,108,817	11,631
Other Funding:								
Gulf Coast Restoration Revolving Fund	4,236	3	12,092	8	9,000	2	6,149	2
Other Federal and Non-Federal Reimbursements	49,789	82	57,657	88	69,000	113	69,000	113
Total Other Funding	54,025	85	69,749	96	78,000	115	75,149	115
Total Available, NRCS	9,681,428	8,597	8,361,938	9,671	10,170,454	11,091	7,731,354	11,746

PERMANENT POSITIONS BY GRADE AND FTEs**Table NRCS-8. Permanent Positions by Grade and FTEs**

Item	2020			2021			2022			2023		
	D.C.	Field	Actual Total	D.C.	Field	Actual Total	D.C.	Field	Estimated Total	D.C.	Field	Estimated Total
SES	15	2	17	13	4	17	17	3	20	17	3	20
SL	-	-	-	-	-	-	-	-	-	-	-	-
GS-15	37	60	97	41	72	113	46	72	118	46	72	118
GS-14	75	146	221	51	179	230	54	190	244	57	192	249
GS-13	15	499	514	8	526	534	28	563	591	31	581	612
GS-12	17	2,528	2,545	11	2,639	2,650	21	2,667	2,688	21	2,802	2,823
GS-11	8	1,860	1,868	7	1,855	1,862	20	1,911	1,931	20	2,090	2,110
GS-10	-	24	24	-	27	27	-	26	26	-	26	26
GS-9	10	1,516	1,526	11	1,840	1,851	11	1,973	1,984	11	2,097	2,108
GS-8	4	341	345	3	328	331	3	347	350	3	347	350
GS-7	3	1,549	1,552	1	1,834	1,835	4	1,951	1,955	4	2,142	2,146
GS-6	-	230	230	-	253	253	-	248	248	-	248	248
GS-5	-	350	350	-	419	419	-	450	450	-	450	450
GS-4	-	108	108	1	118	119	1	142	143	1	142	143
GS-3	-	172	172	-	249	249	-	282	282	-	282	282
GS-2	-	49	49	-	48	48	-	57	57	-	57	57
GS-1	-	7	7	-	3	3	-	4	4	-	4	4
Other Graded	-	-	-	-	-	-	-	-	-	-	-	-
Ungraded	-	-	-	-	-	-	-	-	-	-	-	-
Total Permanent	184	9,441	9,625	147	10,394	10,541	205	10,886	11,091	211	11,535	11,746
Unfilled, EOY	-	-	-	-	-	-	-	-	-	-	-	-
Total Perm. FT EOY	184	9,441	9,625	147	10,394	10,541	205	10,886	11,091	211	11,535	11,746
FTE	165	8,432	8,597	133	9,538	9,671	205	10,886	11,091	211	11,535	11,746

Note: In addition to the numbers above, NRCS maintain over 140 temporary positions throughout the agency that provides support across the agency programs in their national or field location.

VEHICLE FLEET

Motor Vehicle Fleet

As a field-based agency, NRCS has a significant number of employees who require vehicles to visit field offices, job sites (farms and ranches) and other areas where public transportation is non-existent, uneconomical, or inadequate. Driving takes place on agricultural land and in an assortment of operating conditions for the purpose of providing technical assistance to farmers and ranchers, which often involves transporting large engineering and other field equipment, thereby requiring employees to have access to pickup trucks and sport-utility vehicles.

NRCS maintains a fleet of vehicles distributed among service centers and field, area, and State offices in the 50 States, the Caribbean, and the Pacific Basin areas. The majority of the vehicles are owned by the agency, while others are leased through the General Services Administration (GSA). Office locations are assigned vehicles, where multiple employees share vehicles to carry out mission requirements.

Replacement Criteria

To ensure that vehicles are safe and reliable, NRCS requires annual vehicle inspections per Federal Motor Vehicle Management Regulations. Federal Management Regulation 102-34.280 sets forth the minimum number of years or number of miles an agency must keep its vehicles before replacement. The agency policy is to replace motor vehicles based on economy and safety requirements.

Fleet Optimization

The optimal fleet inventory for NRCS has been identified. The agency will attain and maintain this optimal fleet inventory through one-for-one vehicle replacements, additions and eliminating non-essential vehicles through excess and transfer.

During 2021, an increase of 1,000 vehicles was approved to support the NRCS increase in FTEs for expanded mission delivery at the field level and improve sharing capabilities with FPAC agencies and partners. The FTEs and indirect results on the economy support “Build it Back Better” legislation.

Looking ahead, NRCS will continue to optimize its fleet by:

- Maximizing its participation in an existing and successful vehicle-sharing program that is rapidly expanding.
- Implementing telematics to simplify vehicle usage recording for field staff.
- Vehicle right-typing, ensuring that the fleet inventory reflects a blend of vehicles that are a proper match to the mission and offer best value back to the Government.
- Reducing the number of fossil fuel-based vehicles within the agency’s inventory.
- Identifying opportunities to increase electrification. All electric and hybrid (to include plug-in)-electric vehicles will be prioritized within the replacement strategy, where they are a best match to mission requirements, location, and funding availability.

Table NRCS-9. Size, Composition, and Annual Costs of Motor Vehicle Fleet

	Sedans and Station Wagons	Vans	SUVs	Light Trucks 4X2	Light Trucks 4X4	Medium Duty Vehicles	Buses	Heavy Duty Vehicles	Total Vehicles	Annual Operating Costs
2018 End of Year Operating Inventory	406	0	0	1,558	5,184	570	0	17	7,735	\$21,109
2020 End of Year Operating Inventory	337	93	137	1,032	5,463	561	0	17	7,640	21,226
2021 Planned Acquisitions	11	7	7	9	416	71	0	0	521	
2021 Planned Disposals	31	7	9	112	362	58	0	3	582	
2021 End of Year Operating Inventory	317	93	135	929	5,517	574	0	14	7,579	18,700
2022 Planned Acquisitions	1	2	1	24	971	1	0	0	1,000	
2022 Planned Disposals	0	0	0	0	0	0	0	0	0	
2022 End of Year Operating Inventory	318	95	136	953	6,488	575	0	14	8,579	21,635
2023 Planned Acquisitions	0	0	0	0	0	0	0	0	0	
2023 Planned Disposals	0	0	0	0	0	0	0	0	0	
2023 End of Year Operating Inventory	318	95	136	953	6,488	575	0	14	8,579	23,798

Note: Number of vehicles by type include vehicles owned by the agency and leased from commercial sources or GSA.

Annual Operating Costs excludes acquisition costs and gains from sale of vehicles as shown in FAST.

Table NRCS-10. Statement of Proposed Purchase of Passenger Motor Vehicles

Fiscal Year	Net Active Fleet, SOY	Disposals	Replacements	Additions	Total Acquisitions	Net Active Fleet, EOY
2020	337	31	0	11	0	317
2021	317	0	0	1	1	318
2022	318	0	0	0	0	318
2023	318	0	0	0	0	318

SHARED FUNDING PROJECTS**Table NRCS-11. Shared Funding Projects (dollars in thousands)**

Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
Working Capital Fund:				
Administrative Services:				
Material Management Service.....	\$91	\$94	\$44	\$42
Mail and Reproduction Services	705	554	432	422
Integrated Procurement Systems	1,233	1,308	1,068	1,062
Procurement Operations Services	1,019	557	434	374
Human Resources Enterprise Management Systems.....	120	122	170	175
Subtotal	3,167	2,635	2,148	2,075
Communications:				
Creative Media & Broadcast Center.....	405	305	245	421
Finance and Management:				
National Finance Center.....	2,375	2,430	2,436	2,431
Financial Management Systems.....	13,130	14,972	15,462	15,534
Internal Control Support Services	153	75	79	78
Subtotal	15,658	17,477	17,977	18,043
Information Technology:				
Client Experience Center	116,043	122,699	117,274	121,054
Department Administration Information Technology Office	116	74	207	211
Digital Infrastructure Services Center.....	17,420	17,473	29,745	30,126
Enterprise Network Services	5,107	20,407	14,857	11,966
Subtotal	138,686	160,653	162,083	163,357
Office of the Executive Secretariat.....	227	113	142	142
Total, Working Capital Fund	158,142	181,183	182,595	184,038
Department-Wide Shared Cost Programs:				
Advisory Committee Liaison Services.....	2	3	5	5
Agency Partnership Outreach.....	767	587	810	810
Honor Awards	1	1	1	1
Human Resources Self-Service Dashboard.....	60	-	-	-
Intertribal Technical Assistance Network	340	290	375	375
Medical Services.....	22	32	38	38
National Capital Region Interpreting Services.....	-	0	16	20
Office of Customer Experience	574	822	960	960
Personnel and Document Security Program.....	133	132	163	163
Physical Security.....	586	365	465	474
Security Detail.....	463	392	498	502
Security Operations Program	584	551	675	675
TARGET Center	114	101	146	146
USDA Enterprise Data Analytics Services	811	462	489	489
Total, Department-Wide Reimbursable Programs.....	4,457	3,738	4,640	4,658
E-Gov:				
Budget Formulation and Execution Line of Business	9	9	10	10
Hiring Assessment Tool.....	-	-	25	25
E-Rulemaking	-	8	11	12
Financial Management Line of Business.....	18	20	21	21
Geospatial Line of Business	13	13	13	13
Benefits.gov	72	70	71	67
Grants.gov.....	25	34	60	70
Human Resources Line of Business	30	26	31	31
Integrated Acquisition Environment	206	109	3	3
Total, E-Gov.....	371	288	245	252
Agency Total.....	162,970	185,209	187,480	188,947

ADVERTISING EXPENDITURES

Table NRCS-12. Advertising Expenditures (dollars in thousands)

Item	2021 Number of Contracts	2021 Dollars Obligated	2022 Number of Contracts	2022 Dollars Obligated	2023 Number of Contracts	2023 Dollars Obligated
Total Contracts for Advertising Services	3	\$24,940	-	-	-	-
Contracts for Advertising Services to Historically Underserved Small Businesses	-	-	-	-	-	-
Contracts for Advertising Services to Women-Owned and Minority-Owned Small Businesses	2	6,940	-	-	-	-

ACCOUNT 1: PRIVATE LANDS CONSERVATION OPERATIONS

APPROPRIATIONS LANGUAGE

The appropriations language follows (new language underscored; deleted matter enclosed in brackets)

1 For necessary expenses for carrying out the provisions of the Act of April 27, 1935 (16 U.S.C. 590a-f), including
 2 preparation of conservation plans and establishment of measures to conserve soil and water (including farm irrigation
 3 and land drainage and such special measures for soil and water management as may be necessary to prevent floods
 4 and the siltation of reservoirs and to control agricultural related pollutants); operation of conservation plant materials
 5 centers; classification and mapping of soil; dissemination of information; acquisition of lands, water, and interests
 6 therein for use in the plant materials program by donation, exchange, or purchase at a nominal cost not to exceed
 7 \$100 pursuant to the Act of August 3, 1956 (7 U.S.C. 2268a); purchase and erection or alteration or improvement of
 8 permanent and temporary buildings; and operation and maintenance of aircraft, [\$886,285,000]\$1,001,101,000, to
 9 remain available until September 30, [2023, of which not less than \$29,000,000 is for climate change-related
 10 initiatives, including not less than \$21,000,000 for climate science and not less than \$8,000,000 for climate
 11 hubs]2024: Provided, That appropriations hereunder shall be available pursuant to 7 U.S.C. 2250 for construction
 12 and improvement of buildings and public improvements at plant materials centers, except that the cost of alterations and
 13 improvements to other buildings and other public improvements shall not exceed \$250,000: *Provided further*, That
 14 when buildings or other structures are erected on non-Federal land, that the right to use such land is obtained as
 15 provided in 7 U.S.C. 2250a.

Change Description

The change (line 9-11) in language proposes deletion of funding for climate change related initiatives.

LEAD-OFF TABULAR STATEMENT

Table NRCS-13. Lead-Off Tabular Statement (In dollars)

Item	Amount
Estimate, 2022	\$832,727,000
Change in Appropriation	+168,374,000
Budget Estimate, 2023	<u>1,001,101,000</u>

PROJECT STATEMENTS

Table NRCS-14. Project Statement by Appropriations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		Inc. or Dec.	Chg Key
Discretionary Appropriations:											
Conservation Technical Assistance.....	\$729,093	2,911	\$731,255	3,071	\$731,255	2,979	\$885,578	3,514	+\$154,323	+\$535	(1)
Soil Survey	74,987	388	79,444	392	79,444	419	87,025	419	+7,581	-	(2)
Snow Survey.....	9,400	43	9,488	53	9,488	52	16,751	52	+7,263	-	(3)
Plant Materials.....	9,481	62	9,540	69	9,540	69	11,747	69	+2,207	-	(4)
Watershed Projects	5,600	-	3,000	-	3,000	-	-	-	-3,000	-	(5)
Subtotal.....	828,561	3,404	832,727	3,585	832,727	3,519	1,001,101	4,054	+168,374	+535	
Mandatory Appropriations:											
Partnerships for Climate-Smart Commodities	-	-	-	-	1,000,000	-	-	-	-1,000,000	-	
Subtotal.....	-	-	-	-	1,000,000	-	-	-	-1,000,000	-	
Total Adjusted Approp.....	828,561	3,404	832,727	3,585	1,832,727	3,519	1,001,101	4,054	-831,626	535	
Add back:											
Rescission, Transfers In and Out.....	1,067	-	-	-	-	-	-	-	-	-	
Total Appropriation.....	829,628	3,404	832,727	3,585	1,832,727	3,519	1,001,101	4,054	-831,626	535	
Transfers Out:											
FPAC-BC.....	-1,067	-	-	-	-	-	-	-	-	-	
Total Transfers Out.....	-1,067	-	-	-	-	-	-	-	-	-	
Recoveries, Other	100,932	-	18,603	-	-65,398	-	-	-	+65,398	-	
Bal. Available, SOY	108,321	-	143,520	-	138,202	-	202,100	-	+63,898	-	
Total Available.....	1,037,814	3,404	994,850	3,585	1,905,531	3,519	1,203,201	4,054	-702,330	535	
Lapsing Balances.....	-16,671	-	-20,873	-	-	-	-	-	-	-	
Bal. Available, EOY.....	-143,520	-	-138,202	-	-202,100	-	-	-	+202,100	-	
Total Obligations.....	877,623	3,404	835,775	3,585	1,703,431	3,519	1,203,201	4,054	-500,230	+535	

Note: The project statement and MAX discrepancy is due to MAX reporting reimbursable funding and FTEs, which are not included in the project statement.

Table NRCS-15. Project Statement by Obligations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Discretionary Obligations:										
Conservation Technical Assistance.....	\$770,086	2,911	\$735,689	3,071	\$790,637	2,979	\$885,578	3,514	+\$94,941	+535
Soil Survey	73,642	388	76,033	392	87,802	419	87,025	419	-777	-
Snow Survey.....	8,844	43	10,801	53	10,091	52	16,751	52	+6,660	-
Plant Materials.....	9,781	62	10,251	69	11,808	69	13,847	69	+2,039	-
Watershed Projects	15,270	-	3,001	-	3,093	-	-	-	-3,093	-
Subtotal Disc oblig.....	877,623	3,404	835,775	3,585	903,431	3,519	1,003,201	4,054	+99,770	+535
Mandatory Obligations:										
Partnerships for Climate-Smart Commodities	-	-	-	-	800,000	-	200,000	-	-600,000	-
Subtotal Mand Oblig	-	-	-	-	800,000	-	200,000	-	-600,000	-
Total Obligations.....	877,623	3,404	835,775	3,585	1,703,431	3,519	1,203,201	4,054	-500,230	535
Add back:										
Lapsing Balances.....	16,671	-	20,873	-	-	-	-	-	-	-
Balances Available, EOY:										
Conservation Technical Assistance.....	64,506	-	64,416	-	-	-	-	-	-	-
Soil Survey	18,688	-	13,645	-	-	-	-	-	-	-
Snow Survey.....	2,150	-	703	-	-	-	-	-	-	-
Plant Materials.....	2,574	-	5,182	-	2,100	-	-	-	-2,100	-
Watershed Projects	55,602	-	54,256	-	-	-	-	-	-	-
Partnerships for Climate-Smart Commodities	-	-	-	-	200,000	-	-	-	-200,000	-
Total Bal. Available, EOY	143,520	-	138,202	-	202,100	-	-	-	-202,100	-
Total Available.....	1,037,814	3,404	994,850	3,585	1,905,531	3,519	1,203,201	4,054	-702,330	535
Total Transfers Out.....	1,067	-	-	-	-	-	-	-	-	-
Recoveries, Other	-100,932	-	-18,603	-	65,398	-	-	-	-65,398	-
Bal. Available, SOY	-108,321	-	-143,520	-	-138,202	-	-202,100	-	-63,898	-
Total Appropriation.....	829,628	3,404	832,727	3,585	1,832,727	3,519	-1,001,101	4,054	-831,626	+535

Note: The project statement and MAX discrepancy is due to MAX reporting reimbursable funding and FTEs, which are not included in the project statement.

JUSTIFICATION

- (1) A net increase of \$154,323,000 and 535 staff years for the Conservation Technical Assistance Program \$731,255,000 and 2,979 staff years available in 2022).
- a. An increase of \$41,037,000 and 535 staff years for the Conservation Technical Assistance (CTA) Program to expand staffing capacity to keep pace with increased mandatory financial assistance authorities that will far exceed \$3 billion in 2023.

The Conservation Technical Assistance (CTA) Program remains the agency’s primary program to work with private landowners across the country through USDA’s unique delivery system of local field offices. Working one-on-one, NRCS can help producers use new technologies and conservation practices that address emerging challenges and opportunities, such as organic production systems, on farm energy management, air quality improvement, and enhancement of pollinator populations.

Through the CTA Program, NRCS helps land managers develop comprehensive conservation plans that include activities that: reduce soil loss from erosion; address soil, water quality, water conservation, air quality, and agricultural waste management concerns; reduce potential damage caused by excess water and sedimentation or drought; enhance the quality of fish and wildlife habitat; improve the long-term sustainability of all lands, including cropland, forestland, grazing lands, coastal lands, and developed or developing lands; and facilitate changes in land use as needed for natural resource protection and sustainability.

In 2023 NRCS proposes to accelerate proven approaches to conservation that generate results at broader scales, leverage tools and resources to gain efficiencies in service delivery, and optimize use of existing authorities that will strengthen rural communities. NRCS high-level priorities include:

- 1) Expand staffing capacity to keep pace with increased mandatory financial assistance authorities that will far exceed \$3 billion in 2023. Increases in financial assistance will continue to place higher demands on agency products and services for conservation planning and conservation plan development, which are requirements to access the agency’s mandatory funding through a wide range of programs.
- 2) Leverage the roll-out of the Conservation Desktop and the Conservation Application and Ranking Tool with continued integration of our automated business processes to reduce data entry and enhance analytics.
- 3) Accelerate conservation results at the landscape scale (e.g., watershed, river basin, multi-state, etc.), building on partnerships and new science and policy tools to focus resources and create non-traditional incentives via new authorities in the 2018 Farm Bill under EQIP-Incentives, RCPP, and other programs. Our Conservation Technical Assistance (CTA) is the conservation planning component for these programs under Private Lands Conservation Operations.
- 4) Support farm- and ranch-specific conservation results that producers rely on to achieve their economic objectives and regulatory requirements.
- 5) Enable conservation access to more producers, including beginning farmers and ranchers and historically underserved producers, urban growers, and leverage State and local government technical capacity.
- 6) Review existing authorities to amplify community action to build natural resource based economic opportunities and accelerate preparedness planning related to climate-driven natural resource effects.

Specifically, NRCS proposes to:

- Target technical and financial resources to achieve conservation objectives and address the most pressing issues affecting landscape resilience. NRCS will work to protect ecosystems, address water resource concerns, and restore habitat for at-risk species in large-scale ecosystems. NRCS will also bring the best available science and work collaboratively with partners to target conservation investments strategically in priority landscapes to generate the most cost-effective return for producers and taxpayers.
 - Leverage partnerships to increase financial resources, expand technical capacity, and accelerate conservation implementation by partnering with State, Federal, and other stakeholders for delivering and assessing conservation investments in healthy soils, and to accelerate efforts to adapt and mitigate the effects of a changing climate on functioning landscapes.
 - Inform conservation-based decision-making through prioritized investments in science-based tools and data, including advancing knowledge of dynamic soil properties (how soils change with land use) to improve and develop conservation practices and soil health management systems to help adapt to climate change, to minimize land degradation, and to improve the health of the soil, water, animal, plant, air, and energy ecosystems; NRCS will support applied research and modeling to identify cost effective strategies to maximize the benefits of improved soil health. Through the Conservation Effects Assessment Project (CEAP) initiatives, NRCS will establish a continuing, statistically-valid survey process to track progress in conservation adoption and conservation investment benefits to the nation's water quality, soil health, and agricultural productivity. Through the Conservation Evaluation and Monitoring Activities (CEMA) Program, NRCS is incorporating monitoring activities of key resource concerns and outcomes into the planning process.
 - Coordinate CTA efforts to measure conservation outcomes with work across the department, including Measure, Monitor, Report and Verify (MMRV) efforts within Partnerships for Climate-Smart Commodities as well as through the Conservation Reserve Program (CRP) Monitoring, Assessment and Evaluation (MAE) projects. NRCS will work to ensure that work done utilizing CTA and planning to measure outcomes, including soil carbon, continue to be compatible and complimentary to efforts across the department for a soil health monitoring network.
 - Advance Equity Priorities: NRCS will continue a coordinated, corporate approach to planning, technical assistance, and outreach across NRCS program delivery that will advance the Administration's priorities of racial, environmental, and economic equity to combat climate change. A detailed database and related tools will be developed to identify historic agency funding locations, which will allow NRCS to better align program assistance with areas and communities of greatest need. This will allow an informed and targeted approach to outreach and promote inclusive outcomes. Climate Smart Agriculture Swat teams would be developed for disadvantaged communities where subject matter experts will assist communities in a collaborative approach.
- b. An increase of \$50,000,000 for Conservation Technical Assistance to invest in equity conservation cooperative agreements.

In 2023, NRCS proposes to continue investment in cooperative agreements to support historically underserved farmers and ranchers with climate-smart agriculture and forestry. The Equity Conservation Cooperative Agreements are two-year projects that expand the delivery of conservation assistance to farmers and ranchers who are beginning, limited resource, historically underserved and/or veterans. Authorized by the Soil Conservation Act and Domestic Allotment Act (16 U.S.C. 590a-590f, 590q), these cooperative agreements will remove barriers to access from conservation planning and technical assistance by historically underserved groups, by providing outreach to these producers and allow NRCS to address key priority areas.

Key priority areas include addressing local natural resource issues; encouraging use of climate-smart practices; encouraging existing and new partnerships; developing state and community-led conservation leadership for historically underserved agricultural producers, including training students for career in natural resource management.

c. An increase of \$21,000,000 for Climate Smart Agriculture Implementation.

The funds will be used to support and expand NRCS's greenhouse gas MMRV efforts as well as efforts to increase internal capacity related to climate change science. As part of the broader effort to establish a soil health monitoring network, including a network of soil sampling sites, NRCS will integrate soil carbon monitoring work into the planning process through the utilization of Conservation Evaluation and Monitoring Activities (CEMA) program for Soil Carbon Stock. Data collected through these efforts, as well as MMRV efforts across the department will support the continued development of a Soil Health Monitoring Network. Targeting hiring and training efforts will further expand NRCS's ability to deliver conservation planning and technical assistance that supports soil health and climate science. Internal capacity will also support an expansion of staff understanding of climate change and the interrelationship between conservation planning, practice implementation, and adaptation and resilience to climate change. These efforts were specifically identified as a high priority in the NRCS Climate Adaptation Plan. NRCS will continue to expand efforts to train staff regarding key soil carbon and climate smart activities, complimentary to the work that partners will be doing through Partnerships for Climate-Smart Commodities.

d. An increase of \$8,000,000 for Climate Hubs.

The Climate Hubs are a framework for connecting a wide range of NRCS partners on climate variability issues including drought, excess rainfall, soil and streams management, and carbon issues. Requested funds will continue to enhance cooperation of the Climate Hubs with NRCS and will result in a greater understanding and delivery of the NRCS mission and programs on a truly national level. The Hubs highlight the technical, financial and economic benefits of NRCS's voluntary conservation programs so that proven science-based information is reaching stakeholders such as producers and resource managers. The amount requested will support Climate Hubs projects that are consistent with the NRCS mission and goals related to making regional and sectoral based vulnerability assessments that assist NRCS in addressing the needs of working lands and vulnerable natural resources through voluntary conservation programs. Funds will also be used to establish regional and state-based projects that understand how natural resource conditions on working lands are affected by the changing climate. This is essential to improve the performance of programs that conserve the land and sustain agriculture production. The increase in funds will assist the Climate Hubs expand NRCS outreach to the public through more effective and efficient delivery of research to end users. This includes Hub adaptation demonstration projects that serve as concrete responses to real-world agricultural climate management issues.

e. An increase of \$3,000,000 to conduct conservation planning related to soil testing and soil remediation to meet Farm Bill requirements.

There are two types of testing that NRCS will undertake in urban areas: 1) soil health testing and 2) soil testing that examines heavy metals. Heavy metal evaluation will include potential presence of soil contaminants, including heavy metals, volatile organic compounds, polycyclic aromatic hydrocarbons, or other contaminants. Soil testing results will be used to complete design and implementation requirements after a conservation plan has identified the need for soil health and/or soil remediation conservation practices for urban agricultural operations.

- f. An increase of \$10,558,000, which includes \$7,187,000 for pay inflation and \$3,371,000 for FERS for 2022 Pay and FERS.

This increase supports the pay increase which went into effect January 1, 2022, of a 2.7 percent Cost of Living pay increases for civilian employees, and a 1.1 percent increase to cover the expenses for the mandated increase of USDA's contribution to FERS.

- g. An increase of \$15,896,000 for 2023 Pay.

This increase will support the annualization of the 2022, 2.7 percent Cost of Living pay increase and the 2023, 4.6 percent Cost of Living pay increase. Without this increase the Agency will not have adequate resources available to avoid any disruption or delays in the Conservation Technical Assistance Program activities.

- h. A net increase of \$4,832,000 for other inflationary costs.

This increase will cover anticipated increases for mandatory operational expenses for rents (non-GSA rental payments an increase of \$5,894,000 and GSA rental payments a decrease of \$2,114,000), DHS Building Security Payments an increase of \$55,000, and Working Capital Fund, Departmental Management an increase of \$997,000. Without this increase the Agency will not have adequate resources available to avoid any disruption or delays in the Conservation Technical Assistance Program activities.

- (2) A net increase of \$7,581,000 and no change in staff years for the Soil Survey Program (\$79,444,000 and 419 staff years available in 2022).

NRCS conducts Soil Surveys cooperatively with other Federal agencies, Land Grant Universities, State agencies, tribes, and local governments. NRCS's major Soil Survey Program objectives are to:

- Inventory and map the soil resource on all lands of the United States, including Tribal and Native American lands;
- Keep soil surveys relevant to meet emerging and ever-changing needs, such as the impact of climate change on the soil landscape;
- Interpret the data and make soil survey information available to meet public needs;
- Promote and provide technical assistance in the use of soil survey information; and
- Lead the National Cooperative Soil Survey Program.

Soil Survey information is the foundation of resource planning conducted by land-users and policy makers. Soil Surveys provide vital information needed to support sustainable and productive soils in the United States. Emerging environmental issues (e.g., soil carbon stocks, nutrient management, and healthy soils) require that the soil survey collect and interpret new data and integrate that information into the Department's soil carbon measurement and monitoring activities. As USDA continues to build out a Soil Health Monitoring Network, NRCS will continue to build upon and integrate information from the Soil Survey. Sampling designs, working across USDA conservation programs, will also leverage existing information from the Soil Survey.

In addition to providing Soil Survey data to the public, NRCS also maintains a National Soil Survey Center that integrates and adds to the current soil science and provides information for the effective application of the Soil Survey to help make good land management possible. The National Soil Survey Center develops national soil policy, technical guidance, procedures, and standards. It conducts soil research investigations, operates a soil survey laboratory, develops handbooks and manuals, provides training, develops and maintains soil survey data systems; and plans regional work conferences.

- a. An increase of \$5,000,000 to continue to maintain relevant soil survey for all lands of the United States and territories, including Federal and Tribal lands.

The increase in funding will allow NRCS to keep soil survey relevant for all lands of the United States and territories, including Federal and Tribal lands. This is the primary mission of the National Cooperative Soil Survey (NCSS). NRCS provides the science behind science-based conservation practices and management strategies. Water quality and watershed health used to evaluate conservation practices are key focus areas

for NRCS. Conservation practices need supporting data to show landowners and farm managers the strength of using NRCS conservation practices in ensuring the sustainability and health of their soils. Soils data and information will enhance the assessment of watershed health by providing static and dynamic soil properties that affect water quality and that can be used for assessment and modeling.

The funding will support linkages to soil health and monitoring efforts referred to dynamic soil properties for soil health:

- Evaluate data collection and compilation of soil health indicators through Dynamic Soil Properties (DSP) information and similar efforts to facilitate the measurement and monitoring of soil health and carbon.
- Conduct Dynamic Soil Properties projects nationwide as part of Soil Survey operations to provide information on how management-related activities affect soil health and soil carbon stocks.
- Develop a data and information system to simplify and significantly expand the use of soil, ecological, conservation, and management data to support climate-smart agriculture, soil health and carbon monitoring for both internal and external customers.
- Provide technical expertise and assistance to support all aspects of the soil health and carbon monitoring.
- Assess static and dynamic soils information and other data as it relates to evaluating applied conservation practices for multiple land uses in support of soil health and carbon monitoring.

This funding will further support soil survey activities for NRCS to

- Better monitor priority watersheds to assist in evaluation of applied conservation practices. Includes water table monitoring in all watersheds and installation of Soil Climate Analysis Network (SCAN) sites in selected watersheds.
- Collect additional dynamic and static soil property data to fill soil data gaps such as changes in soil health (dynamic soil properties) related to conservation practices
- Generate assessments from data collected in catchments.
- Create digital raster maps of watersheds and provide training to conservation planning staff on using raster data for improved resource assessment and conservation planning.
- Generate interim and final project reports on watershed data and dynamic soil property data, identify strengths and weaknesses of soils data, provide guidance on future watershed projects, and determine how effective project and soils data is used to evaluate applied conservation practices.
- Provide States and partners with additional data to evaluate outcomes of applied conservation practices.
- Provide additional point data for Conservation Effects Assessment Project (CEAP) and Outcomes Team for modeling effects of conservation practices on water quality and watershed health.
- Provide accurate measurement of water quality/quantity related temporal soil properties to underpin soil survey and conservation assessments.
- Enhance and expand activities and partnerships in the National Water Quality Initiative (NWQI) and Edge-of-Field Monitoring programs.

Staffing levels must remain at current levels to maintain a cadre of soil scientists to provide detailed soils information to aid decision making by landowners, planners, and policy makers. NRCS is the sole Federal authority and lead in the United States for soil survey. The soil survey program needs to remain a viable enterprise that provides current, complete, consistent, and comprehensive soils information for the public good to enable wise decision making. Decreases in personnel and operational support will mean extended delays in delivering up-to-date core science and technology information for societal and agency needs. Efficiencies have been implemented in the soil survey program, since 2012 when the appropriation was reduced by 15 percent. Staffing decreased by 50 percent, and operating budgets decreased resulting in offices covering up to 12 million acres requiring additional travel to reach customers.

Soil survey information underpins conservation planning in the Conservation Technical Assistance Program, Farm Bill implementation in the Farm Bill Programs, the National Resource Inventory, the Conservation Effects Assessment Projects, and numerous programs in other Federal agencies, State/local agencies, and non-profit organizations.

b. An increase of \$2,116,000 for 2023 Pay.

This increase will support the annualization of the 2022, 2.7 percent Cost of Living pay increase and the 2023, 4.6 percent Cost of Living pay increase. Without this increase the Agency will not have adequate resources available to avoid any disruption or delays in the Soil Survey Program activities.

c. An increase of \$465,000 for other inflationary costs.

This increase will cover anticipated increases for mandatory operational expenses for Working Capital Fund, Departmental Management an increase of \$446,000, Shared Cost Program an increase of \$18,000, and E-Gov an increase of \$1,000. Without this increase the Agency will not have adequate resources available to avoid any disruption or delays in the Soil Survey Program activities.

(3) A net increase of \$7,263,000 and no change in staff years for the Snow Survey and Water Supply Forecasting Program (\$9,488,000 and 52 staff years available in 2022).a. An increase of \$7,000,000 for the Snow Survey and Water Supply Forecasting Program for Snow Telemetry (SNOTEL).

The NRCS Snow Survey and Water Supply Forecasting Program provides mountain snowpack information and streamflow forecasts for the western United States and Alaska. To predict this annual runoff, the Snow Survey & Water Supply Forecasting Program manages and maintains a comprehensive network of manually-measured snow courses and automated Snow Telemetry (SNOTEL) monitoring sites throughout the West. SNOTEL stations also collect data on snow depth, all-season precipitation accumulation, and air temperature with daily maximums, minimums, and averages. Many enhanced SNOTEL sites are equipped to take soil moisture and soil temperature measurements at various depths, as well as solar radiation, wind speed, and relative humidity. The NRCS SSWSF is the only Federal agency that provides high elevation snowpack and climate data at sites across the U.S. West. The information is used by NOAA's Drought Monitor, NOAA's River Forecast Centers (RFCs) for streamflow and flood forecasting, the Bureau of Reclamation (USBR) and Army Corps of Engineers (USACE) for reservoir and river management, and the Forest Service to assess fire risk. Some of these Federal agencies also are supporting newer remote sensing technologies which use the SSWSF data for ground-truthing. SSWSF water supply forecasts are produced in collaboration with NOAA RFCs or in consult with RFCs, USBR, and USACE.

SNOTEL sites are designed to operate unattended and without maintenance for a year or more. A typical SNOTEL remote site consists of measuring devices and sensors, an equipment shelter for the radio telemetry equipment, and an antenna that also supports the solar panels used to keep batteries charged. The increase in funds will be used to upgrade standard sensor configurations which includes:

- Upgrade of Air Temperature Sensors and Solar Radiation Shields network wide – All the air temperature sensors and one of the radiation shields being tested are US made.
- Program-wide Datalogger Upgrade – This would benefit the standardization of the network and data collection (programs). The dataloggers our program uses are also produced in the US by Campbell Scientific.
- Enhanced sensors to support development of process (conceptual) and physical hydrologic models – Sensor vendors would be US companies.
- GOES/Iridium Upgrades – Many stations are still using Meteorburst telemetry. All stations need to be converted to satellite telemetry using either GOES or Iridium. This ensures continual transmission of data in near real time and optimum performance.
- Soil moisture/soil temperature sensors – Approximately half of the current SNOTEL network have soil moisture/soil temperature sensors. Additional funding will allow for more of the network to be upgraded to collecting this data.

- Investments in the Water and Climate Information System (WCIS) – Data delivery, data quality and improved water supply forecasting models require investment in IT support and upgrades. Additional dollars will allow increased investment in making these improvements and providing the best products for our customers.

The SNOTEL Platform upgrades will provide 5-10 years of optimum operations depending on maintenance schedules and environmental exposure.

b. An increase of \$263,000 for 2023 Pay.

This increase will support the annualization of the 2022, 2.7 percent Cost of Living pay increase and the 2023, 4.6 percent Cost of Living pay increase. Without this increase the Agency will not have adequate resources available to avoid any disruption or delays in the Snow Survey and Water Supply Forecasting Program activities.

(4) A net increase of \$2,207,000 and no change in staff years for the Plant Material Centers Program (\$9,540,000 and 69 staff years available in 2022).

a. An increase of \$2,000,000 and no change in staff years for the Plant Material Centers Program to support climate smart agriculture goals within the agency's network of 25 Plant Material Centers (PMCs).

Funding is requested to build back staffing capacity and ensure PMCs have the resources to accelerate development of vegetative information and training for field staff to meet emerging environmental challenges associated with climate change and contribute to agency conservation planning streamlining efforts. Funding will also address continued investments in PMC facilities and equipment to improve operational efficiencies and provide new capabilities so that PMCs continue to be a leader in the development of conservation plants and plant technology resulting in the best conservation solutions for farmer/rancher resiliency. PMC activities directly contribute to USDA goals of healthy soils, grasslands, and forests; abundant and clean air and water; and increasing the resiliency of cropland to support U.S. food production.

Additional funding ensures the PMC program has adequate staffing and budget for supplies, services, and equipment to conduct the plant science studies and field trials efficiently that develop new vegetative plant adaptation and resiliency information related to changing rainfall patterns, average temperature increases, carbon sequestration, and extreme climatic events. Funding will also improve maintenance of PMC facilities allowing employees to focus on technology development and transfer resulting in an additional 10 percent more scientific documents and 30 percent more training for conservation planning staff. Technical documents support NRCS conservation practices, new and innovative technology delivery, and the planning process. Training delivers plant materials information to field employees, so they have the knowledge and skills needed to perform their jobs. Plants used for conservation of natural resources must be adapted to changing environments to ensure they continue to function to protect our soils, water, livestock production, and wildlife habitat. The net result is scientifically sound vegetative conservation practices and more efficient implementation of conservation plans with farmers, ranchers, and private landowners.

b. An increase of \$207,000 for 2023 Pay.

This increase will support the annualization of the 2022, 2.7 percent Cost of Living pay increase and the 2023, 4.6 percent Cost of Living pay increase. Without this increase the Agency will not have adequate resources available to avoid any disruption or delays in the Plant Material Centers Program activities.

(5) A decrease of \$3,000,000 for the Watershed Projects Program (\$3,000,000 available in 2022).

No funds are requested in the 2023 Budget for this program.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND FTE**Table NRCS-16. Geographic Breakdown of Obligations and FTE (thousands of dollars)**

State/Territory/Country	2020		2021		2022		2023	
	Actual	FTE	Actual	FTE	Enacted	FTE	Estimate	FTE
Alabama	\$7,991	45	\$6,683	39	\$7,224	39	\$8,022	45
Alaska	5,315	26	4,626	30	5,001	30	5,553	35
Arizona	6,458	39	6,633	38	7,170	38	7,962	44
Arkansas	11,307	50	12,225	71	13,215	70	14,674	81
California	18,543	104	20,356	123	22,004	121	24,434	139
Colorado	11,535	69	11,617	83	12,558	81	13,945	93
Connecticut	3,466	23	3,170	24	3,427	24	3,805	28
Delaware	2,603	12	2,938	19	3,175	18	3,526	21
District of Columbia	389,810	463	370,575	394	400,573	387	444,810	446
Florida	6,716	53	7,480	52	8,085	51	8,978	59
Georgia	10,549	45	9,472	59	10,238	58	11,369	67
Hawaii	7,485	29	6,083	37	6,575	36	7,301	41
Idaho	7,850	56	8,963	60	9,689	59	10,759	68
Illinois	11,680	68	8,997	54	9,726	53	10,800	61
Indiana	10,970	75	10,712	90	11,580	89	12,859	102
Iowa	17,856	146	18,210	119	19,684	117	21,858	135
Kansas	12,244	114	12,344	86	13,343	85	14,816	98
Kentucky	10,089	77	8,299	76	8,971	74	9,961	85
Louisiana	9,654	64	9,338	63	10,094	62	11,209	71
Maine	4,163	35	3,784	33	4,091	33	4,543	38
Maryland	5,537	33	5,867	41	6,342	40	7,042	46
Massachusetts	3,517	21	3,140	22	3,394	22	3,769	25
Michigan	8,935	59	10,323	65	11,159	64	12,391	74
Minnesota	11,634	63	12,628	82	13,650	81	15,157	93
Mississippi	12,334	63	14,631	81	15,815	80	17,561	92
Missouri	32,930	114	16,776	118	18,134	116	20,137	133
Montana	12,411	70	11,480	85	12,409	83	13,779	96
Nebraska	14,967	107	15,587	118	16,849	116	18,710	134
Nevada	3,586	22	3,694	25	3,993	25	4,434	29
New Hampshire	3,340	25	3,195	30	3,453	29	3,834	33
New Jersey	4,624	33	4,169	30	4,506	29	5,004	33
New Mexico	7,087	13	7,426	35	8,027	35	8,913	40
New York	7,575	60	8,191	62	8,854	61	9,832	70
North Carolina	8,477	49	7,432	44	8,034	43	8,921	50
North Dakota	11,676	90	11,019	78	11,911	77	13,226	89
Ohio	10,430	47	8,428	52	9,110	51	10,116	59
Oklahoma	11,849	102	11,826	100	12,783	98	14,195	113
Oregon	10,813	37	10,483	64	11,331	62	12,582	71
Pennsylvania	9,965	66	8,845	74	9,561	73	10,617	84
Puerto Rico	3,378	28	3,180	26	3,438	26	3,818	30
Rhode Island	2,251	12	2,161	13	2,336	13	2,594	15
South Carolina	6,623	27	5,830	31	6,302	30	6,998	35
South Dakota	11,794	80	12,245	90	13,236	88	14,698	101
Tennessee	11,411	78	10,471	80	11,319	78	12,569	90
Texas	33,663	181	35,199	252	38,048	247	42,250	285
Utah	6,895	39	7,176	33	7,757	33	8,614	38
Vermont	4,034	28	3,559	35	3,847	34	4,272	39
Virginia	7,239	55	6,607	58	7,142	57	7,931	66
Washington	8,356	68	7,881	59	8,519	58	9,460	67
West Virginia	6,389	38	6,164	47	6,663	46	7,399	53
Wisconsin	11,275	53	10,847	53	11,725	52	13,020	60
Wyoming	6,346	50	6,810	48	7,361	47	8,174	54
Distribution Unknown	-	-	-	-	800,000	-	200,000	-
Obligations	877,623	3,404	835,775	3,585	1,703,431	3,519	1,203,201	4,054
Lapsing Balances	16,671	-	20,873	-	-	-	-	-
Bal. Available, EOY	143,520	-	138,202	-	202,100	-	-	-
Total, Available	\$1,037,814	3,404	\$994,850	3,585	\$1,905,531	3,519	\$1,203,201	4,054

CLASSIFICATION BY OBJECTS**Table NRCS-17. Classification by Objects (thousands of dollars)**

Item No.	Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
	Personnel Compensation:				
	Washington D.C.	\$64,366	\$66,346	\$66,257	\$79,338
	Personnel Compensation, Field	216,829	223,498	223,197	267,262
11	Total personnel compensation	281,195	289,844	289,454	346,600
12	Personal benefits	126,782	119,657	120,347	144,106
13.0	Benefits for former personnel	43	46	50	60
	Total, personnel comp. and benefits	408,020	409,547	409,851	490,766
	Other Objects:				
21.0	Travel and transportation of persons	2,248	-278	2,286	2,430
22.0	Transportation of things	3,263	3,080	3,602	4,287
23.1	Rental payments to GSA	14,356	15,571	20,048	15,868
23.2	Rental payments to others	35,493	31,922	35,507	36,632
23.3	Communications, utilities, and misc. charges	2,061	328	382	427
24.0	Printing and reproduction	116	360	419	480
25.1	Advisory and assistance services	-795	-20	-	-
25.2	Other services from non-Federal sources	321,698	161,730	195,808	248,938
25.3	Other goods and services from Federal sources	1,996	1,930	1,739	1,365
25.4	Operation and maintenance of facilities	44,299	152,978	167,070	153,278
25.5	Research and development contracts	443	-416	-	-
25.6	Medical Care	2	14	14	-
25.7	Operation and maintenance of equipment	1,964	1,428	1,668	1,964
26.0	Supplies and materials	6,303	7,822	9,135	10,722
31.0	Equipment	35,308	42,560	48,075	33,627
32.0	Land and structures	503	6,969	7,519	2,100
33.0	Investments and loans	-	-	-	-
41.0	Grants, subsidies, and contributions	-24	-2	800,000	200,000
42.0	Insurance Claims and Indemnities	347	259	305	314
43.0	Interest and Dividends	23	3	3	3
44.0	Refunds	-1	-10	-	-
	Total, Other Objects	469,603	426,228	1,293,580	712,435
99.9	Total, new obligations	877,623	835,775	1,703,431	1,203,201
	DHS Building Security Payments (included in 25.3).....	\$1,996	\$1,930	\$1,739	\$1,365
	Information Technology Investments:				
	FBC-1001 Cust Engagement & Mgmt Svcs				
25.2	External Labor (Contractors)	8,301	4,873	6,747	6,764
	Total FBC-1001 Cust Engagement & Mgmt Svcs	8,301	4,873	6,747	6,764
	FSA-127 Geospatial Services				
25.2	External Labor (Contractors)	849	478	3,416	10,947
25.2	Outside Services (Consulting).....	-	10,337	7,909	272
	Total FSA-127 Geospatial Services	849	10,815	11,325	11,219
	FSA-129 Program Financial Services				
25.2	External Labor (Contractors)	32	33	34	35
	Total FSA-129 Program Financial Services	32	33	34	35
	NRCS-CDSI Conservation Delivery Streamline Initiative*				
25.2	External Labor (Contractors)	6,564	2,525	3,120	2,525
	Total NRCS-CDSI Conservation Delivery Streamline Initiative	6,564	2,525	3,120	2,525
	Total Major Investments	15,746	18,246	21,226	20,543
	Mission Area Non-Major Investment Totals.....	46,675	52,246	99,067	57,891
	Mission Area Standard Investment Totals.....	20,472	30,369	33,745	23,280
25.3	Mission Area WCF Transfers	89,706	97,577	97,787	100,655
	Total IT Investments	172,599	198,438	251,825	202,369
	*NRCS-CDSI Conservation Delivery Streamline Initiative was reported in error in the 2022 President's Budget. The Initiative was reported in the Farm Security and Rural Investment Program Account.				
	Position Data:				
	Average Salary (dollars), ES Position	\$182,514	\$186,928	\$191,975	\$200,806
	Average Salary (dollars), GS Position	\$72,229	\$70,816	\$72,728	\$76,074
	Average Grade, GS Position	10.0	10.0	10.0	10.0

Note: The position data reported above is representative of data collected across all funding sources provided to NRCS, including, but not limited to Conservation Operations, Watershed Rehabilitation (Technical Assistance), Watershed and Flood Prevention Operations (Technical Assistance), Water Bank Program (Technical Assistance), and Farm Security and Rural Investment Program (Technical Assistance).

NRCS TECHNICAL ASSISTANCE**Table NRCS-18. NRCS Technical Assistance (millions of dollars)**

NRCS Technical Assistance ¹	2021 Actual	2022 Estimated	2023 ² Estimated
Discretionary:			
Conservation Operations (Technical Assistance):			
Conservation Technical Assistance	\$731	\$731	\$885
Soil Surveys	79	79	87
Snow Surveys	9	9	17
Plant Materials	10	10	12
Watershed Projects	3	3	-
Total, Discretionary Programs	\$832	\$832	\$1,001
Mandatory:			
Farm Bill Programs (Technical Assistance):			
Environmental Quality Incentives Program	617	625	593
Agricultural Conservation Easement Program	192	219	162
Regional Conservation Partnership Program	289	370	287
Conservation Stewardship Program	659	504	423
Agricultural Management Assistance ³	1	1	1
Conservation Reserve Program Tech. Assist	236	328	256
Voluntary Public Access and Habitat Incentive Program	1	2	-
Feral Swine Eradication and Control Pilot	3	1	1
Agriculture Water Enhancement Program	5	6	1
Farm and Ranchland Protection Program	47	40	14
Grassland Reserve Program	20	15	3
Wetland Reserve Program	17	11	1
Wildlife Habitat Incentives Program	5	5	1
Chesapeake Bay Watershed Program	4	4	-
Healthy Forest Reserve Program	1	1	-
Total, Mandatory Programs	\$2,097	\$2,132	\$1,743
Total, Technical Assistance	\$2,929	\$2,964	\$2,744

¹ This table reflects the total staff resources necessary to implement private lands conservation programs administered by the Natural Resources Conservation Service. This table includes the total for discretionary technical assistance and associated science and technology programs provided through the Private Lands Conservation Operations account in addition to the total technical assistance necessary to implement Farm Bill programs.

² The 2023 Budget assumes estimated carryover of \$504 million.

³ NRCS is authorized to receive 50 percent of total AMA funding. The balance of the funds is allocated to the Risk Management Agency and the Agricultural Marketing Service.

STATUS OF PROGRAMS**CONSERVATION OPERATIONS**

Conservation Operations is authorized by the Soil Conservation and Domestic Allotment Act of 1935 (P.L. 74-46; 16 U.S.C. 590a-590f) and the Soil and Water Resources Conservation Act of 1977 (RCA) (16 U.S.C. 2001-2009). The purpose of Conservation Operations is to provide technical assistance supported by science-based technology and tools that help people conserve, maintain, and improve the Nation's natural resources. Conservation Operations has four major program components – Conservation Technical Assistance (CTA); Soil Survey; Snow Survey and Water Supply Forecasting (SSWSF); and Plant Materials Centers (PMCs).

Discretionary funding in the Conservation Operations account provides for the development and delivery of a major portion of the products and services associated with four of the Agency's five business lines:

- 1) Conservation Planning and Technical Consultation
- 2) Conservation Implementation
- 3) Natural Resource Inventory and Assessment
- 4) Natural Resource Technology Transfer

The fifth business line, Financial Assistance, is funded primarily through mandatory conservation programs that are authorized and funded through the Farm Bill.

Conservation Technical Assistance (CTA) Program

NRCS is the principal agency within USDA for providing conservation technical assistance to private landowners, conservation districts, Indian tribes, and other organizations. Through the Conservation Technical Assistance (CTA) Program, NRCS helps land managers reduce soil loss from erosion; address soil and water quality, water conservation, air quality, and agricultural waste management concerns; reduce potential damage caused by excess water and sedimentation or drought; enhance the quality of fish and wildlife habitat; improve the long-term sustainability of all lands, including cropland, forestland, grazing lands, coastal lands, and developed or developing lands; and facilitate changes in land use as needed for natural resource protection and sustainability.

The CTA Program provides agricultural producers and others with the knowledge and conservation tools they need to conserve, maintain, and improve the natural resources on the lands they manage. Through the CTA Program, conservation professionals and partners translate science, professional judgment, and sensitivity to land managers so they can take appropriate actions on their farms, ranches, and watersheds to conserve resources, enhance the environment, and ensure the commercial viability of agriculture.

Technical assistance starts with a science-based assessment of the resource concerns and opportunities on farms and ranches and in watersheds. Conservation professionals then provide farmers and ranchers with the best options for addressing resource concerns and taking advantage of opportunities. Trained conservationists understand the synergies of various conservation practices and activities and can recommend the best strategies to get desired results on the land. Through the development of a conservation plan, resource-related problems are addressed as producers and NRCS work together to use information gleaned from the planning process to make decisions, implement plans, and put conservation practices in place.

Technical assistance does not stop with implementation; it includes annual follow-up or reassessment to determine the effectiveness of the plan for the land manager. Technical assistance is an ongoing process of science-based assessment, action, reassessment, and adjusted action. Science-based technical assistance helps producers understand how their operations affect the environment and how they can manage their operations to make a profit and improve natural resources. It connects what happens on one farm with what happens on neighboring farms so that measurable natural resource improvements can be made on the broader landscape. Finally, technical assistance is about innovation – developing, testing, and transferring new conservation practices and systems that better meet the needs of producers and the environment.

Conservation technical assistance addresses at the local level natural resource conservation issues that are of State and national concern. NRCS leadership establishes CTA Program national priorities and initiatives on an annual or multi-year basis to focus resources on specific program objectives. States may establish additional priorities and initiatives for the CTA Program. NRCS has a full array of processes to focus CTA Program resources on national and State priorities and initiatives. These processes include, but are not limited to:

- Strategically positioning staff to address natural resource needs through conservation planning;
- Allocating program funds to address natural resource needs;
- Establishing short-term and long-term performance measures and goals;
- Formulating, enhancing, and expanding partnerships;
- Developing and transferring new and innovative technologies;
- Delivering conservation planning and other technical assistance to help producers meet eligibility requirements for USDA programs and other Federal, State, and local conservation programs;
- Conducting technical and program evaluations and assessments;
- Conducting resource inventories and assessments;
- Developing and delivering training to support conservation planners and conservation planning activities;
- Providing tailored conservation planning and assistance to meet unique need of a diverse customer base;
- Expanding technical capacity, including the use of technical service providers; and
- Developing public information and outreach strategies.

Conservation Technical Assistance

Current Activities

In 2021, CTA Program continuing activities included:

- Using new technologies and conservation practices that addressed emerging challenges and opportunities, such as organic production systems, on-farm energy management, air quality improvement, and enhancement of pollinator populations;
- Providing assistance to improve soil health and productivity in States impacted by the historic drought;
- Protecting wildlife through the Working Lands for Wildlife (WLFW), a partnership between NRCS and the U.S. Fish and Wildlife Service (FWS) to use technical assistance with financial assistance to combat the decline of wildlife species;
- Addressing a growing number of niche enterprises that include aquaculture, specialty crops, sustainable, and organic farming;
- Engaging producers who are new to production agriculture and have higher demands for technical assistance or have not previously participated in NRCS programs, but who are critical in solving the identified resource concerns in special initiative areas;
- Entering into agreements with conservation partnerships in order to leverage local funds and provide additional technical assistance;
- Accelerating focused technical assistance through landscape conservation initiatives such as the Great Lakes Restoration Initiative, Sage Grouse Initiative, and the Mississippi River Basin Healthy Watersheds Initiative;
- Addressing threats to drinking water, especially community water systems, targeting technical and financial assistance for source water protection;
- Addressing growing demand for pre-program conservation planning support for Farm Bill programs such as the Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP), and Regional Conservation Partnership Program (RCPP);
- Designing natural resource conservation systems to reduce the risk of loss and mitigate the effects of climatic events such as drought, fire, and flood;
- Leveraging the innovative technology and agribusiness applications of the private sector in a collaborative

effort to improve the tailored products and assistance provided to customers;

- Bolstering the credibility and technical acumen of staff and partners by strengthening the conservation planner certification program; and
- Attending to the unique needs of urban agricultural customers across the Nation through the delivery of customized conservation planning and technical assistance.
- In 2021, NRCS developed conservation plans covering almost 24 million acres. In accordance with those plans and utilizing CTA Program support, conservation practices and systems designed to improve soil quality were applied to 3.6 million acres of cropland.
- CTA Program support also contributed to the owners and managers of grazing lands in applying conservation practices to improve 10.1 million acres.
- Almost 12.3 million acres of agricultural land had conservation practices applied as designed by the agency to improve off-site water quality.
- Over 174,000 acres had conservation practices applied to improve irrigation water use efficiency, reducing costs to the producer, groundwater withdrawals, and surface runoff.
- 4.7 million acres had conservation practices and systems applied to improve fish and wildlife habitat quality.
- Creation, restoration, and enhancement of wetlands, which provide critical wildlife habitat, were implemented on over 1,500 acres.

There continues to be a growing demand for technical assistance, and the agency has continued to manage and invest in human capital to ensure the right skills are in the right location to deliver high quality products and services. In addition, the agency continues work to improve and streamline internal business processes to accelerate service delivery; expand conservation partnership and build new alliances for cooperative approaches that conserve and protect natural resources; develop and use electronically-based technology to provide a more customer-focused service; and strengthen the ability to develop innovative technology while addressing new and emerging conservation challenges.

Grazing Lands Conservation

Grazing lands comprise an economic resource base in all 50 States and provide food, fiber, clean air and water, wildlife habitat, and open space. According to the National Resource Inventory (NRI, 2021), the 525 million acres of privately-owned range and pasture lands make up 27 percent of the total acreage of the contiguous 48 States. These lands constitute the largest private land use category, exceeding both forestlands (21 percent) and cropland (19 percent). Properly managed grazing land has multiple benefits, including reduced storm water runoff, improved carbon storage in the soil, and continued availability of habitat for wildlife species. In 2021, conservationists helped ranchers and farmers understand the basic principles of rangeland and pastureland soil health. Grazing land conservation practices including their associated enhancements (such as range planting (550), pasture and hay planting (512), brush management (315), herbaceous weed treatment (314), grazing land mechanical treatment (548), prescribed burning (338), prescribed grazing (528) and forage harvest management (511) were applied on approximately 13.9 million acres of grazing land in 2021 in order to conserve, protect, and properly utilize soil, water, plant and air resources. The following grazing conservation practices standards were reviewed in 2021: grazing land mechanical treatment (548) and range planting (550).

NRCS works with the Society for Range Management, American Forage and Grassland Council, and other range and grazing entities to assist in technology development and transfer, and infusion of discipline science into NRCS technical assistance. The agency partners with the National Grazing Lands Coalition, a nongovernmental nationwide consortium of individuals, organizations, and agencies working together to maintain and improve the management and the health of the Nation's grazing lands. This coalition spurred major increases in the knowledge and skills of conservationists with the planning, training, and application of conservation of grazing land management, facilitating adoption of grazing conservation practices. The agency partners with the National Cattlemen's Foundation to recognize outstanding ranch and farm managers and conservationists through the Environmental Stewardship Award Program. This program encourages all producers in America to strive for improved land management on their farm or ranch for future generations.

NRCS uses the NRI Grazing Land On-Site Data Survey to evaluate and document the environmental conditions of rangelands and pastureland across private lands in America. Our interagency agreement with the Bureau of Land

Management (BLM) expands grazing lands NRI onto non-forested BLM lands to provide a statistically based sample design that is common to both agencies.

Ecological Site Descriptions (ESDs) provide a framework to support conservation planning, implementation, and assessment. An ecological site is a subdivision of the landscape that can be mapped via online tools such as Web Soil Survey. Each ESD contains information that allows a user to determine current conditions (including resource concerns), alternatives for future management (including climate change drivers), and necessary actions (conservation practices) to achieve those objectives. This technology improves land management planning capabilities for private landowners, agencies, and the public by providing blueprints for ecological improvement of grazing lands across the Nation and will have implications and applications in other countries. Joint policy between NRCS, the Bureau of Land Management (BLM), and the USDA Forest Service pools the agencies' technical resources to support the development and use of ESDs to describe site characteristics, plant communities, and use interpretations for grazing land and forestland. Through this approach, agencies achieve consistency in classification, technology development, and conservation planning. ESD development is on-going, and all three agencies provide staff support and participation. All of the relevant information is contained in the Ecosystem Dynamics Interpretative Tool (EDIT) which allows users to directly view information or via other connected platforms.

NRCS continues to work closely with partners and universities in developing and delivering the grazing land training curriculum. In 2021, the following courses were taught: Range Ecology II, Prescribed Grazing, Prescribed Burning, Grazing 101, Recordkeeping, and Interpreting Indicators of Rangeland Health (IIRH) Field Training.

Clean Water Activities

NRCS promotes the implementation of conservation practices on America's working lands to address water quality issues and help safeguard the Nation's streams, lakes, rivers, aquifers, and coastal and ocean resources. These conservation practices help mitigate the potential environmental risks posed by agricultural operations and the impairment of water resources by nutrients, sediment, pathogens, and pesticides. NRCS works with the agricultural community to implement conservation practices to address water quality resource concerns at the field, farm, and watershed scales. The agency also provides the leadership to enhance coordination in areas of mutual interest with the Environmental Protection Agency (EPA), U.S. Geological Survey, Army Corps of Engineers, National Oceanic and Atmospheric Administration, and other Federal agencies. Specific areas in which the agency provides technical leadership include erosion control and sediment management; nutrient management; conservation practices, activities, and enhancements; tools for assessing and addressing agricultural water pollution; and technical knowledge transfer to producers, partners, and the public.

NRCS targets agency efforts to protect water quality, including several national and regional conservation initiatives. The National Water Quality Initiative (NWQI) began in 2012 to implement conservation practices in priority watersheds to reduce agricultural contribution to water quality impairment. Each State has identified watersheds in which to concentrate NRCS efforts and coordinate with State water quality agencies. In 2021, the agency made financial assistance available to help farmers and ranchers implement conservation systems in 175 priority watersheds and provided technical assistance for development of watershed assessments in 211 watersheds. Also, in 2021, NRCS continued to address threats to public water supplies through source water protection in 10 States (23 projects). The initiative continued to emphasize watershed assessment and planning to further target conservation efforts by requiring all watersheds receiving financial assistance to have a watershed assessment, that identifies critical treatment areas. Landowners and producers participating in the initiative receive conservation payments to work on the land in a sustainable way that provides cleaner water while keeping the land productive into the future. State water quality agency partners report that 36 percent of NWQI monitoring watersheds showed an improvement in water quality in at least one of the NWQI-monitored pollutants (2017-2020 data); of these improvements, 73 percent can be attributed to, or associated with, agriculture conservation practices implemented.

The Mississippi River Healthy Watersheds Initiative (MRBI) is a similar initiative with a primary goal of assisting Hypoxia Task Force States in implementing their nutrient loss reduction strategies. In 2021, there were 206 watersheds receiving financial assistance for practice implementation and an additional 72 watersheds developing watershed assessments. MRBI watersheds have watershed assessments and specific metrics designed to target and measure impacts of conservation practice implementation. Communities benefit by having clean waterways, safer drinking water, and healthy habitat for fish and wildlife.

In 2019, NRCS initiated efforts to address source water protection based on the 2018 Farm Bill provisions. NRCS State Conservationist worked with community water systems and other drinking water partners to develop local

priority areas to address water quantity and quality threats to drinking water. During 2021, NRCS further refined the priority areas to better target threats to drinking water.

During 2021, the agency continued to provide leadership through the development, advancement, and demonstration of new and innovative approaches for water quality conservation. Below are some of these:

- NRCS serves as the lead USDA agency for providing conservation technical assistance for water quality improvement. A major component of this assistance is provided through the establishment of national conservation practice standards (CPSs). In 2021, NRCS completed updates to 28 CPSs, including those that protect, maintain, or improve water quality such as Agrichemical Handling Facility (Code 309); Land Reclamation, Abandoned Mined Land (Code 543); On-Farm Secondary Containment Facility (Code 319); Sinkhole Treatment (Code 527); Waste Transfer (Code 634); and Wastewater Treatment – Milk House (Code 627). Associated resources, including technical notes, are being updated to coordinate with new standards. Practice use is being analyzed and investigated to determine barriers to broader implementation. Training was provided throughout the year and new payment scenarios have been developed.
- Voluntary edge-of-field water quality monitoring enables agricultural producers and scientists to quantify the benefits of conservation practices to water quality. Through edge-of-field monitoring, NRCS works with producers and conservation partners to measure the amount of nutrients and sediment in water runoff from a field and compare improvements under different conservation systems. During the first eight years of edge-of-field water quality monitoring, the agency obligated about \$6.8 million for more than 40 monitoring projects collecting water quality data across the country.
- The release of nutrients from agricultural operations is a recognized source of contamination for the Nation’s waterways. Comprehensive Nutrient Management Plans (CNMPs) are an effective voluntary step in addressing water quality problems associated with agriculture. In 2015, NRCS CNMP policy and procedures were revised to make the plans more user-friendly and useful to agricultural operations. Currently, NRCS is working to improve the Manure Management Planner software that can be used to generate CNMPs, for use by NRCS employees and Technical Service Providers.
- NRCS released its 2018-2020 Chesapeake Bay Watershed Action Plan, describing its priority resource concerns of water quality, soil health, wildlife habitat, and principles for working with farmers and landowners to restore and improve the Chesapeake Bay Watershed using science-based conservation, partnerships, and voluntary conservation programs.
- NRCS has a goal of putting conservation systems on four million acres in the Chesapeake Bay Watershed by 2025. Since 2010, NRCS has worked with farmers and ranchers to put conservation on over 2.3 million acres.
- NRCS partnered with EPA and USGS in an interagency effort for the purpose of improving the customer experience for conservation groups who utilize our programs. The teams focused on three areas: Funding, Water Quality Monitoring, and Local Workshops.
- Collaborations with agricultural groups, States, Universities, and other Federal agencies continued to provide aggregated data about voluntary conservation practice implementation by NRCS customers which is helping States meet Chesapeake Bay total maximum daily load goals.
- NRCS continued to provide technical and financial assistance in 2021 to help producers respond to changes in market conditions related to the COVID-19 pandemic. This included providing producers with technical assistance on disposal of waste milk (due to greatly decreased demand) and reduced feeding rates for livestock that slow animal growth and milk production (due to limited receiving capacity at slaughterhouses). NRCS provided technical and financial assistance for emergency animal mortality management (disposal of animal carcasses that could not be taken to processing facilities).

In collaboration with the Agricultural Research Service (ARS), NRCS continues to support, deploy, and expand the geographic range for the Agricultural Conservation Planning Framework (ACPF) for conservation and watershed planning activities. The ACPF is based on a holistic planning concept, using geographic information system tools and high-resolution geospatial data to determine suitable locations for conservation practices and to support stakeholder engagement. ACPF analysis results provide an inventory of conservation opportunities in fields, below fields, and in riparian zones where water quality improvement and other ecosystem services can be realized. ACPF

results provide a planning resource that enables local conservationists and landowners to identify preferred practices and locations suited to their own landscape and farms. In 2019, NRCS funded an agreement with ARS to provide NRCS the tools and recommendations necessary for field offices and watershed planning partners to use ACPF for watershed planning and outreach. In 2021, progress included completion of 20 pilot demonstrations of using ACPF to model results of assessing the need for conservation in row-crop dominated watersheds of the Corn Belt production region. ACPF tools were tested in 11 unique geographies across four States (Arkansas, Maryland, Mississippi, and Oklahoma) to explore the applicability of using ACPF in other regions of the country. Preliminary results supported the establishment of a National Hub for ACPF at Iowa State University's Iowa Water Center.

In support of the EPA's priority to promote and finance water reuse and recycling projects through the Water Infrastructure Finance and Innovation Act, the USDA has committed to the collaborative efforts of the National Water Reuse Action Plan (WRAP), which was released in 2020. The WRAP features 11 strategic themes, 37 developed actions, 28 unique action leaders, 80 collaborating partners, and 200 implementation milestones geared towards better coordination and focus of taxpayer resources on national water resource concerns. Recognizing that data and information on the quality and quantity of available water can improve opportunities for water reuse, NRCS has committed to the action item of increasing water information availability. In 2020, NRCS fulfilled this action by prioritizing watershed-scale, water-reuse projects through the NRCS Conservation Innovation Grants Program (CIG). Through this priority, CIG funded two water reuse-focused projects in FY 2021 for a combined \$1.3 million to investigate tailwater recovery and optimize irrigation scheduling and storage. NRCS is leveraging existing USDA programs regarding agricultural water re-use. NRCS provides increased incentives for conservation practices that relate to water quality and quantity and protect drinking water sources while also benefiting producers. The 2018 Farm Bill authorized these enhanced incentive rates.

National Resources Inventory (NRI) Program

NRCS collects, analyzes, interprets, and delivers data and information on natural resources through the NRI program and the Conservation Effects Assessment Project (CEAP). Several pieces of legislation authorize the NRI, but the Rural Development Act of 1972 (7 U.S.C. 1010a) is recognized as the statute that specifically articulates the NRI program. CEAP is authorized under the Soil and Water Resources Conservation Act of 1977 (RCA) as amended.

The NRI compiles natural resources data and information, conservation program data, and data from other Federal and non-Federal sources. These data provide the basic scientific information necessary to inform sound natural resource planning and decision-making at many landscape levels. The NRI is a national assessment of natural resource conditions and trends on non-Federal lands, including privately-owned land, tribal and trust lands, and lands controlled by State and local governments. In all, the NRI provides information on over 80 percent of the Nation's land area. Data and analyses from the NRI are indispensable for developing appropriate and effective conservation programs, sound agricultural policy, and informing national farm policy discussion through the Farm Bill process. In addition, the data from the Grazing Land NRI Onsite Data Study are used in the CEAP-Grazing Lands conservation effects modeling efforts to further enhance optimization of conservation practice application on the Nation's grazing lands.

The NRI is a statistical survey that inventories scientifically selected sample sites in every county across the United States and locations in the Caribbean and Pacific Island areas. From 1977 to 1997, NRI was conducted on five-year cycles. Since 2001, a statistically sound subset of the 800,000 NRI sample sites nationwide has been selected every year for data collection. Collecting NRI data on an annual basis allows the agency the flexibility and capability to gather scientific information on emerging natural resource issues. The most valuable aspect of the NRI is its ability to capture long-term trends. This trending information is instrumental in evaluating the effects of conservation programs and policies over time. Major releases of NRI data are mandated by law and scheduled for every five years. The NRI is performed in cooperation with the Iowa State University Center for Survey Statistics and Methodology. The 2021 NRI activities included:

- **NRI Production Work.** The Remote Sensing Laboratories (RSLs) staff completed data collection on the 2019 NRI from images of 71,833 sample sites and approximately 216,000 points. The RSLs staff also processed 56 percent of the 71,867 images for the 2020 NRI. The contracts for acquiring aerial photography for over 70,732 segments for the 2021 NRI were awarded. In addition, SSRA received funding to conduct the NRI in Alaska, which was assessed for a single time previously, in 2007.
- **On-site Data Collection on Non-Federal Grazing Lands.** The partnership with the National Employee Development Section (EDS) of the Farm Production and Conservation (FPAC) Business Center

conducted all training remotely due to COVID-19 restrictions. In 2021, data collection was conducted on 2,350 non-Federal range and pasture sites.

- On-site Data Collection on Bureau of Land Management (BLM) Lands. In 2021, NRCS and BLM continued their interagency agreement to monitor rangeland resources by expanding NRI data collection on BLM lands with intensified sampling in core sage-grouse habitat. The five-year agreement that began in September 2019, continues the collaborative work that started in 2011. A survey system, developed with BLM funding, provides scientifically credible information on the status of non-forested BLM lands in 13 Western and Midwestern States. In 2021, NRCS collected data on over 1,100 sites on BLM lands. Adoption of standardized NRI protocols on BLM-managed landscapes enhances NRCS's leadership on grazing lands, benefits BLM surveys by providing a well-proven sampling framework, and enables compilation of a consistent and comprehensive database. Combining information derived from NRI data collected on BLM-managed lands with data obtained from NRI points on non-Federal lands provides a statistically sound, virtually seamless, area-wide representation of all grazing lands in the western U.S.

Conservation Effects Assessment Project (CEAP)

CEAP is a multi-agency effort designed to quantify the effects of conservation practices on agricultural land and to provide a scientific basis for managing the agricultural landscape for environmental quality. Findings from assessments completed under CEAP are used to guide USDA conservation policy and program development and to help conservationists, farmers, and ranchers, make more informed conservation decisions.

To build the science base necessary for effective conservation planning, CEAP collaborates with a number of partners from across the spectrum of the conservation research and planning community, including academic partners, non-governmental organizations, and government collaborators at the local, State, and Federal levels. CEAP projects are managed by five CEAP component leaders, with portfolios centered on cropland, grazing lands, wildlife, wetlands, and watershed assessments. Assessments of the effects of conservation practices and current agricultural management are carried out at national, regional, and watershed scales.

National assessments are conducted for cropland, grazing lands, wetlands, and wildlife. These assessments use a variety of methodologies to evaluate the impacts of conservation practices and to assess the potential of USDA conservation programs to meet the Nation's conservation goals, including modeling, monitoring and data collection, and geospatial analysis. The watershed assessment component focuses on studies that provide more detailed, in-depth assessments of smaller areas, developing science at the regional and watershed level to inform local decision-making and improve modeling capacities at multiple scales. To inform conservation planning strategies, CEAP-funded assessments have refined and developed models to evaluate the conservation impacts of current conservation implemented and of scenarios for additional conservation treatment to evaluate environmental change in response to practices.

Assessments conducted by all components of CEAP at various scales, from field to regional and watershed, inform the prioritization of conservation needs to enable the agency to focus resources in more effective ways to benefit the American public. CEAP-Watersheds and CEAP-Wildlife are working to support Conservation Initiatives within the agency to help identify and document measurable outcomes of on-the-ground conservation efforts. CEAP continues to provide assessments of the conservation efforts in various NRCS Initiative areas: the Mississippi River Basin Healthy Watersheds Initiative, the Chesapeake Bay Watershed Initiative and related Executive Order, the Great Lakes Restoration Initiative, the National Water Quality Initiative, the Lake Champlain Basin Initiative, the Sage-Grouse Initiative, the Lesser-Prairie Chicken Initiative, the Longleaf Pine Initiative, the Joint Chiefs Landscape Initiative, and Working Lands for Wildlife efforts. CEAP also has assessment efforts to support USDA focal areas such as climate-smart agriculture and America the Beautiful (30x30). The Resource Analytics Lab in the Resource Assessment Branch is contributing critical geospatial information and analysis to these assessment efforts.

The 2021 CEAP activities included:

Cropland Assessment

CEAP-Cropland provides science-based estimates of the environmental benefits and effects of conservation practices applied to cropland and the need for additional practices. The main focus in 2021 was on modeling the effects of practices collected during the second CEAP-Cropland farmer survey (for CEAP-2) as well as modeling of alternative conservation scenarios to assist with optimization of conservation practices implementation. This survey, conducted by National Agricultural Statistics Service (NASS) enumerators, involved face-to-face surveys with producers across the country to collect detailed data on farm management and conservation practice adoption on

18,845 farms. Practice adoption and management practices used on cropland in CEAP-2 was compared to those reported in the CEAP-1 farmer survey (conducted 2003-2006) to show trends that have emerged on cropland during the decade between the two survey periods.

A national-level summary of CEAP-2 findings will be released in late 2021, to document changes in practice levels, differences in edge-of-field losses (reductions in sediment and nutrient losses), and the impacts on water quality metrics during the 10-year period. Topics covered in the summarization include structural practices and conservation tillage, crop rotations and cover crops, nutrient management, irrigation, and more. After the national-level report is released, it will be followed by a series of regional CEAP-2 reports. CEAP-2 estimates of sediment and nutrient loss reductions from conservation and management practices will also be used in State Landscape Planning Packages and in agency outcomes reports.

Data collected from the CEAP-1 and CEAP-2 Farmer Surveys made it possible to evaluate changes in cropland conservation and tillage practices over a decade.

During this decade:

- Farmers increasingly adopted advanced technology, including enhanced-efficiency fertilizers and variable rate fertilization to improve efficiency and benefit rural economies and the environment.
- Irrigation expanded in more humid areas and as irrigators shifted to more efficient pressure-based systems and improved water management strategies, per-acre water application rates decreased along with national withdrawals.
- More efficient conservation tillage systems, particularly no-till, became the dominant form of tillage, improving soil health and reducing fuel use.
- Farmer adoption of structural practices and conservation tillage, alone or in combination, increased by nearly 42 million acres nationwide between the two CEAP surveys. The greatest gains were made in the adoption of structural practices plus conservation tillage, evidence that farmers were increasingly integrating multiple conservation treatments to achieve improved results.
- Nearly 70 percent of cultivated cropland had conservation crop rotations, and 28 percent had high-biomass conservation crop rotations.
- Nutrient incorporation declined, and consequently the shifts in rate, timing, and method of nutrient application resulted in overall increases in subsurface nitrogen and soluble phosphorus losses over the decade. Without attention to appropriate timing and method, increased application rates are less effective in improving production and may even lead to reduced yields.

As a result:

- Average annual water (sheet and rill) and wind erosion dropped by 70 million and 94 million tons, respectively, and edge-of-field sediment loss declined by 74 million tons.
- Nearly 26 million additional acres of cultivated cropland were gaining soil carbon, and by CEAP-2 carbon gains on all cultivated cropland increased by over 8.8 million tons per year.
- Nitrogen and phosphorus losses through surface pathways declined by 3 and 6 percent, respectively.
- Average annual fuel use dropped by 110 million gallons of diesel fuel equivalents, avoiding associated greenhouse gas emissions of nearly 1.2 million tons of carbon dioxide equivalents.

In 2020-2021, the process-based, field-scale APEX model (Agricultural Policy/Environmental eXtender Model) continued to be improved from CEAP-1 and Special Studies findings. These ongoing improvements will enable more realistic comparisons between CEAP-1 and CEAP-2 outputs and will better ground evidence-based agency decision-making. Improvements included increased capacity to capture the impacts of grazing animals on nutrient and soil dynamics; improved soil carbon modeling capacity and representation of soil carbon response to tillage impacts; inclusion of the impacts of high temperature stresses on yields; improved nitrogen and phosphorus cycle simulation; capacity to simulate slow-release nitrogen and nitrification inhibitor products; improved modeling of soil temperature with depth; enhanced water table dynamics; and better capacity to simulate woody crops, including orchards, vineyards, timber, and nut trees.

The CEAP-Cropland component scientists participated in several collaborative efforts with interagency and university groups related to potential improvements in conservation efforts in the context of numerous initiatives, including the CEAP Conservation Benefits Indicator (CCBI), the Great Lakes Restoration Initiative, the Greenhouse Gas Initiative, Mississippi River Basin Healthy Watersheds Initiative, the Conservation Assessment Ranking Tool (CART), and the National Water Quality Initiative. Both the Cropland and Watershed components also continue to inform interagency Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA) efforts.

Grazing Lands Assessment

As with other CEAP components, the Grazing Lands component relies on key partners in completing assessments. In 2021, these partners included the Agricultural Research Service (ARS), several universities, and specific non-profit organizations. Additionally, various NRCS Deputy Areas and State Offices are providing needed technical input and collaboration.

Primary CEAP-Grazing Lands component activities and accomplishments in 2021 include:

- Initiated development of the Conservation Outcomes Research Explorer (CORE). CORE will provide the agency with an extensive database that presents peer-reviewed literature findings, as well as the measured conservation outcomes of research. This online geospatial database will contain research papers, measured values, links from research to conservation practices and resource concern components. The database access will be available to all NRCS Deputy Areas to enhance outcome-based assessments, serve as a science-based reference in developing improved conservation practice standards, and help inform conservation planning to achieve programmatic outcomes. Additional information provided by CORE will include assessments and science produced from Farm Bill Conservation Innovation Grants, Conservation Stewardship Program, Regional Conservation Partnership Program, along with other field-based studies. CORE is expected to be released in late 2022.
- Continued development of the ArcGIS Online tool, RaBET, for use by conservation planners, ranchers, and others. The Rangeland Brush Estimation Tool (RaBET), developed with ARS-Tucson, provides MLRA-based remote sensing woody plant maps and canopy cover estimation using no-cost imagery. In collaboration with multiple NRCS and academic partners, the CEAP-Grazing Land team worked in 2021 to expand coverage of RaBET to an additional 12 MLRAs in five states. The RaBET team has joined forces with the CEAP-Grazing Lands VGS team and two USFWS Joint Ventures, resulting in more effective training sessions, data exchange, and ground-truthing of the canopy cover values generated via remotely sensed data. RaBET is useful for efficient and effective conservation planning, evaluation of conservation effects, documentation of Farm Bill funds to treat woody plant concerns, and helping States to develop statewide resource assessments.
- Completed development of a nationwide ArcGIS Online soil characteristics filter to aid in CEAP modeling efforts, soil survey and ecological site concepts and correlation, and conservation planning. The tool is called SSURGO-QT (Soil Survey Geographic Query Tool) and uses soil properties from the official NRCS soil data. Users select desired soil properties that then appear on the map and lead to effective conservation solutions. In 2021, The CEAP Grazing Lands team conducted a review of the tool, soliciting feedback from staff across NRCS on the application and its utility, strengths, and weaknesses. Revisions were made in response to the review, with additional base maps, data, and functionality added to the tool. The tool is being updated to the 2021 SSURGO and gSSURGO datasets and will be deployed for use in December 2021.
- Continued development of the Climate-Enhanced Topographic Wetness Index (CETWI)--a new index for conservation planning, soil data quality reviews, and ecological site concept development. CETWI is a geospatial mapping representation of landscape, soil, and climate properties that result in variable soil moisture gradients and vegetation potentials (kinds and amounts of plants). When CETWI is used in conjunction with soil mapping products, the combination is a powerful tool for conservation planning, modeling, and ecological site development. The new index is designed to better capture variability in critical site condition factors such as aspect, terrain, position, temperature, effective precipitation, and soil physical and chemical properties than existing indices. The CEAP-Grazing Lands team has developed the tool in collaboration with Teren Inc., formerly SolSpec Aerial Analytics. The tool is scheduled for extensive state-level review beginning in January 2022.
- Finalized the water erosion matrix for the rangeland Soil Vulnerability Index (rSVI-water), and continued work on the final matrix for rangeland soil vulnerability to wind (rSVI-wind). These indices are designed to offer a quick analysis of soils and soil map units that are at High, Moderately High, Moderate, or Low risk of erosion by wind and/or water. These background layers will aid conservation planners in developing options with producers for the treatment of at-risk areas to improve soil stability and resilience. The final rSVI package for wind and water will be released for use in the spring of 2022.

- Initiated a study on the impacts of applied conservation on ecosystem service valuation in the southwestern and western states that are part of the NRCS Land Resource Region D. Rangeland is a dominant land use in the area, with approximately 40 percent being non-federal, and 60 percent in federal ownership/management (Bureau of Land Management (BLM), predominantly). In line with the goals of the America the Beautiful (30x30) USDA initiative, CEAP-Grazing Lands is collaborating with the BLM to evaluate and estimate ecosystem service values on non-federal and BLM lands. NRCS expends approximately \$171 million annually (2005-2016 average) in conservation applied to BLM and USFS lands, and cooperation with the BLM allows CEAP-Grazing Lands to use grazing land data collected within the nationwide NRI statistical framework on federally managed BLM lands. Those BLM data are added to the non-federal NRI grazing land data, improving the estimates of ecosystem service values resulting from application of conservation practices and treatments and expanding to scope of the estimates to include investments on federal lands.

Natural Resource Technology Transfer

NRCS ensures field employees have the appropriate resources and necessary training to utilize the latest scientific research and technology for natural resources assessment, conservation planning, conservation system installation, and program delivery.

Key activities in 2021 included:

- Science and Technology staff developed or provided training on a wide range of topics as part of NRCS's goal of making the latest technology available to our field offices.
- Biologists have expressed concern about larval and nectar food resources available to Monarch butterflies on privately owned rangeland. The NRCS National Resource Inventory (NRI) rangeland data was used to evaluate *Asclepias* species densities, geolocations, and environmental gradients thus providing a source of information to improve NRCS assistance to landowners and producers with respect to Monarch recovery efforts.
- The Natural Resources Specialist (NRS) provided support to revise practice narratives, assign practice points to each narrative revision, resource concern component, and land use in the Conservation Practice Data Entry System (CPDES). This effort required coordination with the Conservation Planning and Technical Assistance Division and National Discipline Leads, and established resource concern teams to both rewrite all national practice narratives and assign practice points for individual resource concern components and land use for each practice and narrative. National Discipline Leads and technical specialists from the West, Central, and East National Technology Centers participated on various teams to evaluate resource concern components on applicable land uses and assign practice points to each narrative.
- Various National Technology Support Center (NTSC) staff provided support for the development of several new and existing tools. Some of the tools were the Conservation Practice Document-Document Management System (CPD-DMS), CPDES, Conservation Desktop (CD), Field Office Technical Guide (FOTG), SSURGO-QT Tool, CRP Soils Data Tool, ROSETTA, Prairie Pothole Region HGM Wetland Class, National HEL Determination Tool, National Wetland Determination Tool, Water Erosion Prediction Project (WEPP), and Wind Erosion Prediction System (WEPS), Agricultural Waste Management (AWM). CNTSC staff is supporting the Grazingland Resource Analysis System (GRAS) design and deployment into conservation desktop.

NRCS National Discipline Leads, supported by technical specialists at the East, Central and West Technology Support Centers, completed updates to 52 national Conservation Practice Standards released to States for adoption with an additional 33 standards having completed *Federal Register* public comment or ready for *Federal Register* public comment.

- West, Central and East Technology Support Center economists, with support from a team of NRCS State economists, redesigned the Conservation Economics class to be delivered asynchronously to Conservation Planner staff as required for planner certification. The course has been streamlined from a total of 24 hours in-person training to a series of webinars totaling about eight hours of training time delivered remotely. The course has been favorably received and resulted in significant travel and staff time savings.
- CNTSC technical specialists provided over 500 instances of direct technical support to States with the Conservation Practice Document-Document Management System (CPD-DMS), including managing user permissions, troubleshooting errors, and solving program malfunctions. Technical staff provided direct assistance, and collaborated with software developers to correct bugs and enhance program functionality

for CPD – DMS, FOTG, CPDES, NASIS Interpretation Generator, DSP Hub, ROSETTA, WEPP, WEPS, and RUSLE2. Technical specialists in the East, Central, and West NTSC hosted three (3) workshops for technical and discipline leads on writing conservation practice standards and using CPD-DMS to manage practice standards and associated practice documents. Technical staff also provided timely guidance and leadership to States with the new conservation practice variance request and interim conservation practice request processes in CPD-DMS. Technical assistance was also provided in geospatial sciences and technology to States in all regions. A national workshop was organized for States to share workflows and methods of digital field data collection and implementation within the NRCS geospatial enterprise.

- ENTSC Water Management, Agricultural, and Environmental Engineers and Agronomist provided mentoring, guest lectures, software training, and Capstone/Senior design evaluations to students at 1890 Institutions including North Carolina A&T State University. ENTSC specialist also served on the Department of Biological Engineering Advisory Board.
- ENTSC Water Management Engineer provided Irrigation and Water Management on-line training and direct assistance to more than 300 NRCS and partner planners across the East states. The trainings have better equipped staff with fundamentals of micro irrigation systems planning, design and evaluation including use of design tools and templates.
- ENTSC and CNTSC Water Management Engineers provided joint training and direct assistance to NC and PR to compute lateral effects (ditch setbacks) using the NRCS NDDrain software for all soils in the state. The training has better prepared staff to deal with the impact of drainage on wetland hydrology and compliance issues.
- ENTSC technical specialists provided direct technical support to all 23 States in the Northeast and Southeast Regions, along with ENTSC, WNTSC, and NHQ staff on the Conservation Practice Document-Document Management System (CPD-DMS), and the Field Office Technical Guide (FOTG) Section 4, including managing user permissions, troubleshooting errors, and solving program malfunctions in order to properly manage and display conservation practice standards and supporting documents.
- The CNTSC has provided Pest Management training to more than 80 NRCS and partner planners across three states. This training has better equipped planners to provide higher quality customer service related to Pest Management planning and the implementations of conservation contracts containing the Pest Management Conservation System conservation practice.
- The CNTSC and ENTSC worked with South Carolina NRCS to create and deliver three Conservation Webinars that provided training on monarch biology and conservation to hundreds of NRCS field staff in the southeastern U.S.
- The CNTSC has provided soil report and interpretive products related to Conservation Practice Standard 808 (Soil Carbon Amendment), Excess Surface Salinity, Soil and Site Suitability for Aronia Berry Production, Hydrogeomorphic Wetland Class (Prairie Pothole Region Lateral Effects Consistency Project), CRP/soils data geospatial tool testing, and SSURGO-QT testing. These products assist states in implementing Soil Health Practices to the most vulnerable soils, enable the protection of sensitive areas, and enhance the use of soils data in conservation planning activities.
- Led the development and release of the National Range and Pasture Manual. The manual describes the policy for providing technical assistance on grazing lands including pastureland rangeland, grazed forestland, hayland and grazed cropland.
- Updated/Revised the National Range and Pasture Handbook. The handbook is a companion document to the new manual. Chapters provide technical information related to the current extent of grazing land resources, ecological sites, resource concerns and rangeland trends and conditions, rangeland ecohydrology, rangeland soil health, livestock nutrition, wildlife planning considerations, grazing economics, inventory, assessment and monitoring of grazing lands and pollinator considerations for range and pasturelands.
- NRCS and ARS jointly developed the Rangeland Hydrology and Soil Erosion Processes Handbook and the Rangeland Hydrology Erosion Model Handbook. The handbooks teach NRCS employees the causes and consequences of soil erosion on rangelands and how to design management plans to prevent or correct issues of concern on rangelands at scales ranging from hillslopes to watersheds. CNTSC has also worked with ARS to support the implementation of the Agricultural Conservation Planning Framework.

- The CNTSC provided irrigation training to more than 20 NRCS staff in Missouri through a webinar. The training focused on irrigation center pivot design, which included pump design, sprinkler design and hydraulic fundamentals.
- The CNTSC facilitated meetings to expand ideas generated during the Ogallala Aquifer Summit. The Summit brought together a diverse group of over 200 participants who discussed the impacts declining groundwater levels had on communities and ways to reduce these impacts. Following this effort, the National programs staff considered ideas and worked with State Conservationists and their partners to guide local efforts and communications across the region.
- Led the development of the Central Region Dam Consortium to create an interdisciplinary community of engineers and geologists focused on dam safety issues. This community supports technology transfer, informal mentoring, and on the job training on dam safety topics related to geology; hydrology; and hydraulic, geotechnical, structural, and construction engineering. This consortium works to increase engineering technical capacity and efficiency across regions and implement efficient methods to enable specialists to sustain high quality technical assistance to our customers on dam safety issues. The Dam Consortium may be adapted as needed and as directed the State Conservation Engineers.
- Assisted the Conservation Engineering Division in the development of the Urban Agriculture (UA) Chapter for the National Engineering Manual by authoring technical guidance on aeroponic, hydroponic, aquaponic, artificial substrates, UA case studies, UA facility, food safety, UA livestock, microgreen, rainwater harvesting, and vertical farming.
- Assisted in the planning for the watershed summit to address the Watershed Program challenges posed by program implementation across all aspects of programs and technology. The summit will be client, customer, and partner focused.
- Updated analysis of rangeland NRI data using Statistical Analysis System (SAS). Statewide and MLRA specific analyses include data analysis and reports for rangeland health assessment, similarity index, apparent rangeland trend, resource concerns, conservation practice application and needs and soil stability. Additionally, plant rankings based on frequency of occurrence and presence (acre extent) were conducted and reported for numerous states (Texas, New Mexico, Oklahoma, North Dakota, South Dakota, Arizona). Reports identified if the plants were native or introduced species.
- Served as the technical coordinator and instructor for the EDS – Liner Design for Ag Waste Containment. The course was modified from a classroom format to online delivery via MS Teams.
- Delivered Comprehensive Nutrient Management Plan (CNMP) training to multiple state NRCS staff, virtually (National Animal Manure and Nutrient Management Team with support from subject matter experts from the East, Central, and West NTSCs).
- Updated NRCS’s agency approved Manure Manager Planner (MMP) to ensure CNMPs are correctly written and addressed any issues.
- Released Technical Note on Feed and Animal Management for Horses.
- Delivered 35 training and informational webinars (includes S&T, CIG, Urban Ag, and ENTSC webinars).
- Wetland Conservation Compliance Technology Transfer: NTSC and NHQ staff provided web-based training for 88 staff, prepared three technical briefs and 14 tutorial videos, and developed a training course on determining wetland hydrology for Food Security Act certified wetland determinations.

Highly Erodible Land Conservation (HELC) Compliance

Highly erodible land is made up of soils that have a high vulnerability to increased erosion due to wind and water. This vulnerability is higher when the land is cropped, than when the land is in permanent vegetative cover. Participants in USDA programs (including those receiving Federal crop insurance subsidies) are required to protect their HEL cropland from excessive soil erosion in order to comply with the HELC regulations at 7 CFR Part 12 and statutory provisions of 16 U.S.C. Sections 3801, 3811, 3812, 3812a, and 3814. USDA program participants must implement a conservation plan or system on highly erodible cropped land, that provides for a substantial reduction in soil erosion. In addition, when breaking out native vegetation after 1985, a program participant must implement a plan or system that results in no substantial increase in soil erosion. The agency classifies about 101.1 million acres, or approximately 27 percent of America’s cropland, as HEL.

As part of the technical responsibilities of implementing the HELC provisions, NRCS conducts HELC determinations to identify cropland fields, that are highly erodible and subject to the provisions. In 2021, over 39,000 HELC determinations were conducted nationwide. The agency also provides conservation planning assistance on HELC.

Wetlands Conservation (WC) Compliance

NRCS's responsibilities for wetlands conservation compliance are detailed in Title XII of the Food Security Act of 1985 (16 U.S.C. Sections 3801 and 3821 to 3824). The agency responsibilities include making wetland determinations, resolving determination appeals, developing mitigation and restoration plans, determining minimal effect exemptions, and implementing scope and effect evaluations for the installation of new drainage systems and maintenance of existing systems.

One of the NRCS's significant responsibilities for WC involves conducting wetland determinations, to identify wetlands subject to the provisions, in violation of the provisions, or that are eligible for a specific exemption to the provisions. In 2021, over 21,000 wetland determinations were conducted nationwide.

A compliance status review is an inspection of a cropland tract to determine whether the USDA participant is in compliance with the HELC or WC provisions of the Food Security Act of 1985. Compliance status reviews are conducted annually in every State on farm and ranch lands that are associated with a person who has received USDA benefits and are subject to the HELC or WC provisions, or both. The compliance status review process requires employees to make an onsite determination when a violation of the HELC/WC provisions is suspected and ensures that only qualified employees report violations. In addition, the agency reviews HELC or WC tracts owned or operated by any NRCS or Farm Service Agency (FSA) employee who receives benefits at least once every three years.

Penalties for noncompliance with the HELC or WC provisions range from a Good Faith Exemption issued by the FSA, to a determination by FSA that the producer is ineligible for any government payment and must pay back any current and/or prior year funding. The compliance review year runs from January 1 to December 31. The results of the 2020 reviews, which are displayed in the table below, show that a high percentage of program participants are following approved conservation plans or systems on HELC and complying with the WC requirements.

In 2020, compliance reviews were conducted on 22,113 tracts, which included approximately 3.5 million acres of cropland. A total of 334 tracts, or 1.5 percent of the total reviewed, were found to potentially not be in compliance: 217 tracts had HELC violations, and 119 tracts had potential WC violations. Of the 21,779 tracts that were in full compliance, approximately 1,068 tracts or 5.1 percent were deemed to be in compliance because they had been issued variances or exemptions as provided by statute or regulation. This indicates a low rate of noncompliance, with exemptions provided due to extenuating circumstances.

Data from the past four years suggest that conservation measures prescribed are being effectively implemented on our most vulnerable land (Note: the number of tract reviews in 2019 is lower due to NRCS forgoing reviews in most Federally declared disaster counties due to extreme weather events).

Table NRCS-19. Summary of Tract Reviews and Tracts Out of Compliance (HELC and WC):

	2017	2018	2019	2020
Total Tracts Reviewed	23,944	23,926	18,206	22,113
Tracts out of Compliance	479	456	261	334
Percent out of Compliance	2.0	1.9	1.4	1.5
Number of States Recording Noncompliance	37	41	34	36

CTA Customer Assistance

The CTA program is the backbone of the agency's conservation delivery system. Many customers begin their relationship with NRCS through requests for assistance that later evolve into a conservation plan that may include financial assistance through mandatory (Farm Bill) programs.

In 2021, over 100,600 individual customers received comprehensive planning assistance. Results from this assistance over all NRCS programs are approximately:

- 25.1 million acres covered under written conservation plans;
- 38 million acres treated with conservation practices to improve water quality;
- 31.1 million acres of grazing lands conservation;
- 7.4 million acres of wildlife habitat improvement; and
- 14.5 million acres of conservation applied on cropland to improve soil quality.

NRCS has continued to implement Conservation Desktop (CD) to support the Conservation Delivery Streamlining Initiative. CD is an internally-facing, map-based tool for field conservationists to efficiently develop science-based conservation plans, and practice schedules to support implementation. CD also helps field staff with the management of Farm Bill conservation program contracts. The first release of CD to NRCS field conservationists was in July 2017. In early October 2019, a completed CD release replaced and exceeded the current functionality of the Customer Service Toolkit.

In 2020, NRCS integrated CD with the Conservation Assessment Ranking Tool (CART). CART modernizes and streamlines NRCS's conservation planning and program delivery, reduces workload for field staff, and improves the customer experience by creating an efficient application process. NRCS planners can use CART to help address a variety of 47 resource concerns, across seven land uses, for 353 conservation practices, enhancements, and bundles, and clients can submit one application for many considerations of a program simultaneously. Along with targeted questions, CART also enables planners to take advantage of almost 850 geospatial layers of data to automate processing calculations during conservation planning. This enables the planner to move the client from program application to program contract much quicker than in past years. CART establishes a system that reduces the amount of paperwork on NRCS clients, and the amount of work on our field offices.

In 2021, NRCS made many further enhancements to CART, including automating the NRCS environmental evaluation forms, expanding the geospatial levels available for conservation planning (more than 3,100 published), generating new reports for field offices to track conservation planning progress, and incorporating features to allow one conservation plan to address multiple programs. As of the end of 2021, there were over 9,500 users in CART. NRCS evaluated over 12 million resource concerns on over 59 million acres and completed over 125,000 ranked assessments.

Technical Service Providers (TSP)

TSPs expand and accelerate NRCS's ability to plan and apply conservation practices that enhance, restore, or conserve the Nation's soil, water, and related natural resources on non-Federal land. TSPs assist landowners and agricultural producers in applying conservation practices on the land. TSPs may be individuals or entities such as private businesses, nonprofit organizations, Indian tribes, or State and local governments. TSPs provide participants in USDA conservation programs with convenient access to technical services, quality work, and professional one-on-one technical assistance. TSPs develop conservation plans; perform selected compliance studies; plan, design, and implement conservation practices; and evaluate completed conservation practices.

The TSP program provides eligible participants with consistent, science-based, site-specific practices designed to achieve conservation objectives on land active in agricultural, forestry, or related uses. The program is national in scope and is offered throughout the United States and its territories.

To become a certified TSP, individuals or entities must enter into a certification agreement with NRCS. TSPs must meet education, experience, and credential requirements that are established for each conservation practice and Conservation Activity Plan (CAP). This ensures that technical assistance is provided in accordance with the agency's statement of work associated with each conservation practice and plan development criteria for each CAP. All technical service certification criteria are reviewed and updated annually. The TSP website hosts a link to view and access certification criteria and hosts a publicly accessible registry of certified TSPs. The TSP website contains other important information about the TSP Program for TSPs and customers:

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/tsp>

Currently, there are approximately 1,250 individuals and more than 100 businesses serving as certified TSPs that are available to help program participants apply conservation efforts through programs such as the Environmental Quality Incentive Program (EQIP), Agricultural Conservation Easement Program, Conservation Reserve Program, Conservation Stewardship Program, Conservation Technical Assistance Program, and Watershed programs.

TSPs continue to play the primary role in the planning and implementation of CAPs in EQIP. NRCS offered 16 approved CAPs during 2021. NRCS is transitioning and expanding the CAP Program in 2022.

International Conservation

Through International Conservation, NRCS provides leadership to promote, enhance, and strengthen the conservation of natural resources globally. The program helps foreign governments develop, use, and protect their natural resources. NRCS shares scientific and technological information about conserving natural resources with other countries.

The agency cooperates with other Federal agencies in providing technical assistance in natural resource conservation to countries affected by disasters, conflicts, or mismanagement of natural resources. NRCS assists other Federal agencies by arranging meetings between agency specialists and foreign visitors, who are interested in how the agency provides technical and financial assistance to private landowners and works with other countries on scientific and exchange projects that benefit both countries.

Current Activities

In 2021, the NRCS International Programs Division (IPD) arranged for 13 employees to meet with nine foreign visitors from six countries. IPD aided one agency employee on international travel to one foreign country to serve on a 120-day detail in the Republic of Palau as Acting Resource Conservationist with NRCS Pacific Island Area. The employee worked on U.S. Embassy priority agriculture and natural resources issues. IPD assisted 30 agency employees to participate in 12 international virtual workshops on topics supporting agricultural and livestock production, soil health, water management, and conservation practices.

In a virtual presentation at the National Cooperative Soil Survey XXVII Congress of Soil Science held in Argentina, NRCS shared recent advances of the USA National Cooperative Soil Survey Program that included the urban soil survey, coastal zone soil survey, ecological site inventory, dynamic soil properties, and dynamic soil survey.

NRCS staff from the National Soil Survey Center (NSSC) and Soil and Plant Science Division (SPSD) participated in an International Webinar on “Soil Spectroscopy: An Emerging Technique for Rapid Soil Health Assessment” hosted by the Republic of India and the Republic of Kenya. NRCS was recognized by the presenters for the research and development that has improved the global use of spectroscopy.

NRCS completed the final phase of a multiyear effort with the Islamic Republic of Pakistan on watershed rehabilitation, soil health, and irrigation improvement. NRCS provided expert technical advice, consultation, training, and leadership that exemplified the technical excellence of USDA, in the capture, delivery, and management of water for agriculture and why improving soil health is central to improving soil fertility.

NRCS Air Quality Specialist from the West National Technology Support Center is participating in a bi-lateral climate change and carbon farm planning meetings with the Federal Republic of Germany. NRCS will share climate change expertise and working lands climate solutions.

NRCS Animal Husbandry Specialist from the East National Technology Support Center, National Animal Manure and Nutrient Management Team met with the Deputy Head of Food, Agriculture and Fisheries and the Commercial Advisor for Food and Agriculture from the Consulate General of the Kingdom of Denmark. The meeting focused on economically viable environmental solutions to processing swine carcasses to deal with swine mortality on farms.

Additionally, a NRCS Nebraska Geographer and Geographic Information Systems Specialist has continued working on Department of State Embassy Science Fellowship Project with the Republic of the Marshall Islands despite the global pandemic via email and Skype meetings. He has been able to successfully direct his Team to track and monitor groundwater data and map hundreds of households in a secured cloud database that can be accessed from his duty station in Nebraska.

Scholarship/Internship Programs

In 2021, the FPAC Mission Area, NRCS, FSA, and RMA participated in the USDA 1890 National Scholars Program, a partnership between USDA and the 1890 Land-Grant Universities. This program is intended to increase the number of minority students enrolling in agriculture, food, natural resource sciences, and other related programs in pursuit of a bachelor’s degree at any of the Nation’s 1890 Land Grant Universities, all of which are Historically Black Colleges and Universities. In 2021, the agency obligated one million dollars for these scholarships and career training for students enrolled in this program, referred to as “Scholars”. Applicants include inbound freshmen and rising college sophomores and juniors. Students must maintain a minimum Grade Point Average of 3.0 and are required to work during the summers as conservation interns. In return for Scholarship funding, Scholars commit through a service agreement to fulfill one year of permanent employment upon graduating for every year of tuition

received. There were 42 new Scholars Sponsored in 2021 (39 NRCS, 2 FSA, 1 RMA). Currently, there are 95 Scholars (91 NRCS, 3 FSA, 1 RMA).

In past years, NRCS participated in the USDA 1994 Tribal Scholars Program designed to strengthen the long-term partnership, between USDA and the 1994 Land-Grant Institutions. The objective is to promote FPAC as an employer of choice for diverse populations, with an emphasis on American Indian/Alaska Native (AIAN) tribal students. The program offers a unique strategy for sharing information and ideas focused on best practices in outreach to American Indian/Alaska Natives interested in careers in Agriculture and Natural Resource management. In 2021, FPAC made efforts to utilize this program, but USDA recruitment efforts yielded no eligible Scholars for FPAC positions during the annual application period. In collaboration with USDA's Office of Partnership and Public Engagement, FPAC conducted a Special Recruitment for 1994 Tribal Scholars. NRCS participated with this effort, announcing ten positions at the end of the fiscal year. Current Applicants are being evaluated for selection at this time.

Outreach Partnerships

The Office of Outreach and Partnerships Division (OPD) within NRCS provides leadership and funding to ensure NRCS programs and services are made accessible to all NRCS customers, fairly and equitably, with emphasis on reaching the historically underserved farmers, ranchers, and landowners.

In 2021, NRCS announced a new funding opportunity, "Conservation Outreach: Racial Equity and Justice Conservation Cooperative Agreements," making available up to \$50 million for projects that provide outreach to historically underserved groups. Through this and other opportunities, NRCS continues to develop new and enhance existing partnerships to expand the delivery of conservation assistance to historically underserved farmers, ranchers, and landowners across rural, suburban, and urban landscapes. As a result, NRCS is:

- Demonstrating the connection between food, agriculture, community, and a sustainable environment;
- Expanding access to affordable fresh and local foods; and
- Stimulating economic development.

Beginning, Limited Resource, Historically Underserved, and Veteran Farmers and Ranchers

NRCS assists beginning, limited resource, historically underserved and veteran farmers and ranchers by creating opportunities for transparent dialogue, promoting open partnerships, coordinating economic viability through innovative conservation programs, increasing program access and services in persistent poverty communities, and expanding program participation avenues by improving internal guidelines.

In 2021, NRCS programs, including the Environmental Quality Incentives Program, Conservation Stewardship Program, and the Agricultural Management Assistance Program provided assistance to historically underserved customers, which include beginning, limited resource, and veteran farmers and ranchers.

The following financial assistance contracts were provided to customers in 2021:

- \$208.4 million in financial assistance on 4,837 contracts with historically underserved farmers and ranchers to treat about 2,948,521 acres.
- \$450.6 million in financial assistance on 12,952 contracts with beginning farmers and ranchers to treat about 2,637,591 acres.
- \$37.5 million in financial assistance on 1,319 contracts with limited resource farmers and ranchers to treat about 210,313 acres.
- \$22.5 million in financial assistance on 979 contracts with veteran farmers and ranchers to treat approximately 134,406 acres.

Assistance to American Indians and Alaska Natives

In 2021, NRCS continued to increase American Indians and Alaska Natives tribal participation in financial assistance programs among the 574 Federally-recognized tribal governments to strengthen conservation activities on tribal lands. The agency's objectives are to:

- operate within a government-to-government relationship with Federally-recognized Indian Tribes;

- consult to the greatest extent practicable with Indian Tribal Governments before taking actions that affect Federally-recognized Indian Tribes;
- assess the impact of agency activities on tribal trust resources, and assure that interests are considered before the activities are undertaken; and
- remove procedural impediments to working directly with tribal governments on conservation activities that affect trust property or government rights of the Tribes.

Federally-recognized Tribes can work with NRCS to receive financial assistance through the Conservation Technical Assistance (CTA) and mandatory programs. Assistance to Tribal governments is offered along with conservation planning, partnerships, grants, financial assistance programs, and training through the agency outreach efforts. Employees are trained in tribal culture and protocol. The agency has 46 offices, including 42 full-time and eight part-time offices, located on or near tribal lands. There are approximately 169 agency tribal liaisons assisting the 574 Federally-recognized Tribes.

Through the many technical and financial assistance programs, NRCS strives to meet tribal demands for improved agriculture and environmental quality, such as conservation of cropland, pastureland, and rangelands; improved wildlife habitat; restoration of wetlands; improved water and air quality; and food, fiber and timber production.

Current Activities

NRCS and the Bureau of Indian Affairs (BIA) partnership efforts to better serve Indian Country

NRCS continues to explore conservation planning and financial assistance opportunities in Indian Country to ensure that all resource concerns of Tribal Leaders and Tribal producers are addressed. NRCS is reviewing and discussing BIA Agriculture Resource Management Planning (ARMP) process to see if NRCS can adopt it in lieu of conservation plans.

Weather Stations to support agricultural operations on Tribal Lands

The majority of the 574 Federally-recognized Indian Tribes located in 34 States are involved in agriculture as farmers and ranchers that require adequate decision support tools to maintain productive and profitable systems. In 2020, 23 Tribal Soil Climate Analysis Networks (TSCANs) were purchased, and 18 were installed and connected to NRCS Soil Climate Analysis Network (SCAN). Data is readily available to the Tribes and other entities in the surrounding region. Installation began in Summer 2021 for the other remaining five TSCAN units.

This joint agency project between the BIA and NRCS has increased capacity, broaden the network of advanced weather information critical to managing crops and evaluating environmental concerns, and enhance our partnership highlighted in a national Memorandum of Understanding (MOU) between the BIA, NRCS and FSA. With the support of current TSCAN recipients, additional TSCAN/SCAN sites on Tribal lands have been recommended.

The weather stations will also serve as a focal point for education of tribal youth using the Science, Technology, Engineering and Mathematics (STEM) model. STEM is an interdisciplinary and applied learning approach to integrate these four disciplines into a cohesive and real-world application. Age-appropriate STEM K-12 education and demonstrations using the weather stations with resulting data supported by the tribes Department of Natural and Water Resources (DNR / DWR), NRCS, BIA and the United States Forest Service. The USDA Hubs can play a key outreach role in this area, and the Northeast Hub already has an active network with tribes in their region.

Program Activities/Participation

In 2021, American Indian and Alaska Natives were awarded the following:

- 877 Environmental Quality Incentives Program contracts totaling; \$61,077,810
- 5 Regional Conservation Partnership Program proposals totaling; \$1,594,176
- 320 Conservation Stewardship Program contracts totaling; \$20,154,301 and
- 5 Agriculture Management Assistance Program contracts totaling; \$60,202.

Tribal Conservation Districts (TCD)

There are 63 TCDs established under tribal laws and are essential to delivering conservation planning and conservation programs assistance in Indian Country. These TCDs are recognized by the Secretary of Agriculture.

Accountability

NRCS regularly collects program performance data that provides information to support agency strategic and performance planning, budget formulation, workforce planning, and accountability activities. The Accountability Information Management System tracks and evaluates field- and State-level conservation planning efforts and practice implementation through the Operations Score Card and the KPI Dashboard. In addition to the Accountability Information Management System, the agency implements a suite of actions to monitor program compliance and improve accountability.

Compliance Activities

There were eleven audits, and 45 recommendations open at the start of this year and 23 recommendations added during the year, leaving a total of 62 recommendations in 2021. NRCS closed three of 14 active Office of Inspector General (OIG) and Government Accountability Office (GAO) offices for a year-end closure rate of 21 percent, and closed 37 of 62 recommendations, for a closure rate of 60 percent.

Soil Survey Program

Soil survey is an essential tool for regional and local conservation planning that allows people to manage natural resources. Understanding and managing soil as a strategic natural resource helps sustain the health and economy of the Nation. Scientists and policy makers use soil survey information in studying climate change and evaluating the sustainability and environmental effects of land use and management practices. Soil surveys provide input data that computer simulation models use to predict the dynamics of carbon, nutrients, and water in soils. Planners, engineers, farmers, ranchers, developers, and homeowners use soil surveys to evaluate soil suitability and make management decisions for farms, home sites, subdivisions, commercial and industrial sites, and wildlife and recreational areas.

National Cooperative Soil Survey

NRCS is the lead Federal agency for the National Cooperative Soil Survey (NCSS), a partnership of Federal land management agencies, State agricultural experiment stations, private consultants, and State and local governments. The NCSS promotes the use of soil information and develops policies and procedures for conducting soil surveys and producing soil information. The agency provides the scientific expertise to enable the NCSS to develop and maintain a uniform system for mapping and assessing soil resources that allows soil information from different locations to be shared regardless of which agency collects it. The agency provides most of the training in soil surveys to Federal agencies and assists with their soil inventories on a reimbursable basis.

Standards and Mechanisms for Soil Information

NRCS is responsible for developing the standards and mechanisms for soil information on national tabular and spatial data infrastructure required by Executive Order 12906. NRCS is continually enhancing the National Soil Survey Information System and producing publications that are accessible to the public through the internet at <http://soils.usda.gov>. The Soil Data Warehouse houses archived soil survey data. Web Soil Survey distributes published soil surveys, making it easier to keep soil information current for daily public access. The agency refreshes the official national soil survey data annually to better meet the needs of modelers and researchers in addition to meeting agency and Departmental compliance program requirements. The SoilWeb mobile application is becoming a popular tool for individuals to derive soil information at Global Positioning System (GPS) located points. Web-based delivery mechanisms that simplify the interpretation and delivery of soils data are evolving at a rapid pace.

Current Activities

The primary focus of the Soil Survey Program is to provide current and consistent map interpretations and data sets of the soil resources of the United States. This includes providing useful information to the public in a variety of formats (e.g., electronic, and web-based). The program will continue to focus on maintaining quality soil information and helping people understand and use the soil resource in a sustainable manner. The National Cooperative Soil Survey (NCSS) is integral to maintaining quality soil information. Key program elements include:

Soils Inventory

Mapping procedures are based on physiographic rather than administrative boundaries. Soil surveys based on natural landscape boundaries are more efficient to produce, and provide consistent, quality data for assessing and planning the use and protection of landscape units (watersheds or ecosystems). Physiographic surveys provide consistent data that can be used easily by landowners with holdings in multiple jurisdictions, or by community, State, or regional planners. A primary challenge is to complete the initial soil survey for the entire country. This challenge also

includes completing surveys on Indian Tribal land holdings and on public lands controlled by the Forest Service (FS), Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), National Park Service (NPS), Department of Energy (DOE), and Department of Defense (DOD). Public lands are important to include with private lands when planning land use and conservation for watersheds, landscapes, or ecological sites. NRCS is working cooperatively within the NCSS to accomplish these goals. In 2021, the Soil and Plant Science Division issued guidance on collecting Dynamic Soil Properties (DSP) data. DSPs are those properties that change with land use and management and are used to measure and predict the response of soils to disturbances caused by human and non-human factors. Dynamic soil properties link traditional soil inventories to advancing areas of soil health, conservation, and management practices. There is an increasing demand for dynamic soil property data to inform management activities, to better assess the effect of these ecosystem services, and to provide more detailed and site-specific information for model development and applications.

Ecological Inventory

Ecological sites (ES) are subdivisions of working landscapes; defined and mapped by their associations with soil properties. These management-scale (acres) units have similar abiotic (climate, soil) properties so that they respond predictably to natural and management changes. Each ES is documented by an Ecological Site Description (ESD) containing information resource managers can use to: 1) verify the ES for their area of interest; 2) conduct inventories of soil properties, vegetation dynamics and land use/management interpretations for conservation planning; 3) identify management objectives; and 4) evaluate outcomes. All ES information is stored and managed in a common platform, the Ecological Dynamics Interpretive Tool (EDIT). EDIT is connected to other NRCS databases and platforms.

By policy, ES are used as a technical resource for inventories, assessments, and to make and document management decisions by NRCS, Bureau of Land Management, and Forest Service on rangelands; NRCS also uses ES applications on croplands, pastureland and forestland. These agencies have a long history of collaboration at national and local projects including training, database development, on-the-ground implementation, national inventory, and research.

To get ESDs to end users quickly, the Provisional Ecological Site (PES) initiative was established to organize all the existing soil survey map units across the continental United States into provisional ecological sites suitable to guide conservation planning decisions.

Progress: At the end of 2021, significant progress toward completing the Provisional Ecological Site Initiative had been accomplished. The western 2/3 of the U.S. is substantially complete, except for some areas, mostly Federal lands, in California and the Pacific Northwest. In the eastern 1/3 of the country, where there has not been a history of Ecological Site use, some areas are not yet completed, but most areas have made some progress. Progress metrics are available at [Ecological site descriptions–reports \(nmsu.edu\)](https://nmsu.edu/soils2026). This effort will continue in 2021 as part of the Soils2026, Phase 2 initiative.

In 2021, several collaborative research projects with other Federal agencies and universities have sought to find new, more efficient, and accurate ways to bring information into EDIT and make it available for end users.

Adapting to climate change requires both an understanding of current conditions as well as predictions of the impacts of changes on dynamic soil and vegetation properties. In a collaborative project with IBM Machine Learning scientists, the National Ecological Site Team (NEST) developed algorithms to predict how changes in climate variables will change the soil groupings behind ES and how those changes will affect the outcomes associated with common conservation concerns and practice implementation. The NRCS planning process was introduced into EDIT in 2020 via the use of Resource Concerns dropdown menus, connections to the Conservation Practice Standards Handbook and an interactive tool to include Rangeland Health worksheets.

Another aspect of climate change that will challenge managers is the impacts of more variable and intense events (rainfall, drought, flooding, windstorms) on soil erosion. In a collaborative project with New Mexico State University (NMSU) and Jornada ARS, the NEST are developing automated techniques for including the output of predictive erosion tools into ES State and Transition Models (STMs). STMs are graphical models of temporal change, unique to each ES. This project will allow users to compare the ecosystem service (erosion control) vulnerabilities/benefits of different management objectives and possible responses.

An objective site-based assessment of the outcomes of conservation practice application has long been a goal in NRCS. Through a research agreement with NMSU and US Geological Survey-Moab UT, the NEST have developed a new approach using ES information to refine statistical analysis using synthetic control techniques. This approach

allows a credible analysis of field observations that can allow researchers to compare the effects of conservation practices across a wide range of real-world situations.

<https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/eap.2264>.

Kellogg Soil Survey Laboratory (KSSL)

In 2021, the KSSL conducted analysis and validation on 8,100 soil samples collected from individual soil horizons that represent 1,808 soil profiles (pedons). The soil samples analyzed come from NRCS and other agency clientele that include Soil Survey Field Offices, State Soil Scientists, Resource Soil Scientists, University Cooperators, NGOs, Plant Materials Centers, NRI Soil Monitoring Network, the National Ecological Observatory Network, and outreach activities such as collegiate soil judging and the United Nations-Food and Agriculture Organization (UN-FAO). During 2021, the KSSL recorded 118,250 analytical results on chemical, physical, mineralogical, and biological soil properties by more than 50 different analytical methods. This quantitative data is essential for the National Cooperative Soil Survey and NRCS programs such as Conservation Technical Assistance and Farm Bill Programs. National programs and research projects depend on KSSL data for soil classification, soil screening and assessment, soil health, and dynamic soil properties.

KSSL is the primary laboratory providing quantitative analyses to support National Cooperative Soil Survey and NRCS activities around the Nation. In addition, The KSSL develops and maintains standard soil laboratory procedures specifically applicable to soil assessment programs and provides technical consultation and reference samples to other soil laboratories as participants in lab testing comparison studies.

The quantitative soil data produced by the KSSL serves as input for models and interpretations for land use and management, baseline data to assess Soil Health, and measured values to determine effectiveness of conservation practices and programs (e.g., CEAP, Environmental Policy Integrated Climate model, Revised Universal Soil Loss Equation).

The NCSS Characterization Database is maintained and delivered by the Kellogg Soil Survey Laboratory of the NRCS, Soil and Plant Science Division. It delivers a comprehensive soil laboratory dataset of chemical, physical, and mineralogical properties from over 64,000 sample sites, which are the result of 120 years of inventorying soils of the United States and Territories. The database is used by a wide range of customers, including farmers, ranchers, internal USDA staff, other Federal agencies, nonprofit organizations, local governments, and university partners.

The KSSL participates in the Food and Agriculture Organization (FAO), Global Soil Partnership (GSP), Global Soil Laboratory Network (GLOSOLAN) (<http://www.fao.org/global-soil-partnership/glosolan/en/>), that facilitates harmonization of methods of analysis and standards for laboratory quality control, and improve capacities of laboratories worldwide to perform soil analysis. During the 4th annual GLOSOLAN meeting, the Kellogg Soil Survey Laboratory (KSSL) presented (<http://www.fao.org/global-soil-partnership/glosolan/presentations-4th-glosolan-meeting/en/>). Since the GLOSOLAN meeting, the KSSL has actively participated in global exercises to develop GLOSOLAN Standard Operating Procedures (SOPs) for:

- soil pH determination: <http://www.fao.org/3/cb3637en/cb3637en.pdf>
- soil electrical conductivity (soil/water, 1:5): <http://www.fao.org/3/cb3354en/cb3354en.pdf>
- saturated soil paste extract: <http://www.fao.org/3/cb3355en/cb3355en.pdf>
- soil available P - Bray I and Bray II methods: <http://www.fao.org/3/cb3460en/cb3460en.pdf>
- soil available P - Olsen method: <http://www.fao.org/3/cb3644en/cb3644en.pdf>

Over the last 11 years, the KSSL has been assembling a mid-infrared (MIR) spectral library, similar to international efforts using soil spectrometry as a low-cost tool for the rapid prediction of soil carbon and other properties. The growing KSSL MIR spectral library represents over 90,000 legacy samples from the KSSL soil archive, the largest public collection in the United States with over 400,000 specimens. Geographically and taxonomically constrained calibration models are being developed for use by NRCS soil survey field offices for rapid prediction of organic carbon for soil health and soil resource assessment. MIR spectrometry allows rapid data collection while assuring data quality and consistency with a tool that any NRCS field soil scientist can use for soil survey and soil health investigations.

Based on its demonstrated capacity to produce quality measured and spectral data as well its open data policy, the KSSL holds a co-leadership role in the FAO-GLOSOLAN soil infrared spectrometry initiative (<http://www.fao.org/global-soil-partnership/glosolan/soil-analysis/dry-chemistry-spectroscopy/en/>). Infrared spectrometry allows rapid and reliable estimation of soil properties pertaining to soil classification and soil health

assessment. Work continues toward the establishment of the global spectral calibration library that the KSSL, selected to develop with participating countries and a soil property estimation service, and on capacity building in soil spectrometry, on national and global levels. In 2021, the KSSL completed draft standard operating procedures for sample preparation and MIR spectral data collection, that will also help regional champion laboratories support capacity building activities in soil spectrometry.

The NCSS Characterization Database is maintained and delivered by the Kellogg Soil Survey Laboratory of the NRCS, Soil and Plant Science Division. It delivers a comprehensive soil laboratory dataset of chemical, physical, and mineralogical properties from over 64,000 sample sites, which are the result of 120 years of inventorying soils of the United States and Territories. The database is used by a wide range of customers, including farmers, ranchers, internal USDA staff, other Federal agencies, nonprofit organizations, local governments, and university partners.

National Soil Survey Center

In 2021, the Soil Survey Program entered into agreements with multiple NCSS partners to use their expertise in innovative research and new technology development to achieve efficiencies in assessing and delivering soil and ecological site information. These investments are the foundation for information delivery of the future.

Technical Soil Services

Technical Soil Services (TSS) provides five basic types of service: technical policy and program services; planning services; site-specific soil investigations, testing, interpretation, and evaluation; expert services for judicial requests; and information services. These services are primarily provided through the USDA Service Centers. TSS also supports new and innovative models of conservation delivery such as the Conservation Assessment and Ranking Tool (CART) and Conservation Desktop. In 2021, over 94,000 hours of TSS were delivered to internal and external customers; wetland and highly erodible land compliance, onsite investigations, technical consultations, and delivering maps, presentations, and training comprised over 70 percent of the services delivered.

Web Soil Survey

The Web Soil Survey website, <http://websoilsurvey.nrcs.usda.gov/app/>, provides soil data and information produced by the NCSS to the public. The agency operates the website that provides access to the largest natural resource information system in the world. NRCS' soil maps and data are available online for 96 percent of the continental United States. The site is updated and maintained as the single authoritative source of soil survey information. The Web Soil Survey is used directly for conservation planning via Conservation Desktop.

Digital Soil Surveys

The NCSS develops and maintains two scales of soil surveys:

- Soil Survey Geographic Data Base (SSURGO) is used primarily by landowners, townships, counties or parishes, and watershed hydrologic units for planning and resource management. SSURGO contains the most detailed level of soil information; vector and raster formation for SSURGO are available; and
- United States General Soil Map is used primarily for multi-county, State, river basin planning and resource management and monitoring.

Acres Mapped

During 2021, soil scientists mapped or updated 54.9 million acres bringing the total of soil survey acres mapped to 1.98 billion in the United States. About 94 percent of private lands are completed and 68 percent of Federal lands have a soil survey inventory.

Soil mapping priorities are directed toward completion of all previously unmapped private, Federal, and tribal lands and updating mapping and interpretations to meet current user needs and requirements.

Conservation planners use soils data to choose, implement, maintain, and evaluate conservation practices. In 2021, the value to producers as a result of soils data being used by conservation planners is estimated at \$1.2 billion. The metric uses the obligation data from certified conservation practices, planned or implemented, that are dependent on soils data. Cover crops (\$111 million), fence (\$77 million), brush management (\$75 million), sprinkler system (\$59 million), and irrigation pipeline (\$54 million) were the top five conservation practices, in terms of dollars obligated, for which planners use soil data.

Ecological Site Descriptions were developed and linked to an additional 87 million acres of soil survey information, including Willamette and Puget Sound Valleys (Major Land Resource Area (MLRA) 3) and the Olympic and Cascade Mountains (MLRA 3) in Oregon and Washington; the Palouse and Nez Perce Prairies (MLRA 9) in Idaho, Oregon, and Washington; the Sierra Nevada Mountains (MLRA 22A) in California and Nevada; and the Semiarid and Subhumid Low Mountain Slopes (MLRA 158) in the Hawaiian Islands. Ecological Site Descriptions are a tool for conservation planners to understand how conservation practices can affect ecological sites and the necessary inputs to move ecological sites from one State to another.

Soils Information and Soil Surveys used interactively online

In 2021, soils information was the most requested information on the NRCS web site. The total number of visits was over 3.0 million. The top information requests, by number of visits, are: Soil Surveys by State (440,800), Soil Texture Calculator (170,200), soils homepage (138,700), Soil Survey (131,300), and Soil Classification (86,000).

Soil surveys used interactively online are accessed via Web Soil Survey, SoilWeb, and Soil Data Access. Users can view summaries of soil types for any geographic location where NRCS soil data exists. In 2021, the Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>) logged over 3.0 million user visits and accessed data for over 3.5 million areas of interest. Customers generated about 1.0 million printed documents. Customers downloaded data over 105,700 soil datasets. Users can view summaries of soil types for any geographic location where NRCS soil data exists. SoilWeb was developed in collaboration with the University of California-Davis Soil Resource Lab and NRCS. The website is available at <http://casoilresource.lawr.ucdavis.edu/soilweb>. The SoilWeb interface received about 284,200 visits. Soil Data Access (SDA) is the name of a suite of web services and applications whose purpose is to meet requirements for requesting and delivering soil survey spatial and tabular data that are not met by the Web Soil Survey and Geospatial Data Gateway websites. Customers queried soil data using SDA over 52.2 million times. Combine SDA with Web Soil Survey and SoilWeb applications, and the NRCS Soil homepage soil data has been supplied over 58 million times in 2021.

Soil Resource Assessment for Conservation Planning

NRCS soils information is foundational for the agency to continue to provide technical assistance and support to landowners efficiently and effectively. The increasing availability of geospatially referenced natural resource data (e.g., soil, climate, land cover) and the expansion of computing resources and web feature services does allow the opportunity to provide field staff with an unprecedented amount of information to help support and inform their discussions with landowners. The Conservation Assessment Ranking Tool (CART) modernizes and streamlines NRCS's conservation planning and program delivery, reduces workload on field staff, and improves the customer experience by creating an efficient assessment and application process. The tool combines and analyzes geospatially-referenced data and site-specific information provided by the landowner within a decision support system framework.

In 2021, soils information was accessed over 9.9 million times in the resource assessment part of CART. Documentation for soils data inputs into CART are at <https://jneme910.github.io/CART/>.

Dynamic Soils Hub

The Dynamic Soils Hub, initiated in 2021, is an innovative, high-end, geospatial data user interface that builds new data products from a wide variety of existing data sets. It will support the Conservation Innovation Grants, Environmental Quality Incentives Program, and Soil Health programs. It is focused on rapidly responding to customer requests for science-based soil property data at the Deputy Chief, Chief, and Under Secretary levels. The hub expands USDA capacity to model and report on soil properties that change with conservation management. It will empower the collection, storage, and delivery of data related to dynamic soil properties and conservation management. The Hub will link soil and conservation databases, providing the ability to assess outcomes in conservation programs by accessing otherwise siloed data and models across Agency divisions. The Dynamic Soil Hub is a flagship innovation that expands USDA capacity to model and report on soil properties that change with conservation management on a human time scale.

Snow Survey and Water Supply Forecasting (SSWSF) Program

SSWSF collects high-elevation snow data in the Western U.S. and produces snowpack information, water supply forecasts, and other climatic data useful for both water managers and users. Snowmelt in the West delivers approximately 70 percent the regional water supply vital to continued success of Western agriculture. NRCS field staff and cooperators gather snow depth, snow water equivalent (SWE), and other parameters such as precipitation,

temperature, and soil conditions from thousands of remote mountain sites. Further analysis provides estimates for water supply and usefulness related to planning, drought, flooding, fire, and avalanche.

Google Analytics reports indicate use of SNOTEL (Snow Telemetry) data and associated products make up more than 67 percent of all NRCS web traffic. Customers and partners include farmers; ranchers; irrigation and conservation districts; municipal and industrial water providers; individual providers; hydroelectric power companies; fish and wildlife management; water masters; reservoir management; recreationists; Tribal Nations; Federal, State, and local government; and Canada and Mexico. Users and use cases continue to grow. Federal partners and users include the U.S. Army Corps of Engineers (USACE), Bureau of Reclamation (USBR), Federal Emergency Management Agency (FEMA), National Weather Service (NWS) River Forecasting Centers, National Oceanic and Atmospheric Administration (NOAA), U.S. Geological Survey (USGS), U.S. Forest Service (USFS), and Bureau of Land Management (BLM).

SSWSF furnishes water and climate information and direct assistance for natural resource management in 13 States: Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, South Dakota, Utah, Washington, and Wyoming. The National Water and Climate Center (NWCC) located in Portland, Oregon provides leadership and technology backing for NRCS State Offices supporting field equipment, data collection, database management, and water supply forecast delivery.

Because snowmelt is the greatest source of water supply in the semi-arid West, information provided by SSWSF is critical. Demographic, physical, and political landscapes in the Western U.S. are rapidly changing due in large part to population growth, increased urbanization, and land use change. Recent high temperatures, prolonged droughts, and more intense fires further stress this valuable resource. Competition continues to intensify over water for irrigation, municipal uses, and industrial uses. Competition also includes in-stream requirements such as river-based recreation, aesthetic enjoyment, fish and wildlife habitat, and hydroelectric power generation. Increasing water demands require more precise management starting with snowpack evaluation.

NRCS Snow Survey data are routinely used in matters of commerce and public safety in addition to Western water supply management. Road closure determinations, flooding or drought potential, avalanche mitigation, fire prediction and mitigation, NOAA weather modeling, and streamflow forecasting all rely on SSWSF data. Although minor improvements were observed in fringe areas, 90 percent of the West is still in drought and therefore extensive use of SSWSF data, products, and forecasts resulted across the Southwest. Drought impacts or flood damages are often mitigated with early preparation based on snowpack information and streamflow forecasts.

Established in 1935, the cooperative SSWSF Program is widely recognized for its historical record of high-elevation snow data. SSWSF provides consistent and accurate water supply and hydrograph timing forecasts. The Program accomplishes this by operating and maintaining a world-renowned snowpack monitoring system with over 1,100 manually measured snow courses, aerial markers, and cooperator sites in the U.S. and in watersheds draining into the U.S. SSWSF also maintains 932 automated SNOTEL and SnoLite sites. Additionally, the NWCC operates 210 automated Soil Climate Analysis Network (SCAN) stations across the U.S. Although most of the funding and field efforts occur through the agency, partners and cooperators provide a share of financial burden and contribute to data-collection activities.

Snow courses are locations where snow is manually measured typically on a monthly schedule during winter months. SNOTEL sites automatically collect a suite of hydrometeorological data in high-elevation settings reporting real-time information on hourly intervals via telemetry. Sensor measurements typically include: SWE, snow depth, precipitation, and air temperature. Soil moisture sensors are being added at many SNOTEL sites. SnoLite sites have fewer sensors. Automated telemetered sites provide continuous up-to-date information and reduce costs and safety concerns versus use of field personnel for manual measurements in remote locales. SCAN stations focus on gathering soil and climate information. A limited number of SCAN stations collect snow depth in addition to the typical suite of sensors. Valuable data play a key role in flood and drought forecasting, water supply determination, understanding fire and avalanche risks and behaviors, and for evaluating climate change.

Snow Survey information and water supply forecasts are used extensively in hydroelectric power operations, in reservoir management, to project water quantity available for crops, to project probability of flooding, to determine available water for aquifer recharge, to predict flows for wildlife and recreation, and to inform the public about conditions in remote areas such as snow conditions and for avalanche forecasting. No other products in the Western U.S. fulfill these informational needs. Past assessment of SSWSF Program economic and societal values are outlined in an agency-released report “A Measure of Snow.”

<https://www.wcc.nrcs.usda.gov/ftpref/downloads/factpub/MeasureofSnowSummary.pdf>

Current Activities

Water Supply Forecasts

Water supply forecasts predict snowmelt runoff volume and are issued from January-June in collaboration with the NWS and other Federal and state agencies. Seasonal forecasts for 600+ streamflow locations were delivered during 2021. SSWSF also distributed peak flow, recession, and threshold forecasts with surface water availability index values. Additionally, automated forecasting models ingesting SNOTEL climate data tracked daily forecast trends for 322 points providing up-to-date guidance for water resource managers, for water users, and for augmenting official volume forecasts. The program published 5,786 water supply forecasts during the 2021 water year despite pandemic conditions limiting normal field workloads.

Site Upgrades and Installations

Notwithstanding the 2021 adverse conditions increasing safety precautions and some travel restrictions due to the pandemic, nine new SNOTEL sites were installed in Alaska, Idaho, New Mexico, Utah, and Washington. Alaska also moved a site 200m to the current snow course for better snowpack measurement. Both New Mexico and Washington's new SNOTEL sites were installed on Tribal lands with New Mexico's a second on Tribal lands in the state. The site in New Mexico was named, "Taos Pueblo." Other additions included a new Tribal Soil Climate Analysis Network (TSCAN) site in Arizona on the Hopi Reservation and Colorado installed a new enhanced Snotelite site. Also, Alaska currently has ten SNOTEL sites located on Native Corporation or Native Allotment land and there are other SNOTEL sites located near Native villages on state or Federal lands. Several sites that were burned were re-installed after wildfires this year.

Amidst the pandemic and numerous wildfires, summer maintenance for SNOTEL sites was prioritized to verify sensor calibrations, reset precipitation gages, and perform site upkeep. Maintenance also included repairing or replacing data loggers, radios, transducers, sensors, plumbing, electrical wiring, and snow pillows. Colorado upgraded new upward/downward facing radiation sensors to calculate snow albedo along with six wind sensors at six sites. Hazardous trees that could potentially damage stations were removed.

Significant headway continued for telemetry modernization. Moving away from Meteor Burst telemetry to alternative telemetry options at sites across the West reduces equipment costs and increases reliability. Current expectation is for all telemetry upgrades to be completed in 2024 or sooner, and well in advance of an original 2027 projection. Many sites were switched to cellular, GOES, or Iridium modems. Montana and Alaska Data Collection Offices (DCO) completed both telemetry and data logger upgrades for all sites in their regions. Oregon's DCO upgraded 35 sites from Meteor Burst telemetry and upgraded 23 data loggers and is 93 percent. Utah's DCO converted 65 sites to GOES and 20 sites to cellular. Utah also replaced 400+ sensors at SNOTEL sites across Utah, Nevada, and California this year. Alaska already uses Iridium, but continues conversions to GOES where possible and may move more to cellular further reducing costs. Both the Colorado and Idaho DCOs are also rapidly moving towards converting Meteor Burst telemetry to Iridium, cellular, or GOES alternatives. A large number of SCAN sites were updated and maintained across the country this past year and plans are to expand the network.

SNOTEL Sites Affected by Disasters and Vandalism

Western U.S. wildfires continued into 2021 as extreme drought conditions persisted. Millions of acres burned in 2020 and now in 2021. Multiple fatalities occurred, thousands of buildings were destroyed, farmers were unable to plant crops in many areas, and instances occurred of hydro power generation coming offline due to low water levels. A SNOTEL site was burned in California in the Tamarack fire and two snow courses are within the burn perimeter of the Caldor Fire near Lake Tahoe. Staff haven't been able to visit or assess them as the fire area is still under a closure order. Two SNOTEL sites in Montana were significantly impacted by fire and nearly burned in the Wood Creek fire. Also, in Utah two SNOTEL sites burned due to forest fires. Many sites are located within 2021 fire footprints, but full evaluation has not been possible in many areas as site visit risks remain high. Similar to clear cuts, fire alters the landscape affecting snow accumulation, snowmelt, and resulting streamflow runoff. Snow and streamflow's historical relationship are the foundation for water supply forecasts.

Vandalism, winter conditions, and animal damage remain a struggle. Batteries were stolen at an Arizona SNOTEL site. Vandals destroyed a snow pillow at a SNOTEL site in Washington. Also, in Washington, a precipitation can was damaged by snow creep and at another SNOTEL site, a GOES coaxial cable was wrecked by a large snow drift. Snow load ruined a solar panel at a SNOTEL site in Alaska. An Oregon SNOTEL site was smashed by fallen trees. Bears damaged a number of SNOTEL sites in Alaska, California, and Oregon. Across the West, bears, moose, and rodents harm snow pillows, precipitation plumbing, wiring, and sensors.

Outreach, Partnerships, and Investigative Research

SSWSF offices in each state perform extensive outreach around snow and water conditions. A broad illustration of SSWSF work and data availability is shown in this final draft video developed by the Nevada office:

<https://www.youtube.com/watch?v=cbX2NvM45Vg>

Multiple collaborations continue to be established with private and public partners. The following exemplifies a portion of the on-going work by the state snow survey offices:

- Idaho finds partners for cost sharing SNOTEL site installations and additional sensors for strategic and data gap locations. Partners include Idaho Power, the state of Idaho, and USACE.
- Oregon sustains efforts to integrate SSWSF data and products into Farm Bill conservation planning efforts using the Strategic Approach to Conservation.
- Utah contributes bi-weekly to the multiagency Drought Monitor evaluation group which includes Utah's Department of Agriculture and Foods.
- New Mexico hosts the annual Rio Grande runoff meeting involving local to international affiliates.
- Washington collaborates with tribes establishing SNOTEL sites on Tribal lands and the Yakima, Colville, and Kalispel Tribes perform Cooperative Snow Surveys.

Studies range from determination of wildfire impacts and drought to snowpack assessment and water supply forecast prediction. Montana set up three new snow temperature profile arrays measuring temperatures at various snowpack depths for determination of timing of snowmelt onset and prediction of streamflow peaks. Alaska is evaluating new pressure transducers which affect precipitation and SWE data reporting.

Other investigative research by the SSWSF Program has been enhanced by partnerships. Arizona collaborated with the City of Flagstaff and the USFS monitoring snow in a burned watershed for suitability analysis of a new SNOTEL site. Colorado partnered with Colorado State University (CSU) researchers and with USACE on two separate ventures enhancing monitoring sites in connection to wildfire ecosystems and spatial snowpack modeling. Colorado also worked with USGS to collocate experimental sensors at SNOTEL sites in support of the Next Generation Water Observing System. Finally, the Colorado DCO worked closely with the Aerial Snow Observatory (ASO, Inc. formerly NASA JPL) and other organizations across the state to scope efforts and best utilize ASO flights in Colorado. This is an ongoing collaboration for NRCS, ASO, and Colorado water users.

A “super-site” concept was developed by SSWSF which involves placing additional sensors at sites to evaluate best available technology to support the SSWSF Program, partner, and researcher needs ultimately leading to improved water resource management. This work also is supported through collaboration with the USBR on network design, enhancement, and sensor evaluation. Additionally, the SSWSF and USBR are partnering on identifying emerging snow monitoring technologies advancing water supply forecast performance. Another affiliation with NASA's Western Water Assessment Office involves remotely sensed snow data as a tool for data quality control and as input into hydrologic forecast models.

Plant Materials Centers (PMC)

The NRCS Plant Materials Centers (PMCs) develop vegetative solutions to critical natural resource concerns. PMCs focus on priorities such as soil stabilization, soil health and productivity, water and air quality, enhancement of pollinator habitat to support agricultural production, habitat for at-risk species such as sage grouse, and restoring productivity to degraded landscapes. PMCs directly support the agency mission by providing scientifically sound plant information and tools used by conservation planners, partners, producers, and private landowners. PMCs develop technology and information for the use, establishment, and maintenance of plants for a wide variety of natural resource conservation practices; provide training and education to staff, partners, and the public; assess and characterize plant attributes to provide data and information important in the operation of predictive models and effective management of climate impacted plant resources; and assemble, evaluate, and release seed and plants to provide for the commercial production of plant materials that protect and conserve our natural resources.

The Field Office Technical Guide (FOTG) delivers Plant Materials Program information directly to field staff and partners in conservation planning. PMC staff tailor vegetative information to the unique conditions of the areas they serve and provide extensive training to field staff and partners on the selection and establishment of vegetation adapted to specific resource concerns. Program information is available to the public at <https://www.plant-materials.nrcs.usda.gov>.

Plant Materials Program information improves the condition of natural resources on private and public lands. On private lands, program information supports the successful implementation of Farm Bill programs such as the EQIP, CSP, and CRP administered by Farm Service Agency (FSA).

The Plant Materials Program uses a multidisciplinary approach to solving natural resource problems, drawing from staff expertise in agronomy, biology, soils, forestry, and horticulture. Plant Materials Program activities are coordinated with NRCS technical specialists, other governmental agencies, nongovernment organizations, and the private sector. The program regularly cooperates with the Agricultural Research Service, the Forest Service, the Department of Interior’s Bureau of Land Management, and State and local departments of transportation, wildlife, and natural resource agencies. Nongovernmental organizations include universities, native plant societies, wildlife organizations, and industry partners such as commercial seed and plant growers. These partnerships enhance the development of plant materials information, accomplishing work that would not be possible for PMCs or their partners acting alone. These partnerships also provide a conduit for sharing technical information developed by PMCs to audiences well beyond NRCS.

The NRCS network of PMCs is the only national organization that develops and tests vegetation to address our Nation’s natural resource challenges. The agency operates 25 PMCs and works closely with other entities for the development of plant materials products needed by the agency. Each PMC addresses the high-priority conservation concerns within unique ecological areas. When appropriate, PMCs coordinate among locations to evaluate vegetative technology and solutions that influence large regions of the United States.

Current Activities

In 2021, NRCS continued its efforts to improve the operations and mission of PMCs to produce products needed by field staff and conservation partners. The following are highlights of PMC activities:

Technology Development and Transfer. PMCs provide agency staff, conservation partners, and the public with information needed to successfully get natural resource conservation on the ground. Plant Materials Program studies resulted in over 88 new technical documents to the plant materials website. PMCs continue to increase efforts to tailor plant materials information for specific conservation purposes and to support the agency initiatives. PMCs transferred the results of studies through 11 new study reports, the application of PMC vegetative information in 16 new technical notes or conservation practice implementation requirements, and information on the use, establishment, and management of conservation plants in ten new or revised plant guides. The program continues its efforts to reduce redundancy in technical materials through the development of two new national technical notes – “Using the Appropriate Legume Inoculant for Conservation Plantings” and “Selecting, Planting, and Managing Grasses for Vegetative Barriers” released by NRCS headquarters – and two regional plant materials technical notes released under the NRCS National Technology Support Centers (NTSC) – “Giant Cane and Other Native Bamboos: Establishment and Use for Conservation of Natural Resources in the Southeast” and “Selection and Use of Native Warm-Season Grass Varieties for the Mid-Atlantic Region”. These technical notes, like other PMC State technical notes, provide vegetative information packaged for NRCS conservation planners and customers to assist with implementing conservation practices.

At the end of 2021, there were over 3,000 documents and detailed information on over 420 conservation plants available on the PMCs’ website. The website enhancement continues, with special features, improved linkages to technical topics, national and regional program documents, and connections with other NRCS websites. Plant Materials updates, released as GovDelivery emails to over 100,000 subscribers, continue to disseminate new information monthly. These actions are improving the accessibility and usefulness of the plant materials website for all users.

Plant Materials Program staff conducted 53 technical training sessions for 2,100 field staff and conservation partners. Training included: 1) selecting, planting, and managing cover crops; 2) selecting and establishing conservation plants; 3) plant identification; 4) planning a conservation planting; 5) enhancing wildlife and pollinator habitat; 6) improving the productivity of range and pasture land; 7) planting windbreaks and hedgerows; and 8) importance of vegetative covers for preventing erosion. Technical knowledge of the NRCS field staff is improved by holding many of these PMC trainings in conjunction with Conservation Planner Certification training sessions. PMCs provided field days, tours and presentations to 3,300 participants including NRCS employees, Federal and State government employees, farmers, ranchers, and the public. PMC trainings, field days, and tours continue to be impacted in 2021 by COVID-19 restrictions, though many PMCs have been able to reach their customers through virtual events.

Sharpening direction for PMC activities. In 2021, the NRCS refined and strengthened its ability to address plant materials needs of the Nation with the development of a dynamic agency-facing tracking system, the Plant Materials Needs Assessment. The new system allows for real time updates and delivery of solutions to identified needs and provides greater focus for PMC studies and product development. The PMC program also developed two action plans for cover crops and Climate Smart Agriculture, to provide a framework for PMCs to focus on these two nationally important topics and opportunities for collaboration with other entities to leverage our collective efforts. PMCs have already begun to accelerate development of vegetative information and training for field staff to meet emerging environmental challenges associated with climate change and to provide tools and products for producers to improve cropland health and resiliency through increased use of cover crops.

Conservation Plants

PMCs have selected and released 753 conservation plants over the past 80 years, of which 580 are active and commercially available today. These plants are tools used to support conservation practices that stabilize soil, improve pollinator and wildlife habitat, provide livestock forage, and increase the diversity in conservation plantings. All PMC plant releases support NRCS conservation activities on private lands as well as the National Seed Strategy, a Federal interagency effort to select appropriate plants for restoration and conservation on both public and private lands. In 2021, PMCs contributed to the development of the Plant Conservation Alliance’s 5-year progress report for the National Seed Strategy highlighting the cross-agency collaboration “to get the right seed in the right place at the right time.” Additionally, PMCs initiated an effort with the Agricultural Research Service (ARS) Forage and Range Research Laboratory in Logan, Utah, for genetic analysis to support many current and in-development plant releases. Genetic analysis of PMC plant materials will answer questions regarding genetic variation within and between populations, pollination mechanisms, and other applicable concerns allowing more predictive and targeted use of conservation plant materials in a changing climate.

In 2021, PMCs released two new conservation plants to the public:

- Centex Germplasm threeflower melicgrass (*Melica nitens*) was released by the Knox City, Texas PMC. Centex Germplasm is a native cool-season perennial bunchgrass recommended for critical areas, wildlife habitat plantings, and to add diversity in range and pasture plantings in central and west Texas.
- Permian Germplasm whiplash pappusgrass (*Pappophorum vaginatum*) was released by the Knox City, Texas PMC in cooperation with the Texas Natives Seeds program of Texas A&M University-Kingsville. Permian Germplasm is a warm-season perennial bunchgrass recommended for critical site revegetation, roadside plantings, rights-of-way plantings, erosion control, upland wildlife habitat, and rangeland plantings in central and west Texas.

ACCOUNT 2: WATERSHED AND FLOOD PREVENTION OPERATIONS

APPROPRIATIONS LANGUAGE

The appropriations language follows (new language underscored; deleted matter enclosed in brackets)

For necessary expenses to carry out preventive measures, including but not limited to surveys and investigations, engineering operations, works of improvement, and changes in use of land, in accordance with the Watershed Protection and Flood Prevention Act (16 U.S.C. 1001-1005 and 1007-1009) and in accordance with the provisions of laws relating to the activities of the Department, [~~\$175,000,000~~]\$125,000,000, to remain available until expended: Provided, That for funds provided by this Act or any other prior Act, the limitation regarding the size of the watershed or subwatershed exceeding two hundred and fifty thousand acres in which such activities can be undertaken shall only apply for activities undertaken for the primary purpose of flood prevention (including structural and land treatment measures): Provided further, That of the amounts made available under this heading, [~~\$65,000,000~~]\$25,000,000 shall be allocated to projects and activities that can commence promptly following enactment; that address regional priorities for flood prevention, agricultural water management, inefficient irrigation systems, fish and wildlife habitat, or watershed protection; or that address authorized ongoing projects under the authorities of section 13 of the Flood Control Act of December 22, 1944 (Public Law 78-534) with a primary purpose of watershed protection by preventing floodwater damage and stabilizing stream channels, tributaries, and banks to reduce erosion and sediment transport.

LEAD-OFF TABULAR STATEMENT

Table NRCS-20. Lead-Off Tabular Statement (In dollars)

Item	Amount
Estimate, 2022	\$175,000,000
Change in Appropriation	-50,000,000
Budget Estimate, 2023	<u>125,000,000</u>

PROJECT STATEMENTS

Table NRCS-21. Project Statement by Appropriations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		FTE Inc. or Dec.	Chg Dec. Key
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Discretionary Appropriations:										
Small Watershed P.L. 83-566:										
Technical Assistance	\$15,750	17	\$15,000	33	\$15,000	17	\$35,000	73	+\$20,000	+56
Financial Assistance	89,250	-	85,000	-	85,000	-	65,000	-	-20,000	-
Subtotal Small Watershed P.L. 83-566	105,000	17	100,000	33	100,000	17	100,000	73	-	+56 (1)
Flood Prevention Operations P.L. 78-534:										
Technical Assistance	10,500	1	9,750	6	9,750	1	8,700	1	-1,050	-
Financial Assistance	59,500	-	55,250	-	55,250	-	16,300	-	-38,950	-
Subtotal Flood Prevention Operations P.L. 78-534	70,000	1	65,000	6	65,000	1	25,000	1	-40,000	- (2)
Emergency Watershed Protection Program:										
Technical Assistance	-	87	-	124	55,000	77	-	60	-55,000	-17
Financial Assistance	-	-	-	-	220,000	-	-	-	-220,000	-
Subtotal Emergency Watershed Protection Program	-	87	-	124	275,000	77	-	60	-275,000	-17
Rural Water Operations Program:										
Technical Assistance	-	-	1,500	-	1,500	-	-	-	-1,500	-
Financial Assistance	-	-	8,500	-	8,500	-	-	-	-8,500	-
Subtotal Rural Water Operations Program	-	-	10,000	-	10,000	-	-	-	-10,000	- (3)
Total Discretionary Appropriations	175,000	105	175,000	163	450,000	95	125,000	134	-325,000	+39
Supplemental Appropriations:										
Small Watershed P.L. 83-566 IIIA:										
Technical Assistance	-	-	-	-	125,000	42	-	29	-125,000	-13
Financial Assistance	-	-	-	-	375,000	-	-	-	-375,000	-
Subtotal Small Watershed P.L. 83-566 IIIA	-	-	-	-	500,000	42	-	29	-500,000	-13
Total Supplemental Appropriations	-	-	-	-	500,000	42	-	29	-500,000	-13
Mandatory Appropriations:										
Watershed Flood and Prevention Operations:										
Technical Assistance	14,640	2	16,502	3	4,715	2	16,502	2	+11,787	-
Financial Assistance	32,410	-	30,648	-	42,435	-	30,648	-	-11,787	-
Total Mandatory Appropriation	47,050	2	47,150	3	47,150	2	47,150	2	-	-
Total Adjusted Appropriation	222,050	107	222,150	166	997,150	139	172,150	165	-825,000	+26
Sequestration	2,950	-	2,850	-	2,850	-	2,850	-	-	-
Total Appropriation	225,000	107	225,000	166	1,000,000	139	175,000	165	-825,000	+26
Rescission	-	-	-	-	-	-	-	-	-	-
Sequestration	-2,950	-	-2,850	-	-2,850	-	-2,850	-	-	-
Recoveries, Other	102,739	-	66,037	-	-	-	-66,267	-	-66,267	-
Bal. Available, SOY	1,049,891	-	924,904	-	815,258	-	806,807	-	-8,451	-
Total Available	1,374,680	107	1,213,091	166	1,812,408	139	912,690	165	-899,718	+26
Lapsing Balances	-278	-	-172	-	-	-	-	-	-	-
Bal. Available, EOY	-924,904	-	-815,258	-	-806,807	-	-39,000	-	+767,807	-
Total Obligations	449,498	107	397,661	166	1,005,601	139	873,690	165	-131,911	+26

Note: The project statement and MAX discrepancy is due to MAX reporting reimbursable funding and FTEs, which are not included in the project statement.

Table NRCS-22. Project Statement by Obligations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Discretionary Obligations:										
Small Watershed P.L. 83-566:										
Technical Assistance	\$52,765	17	\$43,686	33	\$46,945	17	\$67,618	73	+\$20,673	+56
Financial Assistance	57,142	-	40,985	-	113,889	-	183,645	-	+69,756	-
Subtotal Small Watershed P.L. 83-566	109,907	17	84,671	33	160,834	17	251,263	73	+90,429	+56
Flood Prevention Operations P.L. 78-534:										
Technical Assistance	2,149	1	6,078	6	7,390	1	16,461	1	+9,071	-
Financial Assistance	35,940	-	20,500	-	89,219	-	99,399	-	+10,180	-
Subtotal Flood Prevention Operations P.L. 78-534 ..	38,089	1	26,578	6	96,609	1	115,860	1	+19,251	-
Emergency Watershed Protection Program:										
Technical Assistance	33,646	87	34,939	124	77,243	77	55,313	60	-21,930	-17
Financial Assistance	220,807	-	204,373	-	253,459	-	293,411	-	+39,952	-
Subtotal Emergency Watershed Protection Program	254,453	87	239,312	124	330,702	77	348,724	60	+18,022	-17
Rural Water Operations Program:										
Technical Assistance	-	-	-	-	2,175	-	825	-	-1,350	-
Financial Assistance	-	-	-	-	8,131	-	8,868	-	+737	-
Subtotal Rural Water Operations Program	-	-	-	-	10,306	-	9,693	-	-613	-
Total Discretionary Obligations	402,449	105	350,561	163	598,451	95	725,540	134	+127,089	+39
Supplemental Obligations:										
Small Watershed P.L. 83-566 IIA:										
Technical Assistance	-	-	-	-	90,000	42	25,000	29	-65,000	-13
Financial Assistance	-	-	-	-	270,000	-	76,000	-	-194,000	-
Subtotal Small Watershed P.L. 83-566 IIA	-	-	-	-	360,000	42	101,000	29	-259,000	-13
Total Supplemental Obligations	-	-	-	-	360,000	42	101,000	29	-259,000	-13
Mandatory Obligations:										
Watershed Flood and Prevention Operations										
Technical Assistance	16,636	2	3,912	3	4,715	2	4,715	2	-	-
Financial Assistance	30,413	-	43,188	-	42,435	-	42,435	-	-	-
Subtotal Mand Oblig	47,049	2	47,100	3	47,150	2	47,150	2	-	-
Total Obligations	449,498	107	397,661	166	1,005,601	139	873,690	165	-131,911	+26
Add back:										
Lapsing Balances	278	-	172	-	-	-	-	-	-	-
Balances Available, EOY:										
Small Watershed	244,703	-	269,053	-	217,530	-	-	-	-211,780	-
Flood Prevention Operations	87,832	-	122,469	-	90,860	-	-	-	-90,860	-
Emergency Watershed Protection Program	592,369	-	413,736	-	348,724	-	-	-	-348,724	-
Rural Water Operations Program	-	-	10,000	-	9,693	-	-	-	-9,693	-
Small Watershed P.L. 83-566 IIA	-	-	-	-	140,000	-	39,000	-	-	-
Total Bal. Available, EOY	924,904	-	815,258	-	806,807	-	39,000	-	-666,807	-
Total Available	1,374,680	107	1,213,091	166	1,812,408	139	912,690	165	-798,718	+26
Less:										
Sequestration	2,950	-	2,850	-	2,850	-	2,850	-	-	-
Recoveries, Other	-102,739	-	-66,037	-	-	-	66,267	-	+66,267	-
Bal. Available, SOY	-1,049,891	-	-924,904	-	-815,258	-	-806,807	-	+8,451	-
Total Appropriation	225,000	107	225,000	166	1,000,000	139	175,000	165	-724,000	+26

Note: The project statement and MAX discrepancy is due to MAX reporting reimbursable funding and FTEs, which are not included in the project statement.

JUSTIFICATION

A net decrease of \$50,000,000 and an increase of 56 staff years for the Watershed and Flood Prevention Operations Programs (Watershed Operations) (\$175,000,000 and 18 staff years available in 2022).

- (1) No change in funding and an increase of 56 staff years for the Small Watershed Operations Program from the 2022 Budget.

This will increase the number of highly skilled specialist needed to conduct watershed planning and program delivery function related to NRCS Watershed Programs. Operationally, there would be some adjustments to support costs for Small Watershed Operations Program, program delivery to ensure staff are dedicated to planning activities and completing ongoing projects, design work, or construction oversight for existing projects.

- (2) A decrease of \$40,000,000 and no change in staff years in Program activities for the Flood Prevention Operations Program from the 2022 Budget.

This will result in a decrease in land treatment opportunities for NRCS Project Sponsors and clients. This would reduce NRCS's overall Watershed Program investment portfolio. Operationally, there would be some adjustments to support costs for WFPO program delivery to ensure staff dedicated to planning activities are redirected to completing ongoing projects, design work, or construction oversight for existing projects. Partnerships will utilize RCPP to the extent possible for similar watershed scale project opportunities.

- (3) A decrease of \$10,000,000 and no staff years for the Rural Water Operations Program (\$10,000,000 and no staff years available in 2022).

No funds are requested in the 2023 Budget for this program.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND FTE*Table NRCS-23. Geographic Breakdown of Obligations and FTE (thousands of dollars)*

State/Territory/Country	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE
Alabama	\$19,270	-	\$2,120	2	\$9,524	2	\$10,305	2
Alaska	845	1	5,226	1	418	-	2,163	1
Arizona	4,228	-	2,106	2	2,089	2	2,808	1
Arkansas	34,482	2	65,396	10	17,041	9	38,973	10
California	12,254	1	3,581	3	6,056	3	7,297	2
Colorado	5,036	3	49,071	3	2,489	3	18,866	3
Connecticut	826	2	3,312	2	408	2	1,516	2
Delaware	687	-	40	-	339	-	356	-
District of Columbia	8,743	8	14,100	10	4,321	9	9,055	10
Florida	11,763	2	4,032	-	5,813	-	7,203	2
Georgia	3,777	1	269	2	1,867	2	1,971	2
Hawaii	18	-	1,306	-	9	-	445	-
Idaho	1,539	-	33	-	760	-	778	-
Illinois	7,980	-	9,215	-	3,944	-	7,047	2
Indiana	1,773	-	10	-	876	-	887	-
Iowa	18,320	8	34,036	9	9,054	7	20,470	9
Kansas	7,729	3	1,050	2	3,820	2	4,200	3
Kentucky	2,590	1	810	1	1,280	1	1,560	1
Louisiana	13,373	1	11,975	2	6,609	2	10,653	2
Maine	454	-	367	1	224	1	349	-
Maryland	6	-	-	-	3	-	3	-
Massachusetts	4,618	2	1,386	2	2,282	2	2,762	1
Michigan	441	-	30,067	2	218	2	10,242	2
Minnesota	106	1	119	1	52	1	93	-
Mississippi	62,836	5	16,476	5	31,055	4	36,789	7
Missouri	38,220	14	44,612	24	18,889	20	33,907	20
Montana	5	-	-	-	3	-	3	-
Nebraska	19,020	5	10,519	6	9,400	5	12,980	4
Nevada	860	-	804	-	425	-	697	-
New Hampshire	1,355	-	8	-	670	-	678	-
New Jersey	88	1	27	-	44	-	53	-
New Mexico	1,219	-	962	-	603	-	928	-
New York	1,527	3	2,746	7	755	6	1,676	1
North Carolina	26,170	1	1,565	2	12,934	2	13,557	2
North Dakota	225	-	775	-	111	-	371	-
Ohio	3,175	-	705	1	1,569	1	1,817	1
Oklahoma	4,491	2	2,440	3	2,220	3	3,051	5
Oregon	34,288	2	23,578	6	16,946	5	24,938	8
Pennsylvania	2,253	3	67	-	1,113	-	1,145	-
Puerto Rico	3,112	1	4,260	1	1,538	1	2,970	1
Rhode Island	1,351	1	999	1	668	1	1,006	-
South Carolina	673	-	5,461	-	333	-	2,156	1
South Dakota	391	1	294	-	193	-	293	-
Tennessee	8,885	4	4,485	3	4,391	3	5,921	2
Texas	33,135	14	16,952	42	16,376	36	22,155	36
Utah	30,690	5	17,338	5	15,168	4	21,066	8
Vermont	1,285	-	364	-	635	-	762	-
Virginia	341	-	-	-	169	-	170	-
Washington	20	-	106	-	10	-	46	-
West Virginia	3,566	2	-47	1	1,763	1	1,792	1
Wisconsin	2,623	5	611	3	1,296	3	1,510	1

2023 USDA EXPLANATORY NOTES – NATURAL RESOURCES CONSERVATION SERVICE

State/Territory/Country	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE
Wyoming	6,839	1	1,926	1	3,380	1	5,049	1
Distribution Unknown	-	-	-	-	-	-	517,202	11
Obligations	449,498	107	397,661	166	222,153	139	873,690	165
Lapsing Balances	278	-	172	-	-	-	-	-
Bal. Available, EOY	924,904	-	815,258	-	217,530	-	39,000	-
Total, Available	1,374,680	107	1,213,091	166	439,683	139	912,690	165

CLASSIFICATION BY OBJECTS**Table NRCS-24. Classification by Objects (thousands of dollars)**

Item No.	Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
	Personnel Compensation:				
	Washington D.C.	\$1,066	\$1,293	\$1,512	\$1,154
	Personnel Compensation, Field	10,214	14,893	14,536	12,790
11	Total personnel compensation	11,280	16,186	16,048	13,944
12	Personal benefits	4,134	6,332	6,258	5,102
	Total, personnel comp. and benefits	15,414	22,518	22,306	19,046
	Other Objects:				
21.0	Travel and transportation of persons	463	222	863	1,342
22.0	Transportation of things	1	3	11	6
24.0	Printing and reproduction	-	2	7	4
25.1	Advisory and assistance services	32,246	13,808	9,983	11,073
25.2	Other services from non-Federal sources	75,309	57,439	175,637	123,024
25.3	Other goods and services from Federal sources	1	1	-	-
25.4	Operation and maintenance of facilities	14,387	10,684	26,749	18,218
25.5	Research and development contracts	327	-538	-	-
25.7	Operation and maintenance of equipment	21	-20	-	-
26.0	Supplies and materials	45	144	681	2,306
31.0	Equipment	1,494	905	4,665	7,203
32.0	Land and structures	15,647	57,171	114,067	142,631
41.0	Grants, subsidies, and contributions	294,143	235,322	650,633	548,837
	Total, Other Objects	434,084	375,143	983,296	854,644
99.9	Total, new obligations	449,498	397,661	1,005,602	873,690
	Position Data:				
	Average Salary (dollars), ES Position	\$182,514	\$186,928	\$191,975	\$200,806
	Average Salary (dollars), GS Position	\$72,229	\$70,816	\$72,728	\$76,074
	Average Grade, GS Position	10.0	10.0	10.0	10.0

Note: The position data reported above is representative of data collected across all funding sources provided to NRCS, including, but not limited to Conservation Operations, Watershed Rehabilitation (Technical Assistance), Watershed and Flood Prevention Operations (Technical Assistance), Water Bank Program (Technical Assistance), and Farm Security and Rural Investment Program (Technical Assistance).

STATUS OF PROGRAMS**WATERSHED AND FLOOD PREVENTION OPERATIONS**

The Watershed and Flood Prevention Operations (Watershed Operations) account includes the Flood Prevention Operations Program authorized by the Flood Control Act of 1944 (P.L. 78-534) and the Watershed Protection and Flood Prevention Program authorized by (P.L. 83-566; 16 U.S.C. 1001-1008). Through Watershed Operations, the Secretary of Agriculture is authorized to provide technical and financial assistance to entities of State and local governments and Tribes (project sponsors) for planning and installing watershed projects.

The Flood Control Act authorizes the Secretary of Agriculture to install watershed improvement measures in 11 watersheds to reduce flood, sedimentation, and erosion damage; improve the conservation, development, utilization, and disposal of water; and advance the conservation and proper utilization of land. Working in cooperation with soil conservation districts and other local sponsoring organizations, the agency prepares detailed sub-watershed plans that outline soil and water management problems and proposals to alleviate the problems. Proposals can include estimated benefits and costs, cost-sharing arrangements, and operation and maintenance arrangements.

Watershed and Flood Prevention Operations

The Watershed Protection and Flood Prevention Act provides for cooperation between the Federal Government and the States and their political subdivisions in a program to prevent erosion, floodwater, and sediment damage; to further the conservation, development, utilization, and disposal of water; and to further the conservation and proper utilization of land in authorized watersheds.

Current Activities

In 2021, the Agency received \$175 million in discretionary funding and \$50 million in mandatory funding. NRCS provided funding to 46 new and 19 backlog projects in 23 States. In selecting projects for funding, the agency balanced the needs of remedial, backlog, and new projects.

Status of Watershed Projects Authorized by the Watershed Protection and Flood Prevention Act

Watershed project plans are prepared by local sponsoring organizations with assistance from agency staff and submitted for approval with requests for Federal funding authorization. The Consolidated Appropriations Act, 2018 included provisions that increased the threshold for requiring authorization by Congressional committee from \$5 million to \$25 million. Watershed projects are limited to 250,000 acres and cannot include any single structure that provides more than 12,500 acre-feet of floodwater detention capacity, or more than 25,000 acre-feet of total capacity. The Consolidated Appropriations Act, 2018 also included provisions that the limitation of 250,000 acres only applies for activities undertaken for the primary purpose of flood prevention.

Loan Programs under the Flood Control Act and the Watershed Protection and Flood Prevention Act

Both programs provide for loans and loan services to finance the local share of the costs of installing, repairing, or enhancing works of improvement and water storage facilities; purchasing sites or rights-of-way; and other costs in approved watershed and flood prevention projects. Over the life of the program, 495 loans have been made at a value of almost \$176 million.

Emergency Watershed Program (EWP)

The Emergency Watershed Program (EWP) is authorized by Section 216 of the Flood Control Act of 1950 P.L. 81-516 (33 U.S.C. 701b-1), and Sections 403-405 of the Agricultural Credit Act of 1978 P.L. 95-334 (16 U.S.C. 2203-2205). EWP implements recovery measures for watershed emergencies created by floods, wildfires, windstorms, and other natural occurrences that threaten life and property. EWP assistance is provided for both major disaster declarations and local watershed emergencies recognized by NRCS.

EWP work is not limited to a set of prescribed practices, but is planned and designed on a case-by-case basis. EWP emergency measures include removing debris from stream channels, road culverts, and bridges; reshaping and protecting eroded banks; correcting damaged drainage facilities; repairing levees and structures; reseeding damaged areas; and purchasing floodplain easements.

EWP projects (except for the purchase of floodplain easements) must be sponsored by a State or local unit of government, or a Native American tribe or tribal organization. Sponsors are responsible for contributing their share

of the project costs, obtaining land rights and regulatory permits, and providing operation and maintenance of the completed emergency measures.

NRCS provides the necessary technical assistance for planning and design and may provide up to 75 percent of the construction cost of eligible emergency measures (or up to 90 percent within limited resource areas).

In 2021, NRCS entered into 169 agreements with local sponsors to implement cooperatively emergency recovery measures, and \$175 million of EWP funds were obligated. Responses to 63 watershed emergencies have been initiated in 2021, including; Hurricanes Zeta, Elsa, and Ida; western wildfires in Arizona, Utah, and California; and the major winter and spring flooding events across the southeast.

In addition to responding to major disaster declarations, EWP also provides assistance for local flooding, tornados, and significant weather events. For example, in 2021, NRCS addressed an immediate need to protect urban infrastructure in Flagstaff, Arizona, and projects that prevented the loss of rural roadways across many Mississippi communities.

EWP Floodplain Easements

NRCS may purchase Emergency Watershed Program Floodplain Easements (EWP-FPE) on floodplain lands that have been impaired or impacted within the last 12 months, have a history of repeated flooding (i.e., flooded at least twice during the past ten years), or have been damaged by a specific natural disaster, for which Congress allocated funding. Under the floodplain easement option, a landowner voluntarily sells a permanent conservation easement to NRCS that provides NRCS the full authority to restore and enhance the floodplain's natural functions and values. Since the program's inception in 1996, most of the purchased floodplain easements involved undeveloped agricultural lands, but a small portion of the purchased easements involved rural land with residences or other structures present. In recent years, the number of easement transactions involving urban and suburban lands with homes present has dramatically increased. Floodplain easements are only available as part of a larger strategy intended to minimize future flood damage, by removing valuable infrastructure from flood prone areas while prohibiting their future development and restoring the floodplain function.

This type of easement purchase requires a local sponsor that will purchase the underlying land, in fee title once the floodplain easement is acquired by NRCS.

NRCS may pay up to 100 percent of the costs associated with the restoration of EWP-FPEs. The goal of EWP-FPE restoration is to restore and return the floodplain to its natural condition. Restoration measures used to accomplish this goal include the removal of buildings or other structures from the floodplain and the reestablishment of the floodplain's functions, and values through the installation of structural and non-structural conservation practices. To the extent practicable, NRCS restores the natural features and characteristics of the floodplain by recreating topographic diversity and reestablishing native vegetation. EWP-FPE landowners can assist with implementation of the easement restoration plan.

Upon enrollment in EWP-FPE, landowners retain certain rights to the property, including quiet enjoyment, controlled public access, and undeveloped recreational use such as hunting and fishing. A landowner may obtain authorization from the agency to engage in other activities, through the Compatible Use Authorization Process, provided the agency determines the activities will further the protection and enhancement of the floodplain easements.

Current Activities

The table below reports the number of easements enrolled in EWP-FPE from 1997 through the end of 2021.

Table NRCS-25. Cumulative Program Activity (1997 Through End of 2021)

Enrolled Easements (Permanent)	Cumulative
Number of Easements	1,760
Number of Acres	199,621
Closed Easements (Permanent)	Cumulative
Number of Easements	1,671
Number of Acres	185,489
Restored Easements	Cumulative
Number of Easements	1,555
Number of Acres	184,871

Oneida County, New York

The Sauquoit Creek is a top resource priority for the Town of Whitestown in New York. Since its inception in 2016, the Sauquoit Creek Channel & Floodplain Restoration Program, a tremendous collaborative effort between federal, state, county, and local governments, has continued to evolve to address the rapidly changing environmental landscape. The Sauquoit Creek Channel & Floodplain Restoration Program has five major components: 1) mitigation – the construction of floodplain benches; 2) infrastructure improvements of the Main Street Bridge and Oriskany Boulevard Bridge; 3) floodplain management – the adoption of smarter, or "green," development practices in the Sauquoit Creek watershed; 4) debris management – all municipalities in the Sauquoit Creek watershed participating in the "Sauquoit Creek Stream Sediment and Debris Management Plan," which was adopted by the Sauquoit Creek Basin Intermunicipal Commission; and 5) adaption – the implementation of the Natural Resources Conservation Service EWPP – Floodplain Easement program. Each component is important and, collectively, will provide relief of repetitive flood loss to property owners. After delineating the EWPP FPE project area using an inundation study completed as a result of the 2019 Halloween Storm, NRCS NY accepted almost 200 applications. Ultimately, the goal is for NRCS to acquire a floodplain easement (and structure {residential home}) with the Town of Whitestown acting as the Sponsor, to acquire the remaining fee-title creating the largest "buy-out" program currently being implemented in New York State.

ACCOUNT 3: EMERGENCY WATERSHED PROTECTION PROGRAM

PROJECT STATEMENTS

Table NRCS-26. Project Statement by Appropriations Detail (thousands of dollars, FTE)

Item	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE	Inc. or Dec.	FTE Inc. or Dec.	Chg Key
Supplemental Appropriations:											
Emergency Watershed Protection Program:											
Technical Assistance	-	-	-	-	\$60,000	37	-	30	-\$60,000	-7	
Financial Assistance	-	-	-	-	240,000	-	-	-	-240,000	-	
Total Appropriation	-	-	-	-	300,000	37	-	30	-300,000	-7	
Bal. Available, SOY	-	-	-	-	-	-	\$84,306	-	+84,306	-	
Total Available	-	-	-	-	300,000	37	84,306	30	-215,694	-7	
Bal. Available, EOY	-	-	-	-	-84,306	-	-20,000	-	+64,306	-	
Total Obligations	-	-	-	-	215,694	37	64,306	30	-151,388	-7	

Table NRCS-27. Project Statement by Obligations Detail (thousands of dollars, FTE)

Item	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE	Inc. or Dec.	FTE Inc. or Dec.
Supplemental Obligations:										
Emergency Watershed Protection Program:										
Technical Assistance	-	-	-	-	\$39,750	37	\$16,250	30	-\$23,500	-7
Financial Assistance	-	-	-	-	175,944	-	48,056	-	-127,888	-
Total Obligations	-	-	-	-	215,694	37	64,306	30	-151,388	-7
Add back:										
Balances Available, EOY:										
Emergency Watershed Protection Program	-	-	-	-	84,306	-	20,000	-	-64,306	-
Total Bal. Available, EOY	-	-	-	-	84,306	-	20,000	-	-64,306	-
Total Available	-	-	-	-	300,000	37	84,306	30	-215,694	-7
Less:										
Bal. Available, SOY	-	-	-	-	-	-	-84,306	-	-84,306	-
Total Appropriation	-	-	-	-	300,000	37	-	30	-300,000	-7

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND FTE

Table NRCS-28. Geographic Breakdown of Obligations and FTE (thousands of dollars)

State/Territory/Country	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE
Distribution Unknown	-	-	-	-	\$215,694	37	\$64,306	30
Obligations	-	-	-	-	215,694	37	64,306	30
Bal. Available, EOY	-	-	-	-	-	-	20,000	-
Total, Available	-	-	-	-	215,694	37	84,306	30

CLASSIFICATION BY OBJECTS**Table NRCS-29. Classification by Objects (thousands of dollars)**

Item No.	Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
	Personnel Compensation:				
	Personnel Compensation, Field	-	-	\$4,235	\$3,777
11	Total personnel compensation	-	-	4,235	3,777
12	Personal benefits	-	-	1,617	1,511
	Total, personnel comp. and benefits	-	-	5,852	5,288
	Other Objects:				
21.0	Travel and transportation of persons	-	-	292	150
25.1	Advisory and assistance services	-	-	1,680	641
25.2	Other services from non-Federal sources	-	-	29,492	8,343
25.4	Operation and maintenance of facilities	-	-	3,278	1,624
25.5	Research and development contracts	-	-	146	-
26.0	Supplies and materials	-	-	-	75
31.0	Equipment	-	-	1,050	898
32.0	Land and structures	-	-	104,040	29,024
41.0	Grants, subsidies, and contributions	-	-	69,864	18,263
	Total, Other Objects	-	-	209,842	59,018
99.9	Total, new obligations	-	-	215,694	64,306
	Position Data:				
	Average Salary (dollars), ES Position	-	-	\$191,975	\$200,806
	Average Salary (dollars), GS Position	-	-	\$72,728	\$76,074
	Average Grade, GS Position	-	-	10.0	10.0

Note: The position data reported above is representative of data collected across all funding sources provided to NRCS, including, but not limited to Conservation Operations, Watershed Rehabilitation (Technical Assistance), Watershed and Flood Prevention Operations (Technical Assistance), Water Bank Program (Technical Assistance), and Farm Security and Rural Investment Program (Technical Assistance).

ACCOUNT 4: WATERSHED REHABILITATION PROGRAM

APPROPRIATIONS LANGUAGE

The appropriations language follows (new language underscored; deleted matter enclosed in brackets)

Under the authorities of section 14 of the Watershed Protection and Flood Prevention Act, \$10,000,000 is provided.

LEAD-OFF TABULAR STATEMENT

Table NRCS-30. Lead-Off Tabular Statement (In dollars)

Item	Amount
Estimate, 2022	\$10,000,000
Change in Appropriation	-
Budget Estimate, 2023	<u>10,000,000</u>

PROJECT STATEMENTS

Table NRCS-31. Project Statement by Appropriations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.	Chg Key
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE			
Discretionary Appropriations:											
Watershed Rehabilitation Program:											
Technical Assistance	\$5,000	1	\$4,000	5	\$4,000	3	\$5,000	3	+\$1,000	-	
Financial Assistance	5,000	-	6,000	-	6,000	-	5,000	-	-1,000	-	
Subtotal Watershed Rehabilitation Program	10,000	1	10,000	5	10,000	3	10,000	3	-	-	(1)
Supplemental Appropriations:											
Watershed Rehabilitation Program (IIJA):											
Technical Assistance	-	-	-	-	30,000	10	-	15	-30,000	+5	
Financial Assistance	-	-	-	-	88,000	-	-	-	-88,000	-	
Subtotal Watershed Rehabilitation Program (IIJA)	-	-	-	-	118,000	10	-	15	-118,000	+5	
Total Discretionary Appropriation	10,000	1	10,000	5	128,000	13	10,000	18	-118,000	+5	
Mandatory Appropriations:											
Small Watershed Rehabilitation Program:											
Technical Assistance	-	4	-	12	-	12	-	6	-	-6	
Financial Assistance	-	-	-	-	-	-	-	-	-	-	
Total Mandatory Appropriation	-	4	-	12	-	12	-	6	-	-6	
Total Adjusted Appropriation	10,000	5	10,000	17	128,000	25	10,000	24	-118,000	-1	
Total Appropriation	10,000	5	10,000	17	128,000	25	10,000	24	-118,000	-1	
Recoveries, Other	4,419	-	12,841	-	-	-	18,093	-	+18,093	-	
Bal. Available, SOY	68,369	-	64,327	-	45,349	-	58,741	-	+13,392	-	
Total Available	82,788	5	87,168	17	173,349	25	86,834	24	-86,515	-1	
Lapsing Balances	-	-	-174	-	-	-	-	-	-	-	
Rescinded Balances	-	-	-	-	-	-	-	-	-	-	
Bal. Available, EOY	-64,327	-	-45,349	-	-58,741	-	-31,000	-	+27,741	-	
Total Obligations	18,461	5	41,645	17	114,608	25	55,834	24	-58,774	-1	

Note: The project statement and MAX discrepancy is due to MAX reporting reimbursable funding and FTEs, which are not included in the project statement.

Table NRCS-32. Project Statement by Obligations Detail (thousands of dollars, FTE)

Item	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE	Inc. or Dec.	FTE Inc. or Dec.
Discretionary Obligations:										
Watershed Rehabilitation Program:										
Technical Assistance	\$1,266	1	\$4,842	5	\$6,391	3	\$5,000	3	-\$1,391	-
Financial Assistance	5,000	-	6,828	-	6,122	-	5,000	-	-1,122	-
Subtotal Disc Obligations.....	6,266	1	11,670	5	12,513	3	10,000	3	-2,513	-
Supplemental Obligations:										
Watershed Rehabilitation Program (IIJA):										
Technical Assistance	-	-	-	-	21,240	10	7,760	15	-13,480	+5
Financial Assistance	-	-	-	-	62,304	-	25,240	-	-37,064	-
Subtotal Flood Prevention Operations P.L. 78-534	-	-	-	-	83,544	10	33,000	15	-50,544	5
Total Discretionary Obligations	6,266	1	11,670	5	96,057	13	43,000	18	-53,057	+5
Mandatory Obligations:										
Small Watershed Rehabilitation Program:										
Technical Assistance	5,330	4	8,084	12	8,124	12	6,510	6	-1,614	-6
Financial Assistance	6,865	-	21,891	-	10,427	-	6,324	-	-4,103	-
Subtotal Mand Oblig	12,195	4	29,975	12	18,551	12	12,834	6	-5,717	-6
Total Obligations	18,461	5	41,645	17	114,608	25	55,834	24	-58,774	-1
Lapsing Balances.....	-	-	174	-	-	-	-	-	-	-
Balances Available, EOY:										
Watershed Rehabilitation Program	4,829	-	3,000	-	486	-	-	-	-486	-
Small Watershed Rehabilitation Program	59,497	-	42,349	-	23,798	-	-	-	-23,798	-
Watershed Rehabilitation Program (IIJA).....	-	-	-	-	34,456	-	31,000	-	-3,456	-
Total Bal. Available, EOY	64,327	-	45,349	-	58,741	-	31,000	-	-27,741	-
Total Available	82,788	5	87,168	17	173,349	25	86,834	24	-86,515	-1
Less:										
Recoveries, Other	-4,419	-	-12,841	-	-	-	-18,093	-	-18,093	-
Bal. Available, SOY	-68,369	-	-64,327	-	-45,349	-	-58,741	-	-13,392	-
Total Appropriation.....	10,000	5	10,000	17	128,000	25	10,000	24	-118,000	-1

Note: The project statement and MAX discrepancy is due to MAX reporting reimbursable funding and FTEs, which are not included in the project statement.

JUSTIFICATION

- (1) The FY 2023 Budget proposes \$10,000,000 and no change in staff years for the Watershed Rehabilitation Program (\$10,000,000 and 3 staff years available in 2022).

This funding will address critical public health and safety concerns with aging dams reaching the end of their design lives.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND FTE**Table NRCS-33. Geographic Breakdown of Obligations and FTE (thousands of dollars)**

State/Territory/Country	2020	FTE	2021	FTE	2022	FTE	2023	FTE
	Actual		Actual		Estimated		Estimated	
Arizona	\$2,022	1	\$1,716	1	\$1,095	2	\$1,611	2
Arkansas	405	-	-	-	219	-	208	-
California	597	-	468	-	323	-	463	-
Colorado	16	-	17	-	9	-	14	-
Connecticut	34	-	50	-	19	-	35	-
District of Columbia	264	1	9,720	2	143	3	3,376	3
Georgia	5,336	-	5,351	1	2,890	2	4,526	2
Idaho	25	-	-	-	14	-	13	-
Illinois	75	-	93	1	41	1	70	1
Indiana	131	-	-1	-	71	-	68	-
Kansas	96	-	343	-	52	-	164	-
Kentucky	187	-	217	-	101	-	169	-
Massachusetts	61	-	401	1	33	1	165	1
Minnesota	1	-	-	-	-	-	-	-
Mississippi	91	1	7	-	49	-	49	-
Nebraska	337	-	130	-	183	-	217	-
Nevada	2,820	-	29	-	1,527	-	1,459	-
New Hampshire	20	-	7	-	11	-	13	-
New Jersey	60	-	67	1	33	1	54	-
New Mexico	435	-	57	-	236	-	243	-
New York	-	-	24	-	-	-	8	-
North Carolina	-	-	2,637	2	-	3	879	2
North Dakota	389	-	188	-	211	-	263	-
Ohio	-	-	1,149	1	-	2	383	2
Oklahoma	2,416	-	1,705	-	1,308	-	1,810	-
Oregon	-	-	735	-	-	-	245	-
Pennsylvania	548	-	1,530	-	297	-	792	-
South Dakota	1	-	-	-	-	-	-	-
Tennessee	148	1	94	-	80	-	108	-
Texas	1,424	1	9,634	3	771	4	3,943	3
Utah	471	-	4,701	1	255	2	1,809	-
Vermont	33	-	19	-	18	-	24	-
Virginia	7	-	36	-	4	-	16	-
Washington	1	-	-	-	-	-	-	-
West Virginia	3	-	518	3	2	4	175	-
Wyoming	9	-	3	-	5	-	6	-
Distribution Unknown	-	-	-	-	104,608	-	32,456	7
Obligations	18,461	5	41,645	17	114,608	25	55,834	24
Lapsing Balances	-	-	174	-	-	-	-	-
Bal. Available, EOY	64,327	-	45,349	-	58,741	-	31,000	-
Total, Available	82,788	5	87,168	17	173,349	25	86,834	24

CLASSIFICATION BY OBJECTS**Table NRCS-34. Classification by Objects (thousands of dollars)**

Item No.	Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
	Personnel Compensation:				
	Washington D.C.	\$171	\$295	\$463	\$367
	Personnel Compensation, Field	710	1,979	3,107	2,460
11	Total personnel compensation	881	2,274	3,571	2,827
12	Personal benefits	308	847	1,371	1,118
	Total, personnel comp. and benefits	1,189	3,121	4,942	3,945
	Other Objects:				
21.0	Travel and transportation of persons	5	25	1	22
22.0	Transportation of things	1	-	-	-
23.1	Rental payments to GSA	6	-	-	-
23.2	Rental payments to others	1	-	-	-
23.3	Communications, utilities, and misc. charges	-4	-	-	-
25.1	Advisory and assistance services	89	-319	-	-
25.2	Other services from non-Federal sources	3,238	6,615	7,660	8,796
25.3	Other goods and services from Federal sources	1	-	-	-
25.4	Operation and maintenance of facilities	3,004	3,495	23,155	6,504
25.5	Research and development contracts	18	-12	-	-
31.0	Equipment	80	4	-	4
41.0	Grants, subsidies, and contributions	10,833	28,716	78,850	36,563
	Total, Other Objects	17,272	38,524	109,666	51,889
99.9	Total, new obligations	18,461	41,645	114,608	55,834
	Position Data:				
	Average Salary (dollars), ES Position	\$182,514	\$186,928	\$191,975	\$200,806
	Average Salary (dollars), GS Position	\$72,229	\$70,816	\$72,728	\$76,074
	Average Grade, GS Position	10.0	10.0	10.0	10.0

Note: The position data reported above is representative of data collected across all funding sources provided to NRCS, including, but not limited to Conservation Operations, Watershed Rehabilitation (Technical Assistance), Watershed and Flood Prevention Operations (Technical Assistance), Water Bank Program (Technical Assistance), and Farm Security and Rural Investment Program (Technical Assistance).

STATUS OF PROGRAMS**WATERSHED REHABILITATION PROGRAM**

The Watershed Protection and Flood Prevention Act (P.L. 83-566), as amended by the Watershed Rehabilitation Amendments of 2000 (Section 313 of P.L. 106-472), authorizes NRCS to assist communities to address public health and safety concerns, and environmental impacts of aging dams. The amendment allowed the agency to provide technical and financial assistance for the planning, design, and implementation of rehabilitation projects that may include upgrading or removing dams past their useful life.

The purpose of the Watershed Rehabilitation Program is to extend the service life of dams and bring them into compliance with applicable safety and performance standards, or to decommission the dams so they no longer pose a threat to life and property.

Since 1948, local communities have constructed 11,850 watershed dams with assistance from NRCS. Local sponsors provide leadership in the program and secure land rights and easements needed for construction. NRCS provided technical assistance and cost sharing for construction. Local sponsors assumed responsibility for the operation and maintenance of the structures once they were completed. These dams protect America's communities, infrastructure, and natural resources with flood control, and many provide the primary source of drinking water in the area or offer recreation and wildlife benefits.

Some communities protected by these watershed dams are now vulnerable to flooding since many dams have reached, or will soon reach, the end of their design life. There are currently 5,938 watershed dams that will have reached the end of their originally designed lifespan. That total is estimated to increase to 6,169 by December 2022; 6,392 by December 2023; 6,609 by December 2024; and 6,782 by December 2025. More than half of the 11,850 watershed dams in the Nation are beyond their design life. Over time, dam spillway pipes have deteriorated, and reservoirs have filled with sediment. More significantly, the area around many dams have changed as homes and businesses have been constructed on what was once agricultural land. Thus, a dam failure could pose a serious threat to the health and safety of those living downstream and to the communities that depend on the reservoir for drinking water. Dam failure could also cause serious adverse environmental effects.

The highest priority of the Watershed Rehabilitation Program is to rehabilitate dams that pose the greatest risk to public safety. The agency classifies these dams as high hazard potential in the national dam safety classification system. Dams classified in the three-tier system as low or significant hazard potential to public safety will not be planned for rehabilitation until all high-hazard potential dam project requests from public sponsors have been rehabilitated.

Dams installed through the Watershed Protection and Flood Prevention Act (the Watershed Operations Program, specifically Public Law 83-566), Pilot Watershed Projects authorized by the Agriculture Appropriation Act of 1953, and the Resource Conservation and Development Program are eligible for rehabilitation assistance.

The Watershed Rehabilitation Program provides up to 65 percent of the total project cost for dam rehabilitation projects, which includes the acquisition of land, easements, rights-of-way, project administration, non-Federal technical assistance, and construction. The agency provides technical assistance to conduct technical studies; develop rehabilitation plans; develop environmental impact statements or environmental assessments; prepare the engineering designs; and provide construction management services, including construction inspection. Local sponsors are required to provide 35 percent of the total project cost.

The implementation strategy for the Watershed Rehabilitation Program has four phases, all of which require a request from a local public sponsor: 1) conduct a dam assessment to evaluate the condition of the dam, including safety hazards, and provide preliminary alternatives for rehabilitation; 2) prepare project plans; 3) prepare designs for implementation; and 4) implement the dam rehabilitation plan. Partnerships among local communities, State governments, and NRCS leverage services and funds to allow many projects to move quickly through the planning and implementation stages.

Annually, the NRCS ranks all dam rehabilitation funding applications for planning, design, and construction based on a numerical risk index and failure index that relates to the overall condition of a dam and the population at risk downstream of the dam.

The Architectural and Engineering (A&E) Service contract awarded in 2013 expired in January 2018. The agency solicited for a new national contract in 2017 for A&E firms to perform dam assessments, rehabilitation planning, engineering designs, and construction inspection services under the agency's guidance. In 2018, the agency awarded

four regional contracts with A&E firms. Also, some sponsors have used their own professional technical staff or acquired technical services as part of their “in-kind” contribution to meet their 35 percent cost-share requirement.

Sponsors have used many innovative means to obtain the funds necessary to address the rehabilitation of aging dams that were threatening their local communities. They have used the sale of bonds dedicated to dam safety and rehabilitation, levied taxes on beneficiaries, obtained grants, used State appropriations, sought voluntary land rights from private landowners, and provided in-kind services using existing staff.

Current Activities

In 2021, the Watershed Rehabilitation Program received \$10 million in discretionary funding. This investment in watershed rehabilitation recognizes the critical role of these watershed structures in flood management, water supply, erosion control, agricultural productivity, recreation, and wildlife habitat. This funding helps to repair aging infrastructure, creates jobs and commerce, and protects homes and families.

The agency continued to provide funding and promoted assessments of high-hazard potential dams, monitored costs, and examined the rehabilitation program to ensure equitable delivery in economically disadvantaged areas. Projects funded for assessments, planning, design, and construction are included in the chart below.

Table NRCS-35. Summary of Watershed Rehabilitation Projects and Allocations as of September 30, 2021

State	Total Number of Funded Dam Rehabilitation Projects 2000 - 2021	Number of Dams Rehabilitated	2021 Federal Allocations of Mandatory Funds	2021 Federal Allocations of Discretionary Funds a/
Alabama	1	1	-	-
Arizona	11	3	\$396,487	-
Arkansas	7	1	-	-
California	1	-	-	\$470,000
Colorado	5	1	\$40,000	-
Connecticut	4	-	\$20,000	-
Georgia	38	7	\$877,000	\$4,713,048
Illinois	1	-	-	\$11,303
Indiana	-	-	-	-
Iowa	4	4	-	-
Kansas	8	3	-	\$303,500
Kentucky	4	-	-	\$234,000
Louisiana	3	-	-	-
Massachusetts	9	1	\$250,000	-
Maryland	1	-	-	-
Mississippi	27	18	-	-
Missouri	2	2	-	-
Nebraska	16	12	-	-
Nevada	1	-	-	-
New Hampshire	5	-	\$106,000	-
New Jersey	2	-	\$25,235	-
New Mexico	9	3	\$65,000	-
New York	8	-	-	-

State	Total Number of Funded Dam Rehabilitation Projects 2000 - 2021	Number of Dams Rehabilitated	2021 Federal Allocations of Mandatory Funds	2021 Federal Allocations of Discretionary Funds a/
North Carolina	7	-	\$2,608,310	\$55,000
North Dakota	8	1	-	\$101,631
Ohio	13	8	\$630,262	\$682,236
Oklahoma	61	38	\$217,000	\$1,505,010
Oregon	2	-	-	-
Pennsylvania	15	2	\$98,151	\$1,188,547
Tennessee	7	3	\$40,477	-
Texas	46	26	\$7,974,705	\$859,295
Utah	24	10	\$6,285,400	\$894,123
Vermont	4	-	\$43,092	-
Virginia	17	13	-	-
Washington	-	-	-	-
West Virginia	12	2	\$385,482	\$397,709
Wisconsin	11	11	-	-
Wyoming	1	1	-	-
Total	395	171	\$20,062,601	\$11,415,402

a/ Discretionary funds include carryover funds, prior year recoveries, and annual funds for project planning, design, and implementation.

In 2021, 38 assessments of high hazard dams were funded. These assessments provided communities with technical information about the condition of their dams, and alternatives for rehabilitation of dams that do not currently meet Federal dam safety standards.

Project Status and Benefits

From 2000 through 2021, 395 dams have been funded for rehabilitation. Of the 395 dams, 263 dams in 26 States were authorized for rehabilitation. There are 110 dams in the planning phase that are subject to funding priorities. Of the 263 dams that were authorized for rehabilitation, 171 have been rehabilitated and 57 are in the design and construction phase.

The following table summarizes the benefits for both agricultural and non-agricultural lands provided by the completed projects:

Table NRCS-36. Benefits for lands provided by the completed projects

Average annual floodwater damage reduction benefits	\$9,383,748
Average annual non-floodwater damage reduction benefits	\$7,754,549
Number of people with reduced risk downstream from the dams	45,302
Number of people who benefit from project action	519,652
Number of homes and businesses benefiting from project action	18,755
Number of farms and ranches benefiting from project action	1,037
Number of bridges downstream which benefit from project action	401

ACCOUNT 5: WATER BANK PROGRAM

LEAD-OFF TABULAR STATEMENT

Table NRCS-37. Lead-Off Tabular Statement (In Dollars)

Item	Amount
Estimate, 2022	\$4,000,000
Change in Appropriation	-4,000,000
Budget Estimate, 2023	-

PROJECT STATEMENTS

Table NRCS-38. Project Statement by Appropriations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.	Chg Key
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE			
Discretionary Appropriations:											
Water Bank Program											
Technical Assistance	\$400	1	\$400	1	\$400	1	-	-	-\$400	-1	
Financial Assistance	3,600	-	3,600	-	3,600	-	-	-	-3,600	-	
Total Appropriation	4,000	1	4,000	1	4,000	1	-	-	-4,000	-1	(1)
Recoveries, Other	122	-	215	-	-	-	-	-	-	-	
Bal. Available, SOY	1,035	-	133	-	649	-	-	-	-649	-	
Total Available	5,157	1	4,348	1	4,649	1	-	-	-4,649	-1	
Bal. Available, EOY	-133	-	-649	-	-	-	-	-	-	-	
Total Obligations	5,024	1	3,699	1	4,649	1	-	-	-4,649	-1	

Table NRCS-39. Project Statement by Obligations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Discretionary Obligations:										
Water Bank Program										
Technical Assistance	\$106	1	\$200	1	\$673	1	-	-	-\$673	-1
Financial Assistance	4,918	-	3,499	-	3,976	-	-	-	-3,976	-
Total Obligations	5,024	1	3,699	1	4,649	1	-	-	-4,649	-1
Bal. Available, EOY	133	-	649	-	-	-	-	-	-	-
Total Available	5,157	1	4,348	1	4,649	1	-	-	-4,649	-1
Recoveries, Other	-122	-	-215	-	-	-	-	-	-	-
Bal. Available, SOY	-1,035	-	-133	-	-649	-	-	-	649	-
Total Appropriation	4,000	1	4,000	1	4,000	1	-	-	-4,000	-1

JUSTIFICATION

- (1) A decrease of \$4,000,000 and 1 staff year for the Water Bank Program (\$4,000,000 and 1 staff year available in 2022).

No funds are requested in the 2023 Budget for this program.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND FTE**Table NRCS-40. Geographic Breakdown of Obligations and FTE (thousands of dollars)**

State/Territory/Country	2020		2021		2022		2023	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE
Minnesota	\$234	-	\$67	-	\$85	-	-	-
North Dakota	4,331	1	2,719	1	3,418	1	-	-
South Dakota	459	-	912	-	1,146	-	-	-
Obligations	5,024	1	3,699	1	4,649	1	-	-
Bal. Available, EOY	133	-	649	-	-	-	-	-
Total, Available	5,157	1	4,348	1	4,649	1	-	-

CLASSIFICATION BY OBJECTS**Table NRCS-41. Classification by Objects (thousands of dollars)**

Item No.	Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
	Personnel Compensation:				
	Washington D.C.	\$76	\$133	\$136	-
11	Total personnel compensation	76	133	136	-
12	Personal benefits	30	55	56	-
	Total, personnel comp. and benefits	106	188	192	-
	Other Objects:				
23.1	Rental payments to GSA	-	12	-	-
25.1	Advisory and assistance services	-8	-	-	-
25.4	Operation and maintenance of facilities	8	-	480	-
32.0	Land and structures	1	-	-	-
41.0	Grants, subsidies, and contributions	4,917	3,499	3,977	-
	Total, Other Objects	4,918	3,511	4,457	-
99.9	Total, new obligations	5,024	3,699	4,649	-
	Position Data:				
	Average Salary (dollars), ES Position	\$182,514	\$186,928	\$191,975	-
	Average Salary (dollars), GS Position	\$72,229	\$70,816	\$72,728	-
	Average Grade, GS Position	10.0	10.0	10.0	-

Note: The position data reported above is representative of data collected across all funding sources provided to NRCS, including, but not limited to Conservation Operations, Watershed Rehabilitation (Technical Assistance), Watershed and Flood Prevention Operations (Technical Assistance), Water Bank Program (Technical Assistance), and Farm Security and Rural Investment Program (Technical Assistance).

STATUS OF PROGRAMS**WATER BANK PROGRAM**

Section 748 of the Water Bank Act (16 U.S.C. 1301-1311) authorized the Water Bank Program (WBP). The purposes of the WBP include: 1) preserving and improving major wetlands as habitat for migratory waterfowl and other wildlife; 2) conserving surface waters; 3) reducing soil and wind erosion; 4) contributing to flood control; 5) improving water quality; 6) improving subsurface moisture; and 7) enhancing the natural beauty of the landscape. The intent of the program is to keep water for the benefit of migratory wildlife.

WBP contracts are non-renewable, ten-year rental agreements to compensate landowners for maintaining lands as wetlands in lieu of draining the lands for agricultural production. Rental payments are made annually. WBP agreements for each participating farm or ranch become effective on January 1, of the calendar year in which the agreement is approved. WBP only provides these rental payments, and payments are not available for conservation practices. Participants who wish to establish or maintain conservation practices may apply for financial assistance through other NRCS or State financial assistance programs.

WBP participants are not subject to the Farm Bill payment eligibility requirements, including the highly erodible land and wetland conservation provisions, or the adjusted gross income limitations. The rental rates, for the 2021 program, were as follows:

- \$50 per acre per year for cropland;
- \$35 per acre per year for pasture and rangeland (grazing lands); and
- \$20 per acre per year for forestland.

NRCS determines whether land is eligible for enrollment and whether, once found eligible, lands may be included in the program based on the likelihood of successful protection of wetland functions, and values when considering the cost of the agreement. Land placed under an agreement shall be specifically identified and designated for the period of the agreement. A person must:

- Be the owner of eligible land for which enrollment is sought for at least two years preceding the date of the agreement unless new ownership was acquired by will or succession because of death of the previous owner; or
- Have possession of the land by written lease over all designated acreage in the agreement for at least two years preceding the date of the agreement unless new ownership was acquired by will or succession because of death of the previous owner and will have possession over all the designated acreage for the agreement period.

An agreement shall be executed for each participating farm. The agreement shall be signed, by the owner or operator of the designated acreage and any other person who, as landlord, tenant, or sharecropper, will share in the payment or has an interest in the designated acreage. There may be more than one agreement for a farm. The designated acreage in the agreement must:

- Be maintained for the agreement period in a manner which will preserve, restore, or improve the wetland character of the land;
- Not be drained, burned, filled, or otherwise used in a manner which would destroy the wetland character of the acreage;
- Not be used as a dumping area for draining other wetlands, except where the State Conservationist determines that such use is consistent with the sound management of wetlands and is specified in the conservation plan;
- Not be used for agricultural purposes, including cropping, haying, or grazing, for the life of the agreement;
- Not be hayed unless authorized under limited circumstances, such as severe drought; and
- Not be grazed unless necessary to enhance the wetland functions and values of the land under agreement.

An annual status review is performed to note the progress in maintaining designated wetland acreage, and the need for technical assistance. Failure to maintain the designated wetland acreage may result in noncompliance or a reduction in rental payments.

Current Activities

In 2021, \$4 million in financial and technical assistance was available for approval of new WBP ten-year rental agreements. Over \$3.4 million was obligated to 62 agreements covering 7,338 acres.

ACCOUNT 6: HEALTHY FORESTS RESERVE PROGRAM

APPROPRIATIONS LANGUAGE

The appropriations language follows (new language underscored; deleted matter enclosed in brackets)

For necessary expenses to carry out the Healthy Forests Reserve Program under the Healthy Forests Restoration Act of 2003 (16 U.S.C. 6571-6578), \$20,000,000, to remain available until expended.

Change Description

The change adds appropriation language for the Healthy Forests Reserve Program.

LEAD-OFF TABULAR STATEMENT

Table NRCS-42. Lead-Off Tabular Statement (In Dollars)

Item	Amount
Estimate, 2022	-
Change in Appropriation	+\$20,000,000
Budget Estimate, 2023	20,000,000

PROJECT STATEMENTS

Table NRCS-43. Project Statement by Appropriations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.	Chg Key
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE			
Discretionary Appropriations:											
Heathy Forests Reserve Program:											
Technical Assistance	-	-	-	-	-	-	\$6,600	1	+\$6,600	+1	
Financial Assistance	-	-	-	-	-	-	13,400	-	+13,400	-	
Total Appropriation	-	-	-	-	-	-	20,000	1	+20,000	+1	(1)
Total Available	-	-	-	-	-	-	20,000	1	+20,000	+1	
Total Obligations	-	-	-	-	-	-	20,000	1	+20,000	+1	

Table NRCS-44. Project Statement by Obligations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Discretionary Obligations:										
Heathy Forests Reserve Program:										
Technical Assistance	-	-	-	-	-	-	\$6,600	1	+\$6,600	+1
Financial Assistance	-	-	-	-	-	-	13,400	-	+13,400	-
Total Obligations	-	-	-	-	-	-	20,000	1	+20,000	+1
Total Available	-	-	-	-	-	-	20,000	1	+20,000	+1
Total Appropriation	-	-	-	-	-	-	20,000	1	+20,000	+1

JUSTIFICATION

- (1) An increase of \$20,000,000 and 1 staff year for the Healthy Forests Reserve Program (no funding available in 2022).

The budget proposes \$20,000,000 for the Healthy Forests Reserve Program enroll private and Tribal landowners on a voluntary basis for the purpose of restoring, enhancing, and protecting forestland to promote recovery of endangered and threatened species under the Endangered Species Act. Funds will be prioritized to projects that increase plant and animal biodiversity and enhance carbon sequestration.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND FTE

Table NRCS-45. Geographic Breakdown of Obligations and FTE (thousands of dollars)

State/Territory/Country	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE
Distribution Unknown	-	-	-	-	-	-	\$20,000	1
Obligations	-	-	-	-	-	-	20,000	1
Total, Available	-	-	-	-	-	-	20,000	1

CLASSIFICATION BY OBJECTS

Table NRCS-46. Classification by Objects (thousands of dollars)

Item No.	Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
	Personnel Compensation:				
	Personnel Compensation, Field	-	-	-	\$97
11	Total personnel compensation	-	-	-	97
12	Personal benefits	-	-	-	40
	Total, personnel comp. and benefits	-	-	-	137
	Other Objects:				
25.2	Other services from non-Federal sources	-	-	-	6,463
32.0	Land and structures	-	-	-	8,308
41.0	Grants, subsidies, and contributions	-	-	-	5,092
	Total, Other Objects	-	-	-	19,863
99.9	Total, new obligations	-	-	-	20,000
	Position Data:				
	Average Salary (dollars), ES Position	-	-	-	\$200,806
	Average Salary (dollars), GS Position	-	-	-	\$76,074
	Average Grade, GS Position	-	-	-	10.0

Note: The position data reported above is representative of data collected across all funding sources provided to NRCS, including, but not limited to Conservation Operations, Watershed Rehabilitation (Technical Assistance), Watershed and Flood Prevention Operations (Technical Assistance), Water Bank Program (Technical Assistance), and Farm Security and Rural Investment Program (Technical Assistance).

ACCOUNT 7: URBAN AGRICULTURE AND INNOVATIVE PRODUCTION PROGRAM

APPROPRIATIONS LANGUAGE

The appropriation language follows (new language underscored; deleted matter enclosed in brackets):

For necessary expenses to carry out the Urban Agriculture and Innovative Production Program under section 222 of subtitle A of the Department of Agriculture Reorganization Act of 1994 (7 U.S.C. 6923), as added by section 12302 of Public Law 115–334, \$13,469,000.

Change Description

The change adds appropriation language for the Urban Agriculture and Innovative Production Program.

LEAD-OFF TABULAR STATEMENT

Table NRCS-47. Lead-Off Tabular Statement (In Dollars)

Item	Amount
Estimate, 2022*	-
Change in Appropriation	+\$13,469,000
Budget Estimate, 2023	<u>13,469,000</u>

*2022 assumes the program will continue under an Annualized Continuing Resolution as a General Provision in the Farm Security and Rural Investment Programs Account.

PROJECT STATEMENTS

Table NRCS-48. Project Statement by Appropriations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.	Chg Key
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE			
Discretionary Appropriations:											
Urban Agriculture and Innovative Production											
Technical Assistance	-	-	-	-	-	-	\$13,469	4	+\$13,469	+4	
Total Appropriation	-	-	-	-	-	-	13,469	4	+13,469	+4	(1)
Total Available	-	-	-	-	-	-	13,469	4	+13,469	+4	
Total Obligations	-	-	-	-	-	-	13,469	4	+13,469	+4	

Note: The 2020 and 2021 Enacted Appropriations were funded as a General Provision in the Farm Security and Rural Investment Programs Account. 2022 assumes the program will continue under an Annualized Continuing Resolution as a General Provision in the Farm Security and Rural Investment Programs Account.

Table NRCS-49. Project Statement by Obligations Detail (thousands of dollars, FTE)

Item	2020		2021		2022		2023		Inc. or Dec.	FTE Inc. or Dec.
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE		
Discretionary Obligations:										
Urban Agriculture and Innovative Production										
Technical Assistance	-	-	-	-	-	-	\$13,469	4	+\$13,469	+4
Total Obligations	-	-	-	-	-	-	13,469	4	+13,469	+4
Total Available	-	-	-	-	-	-	13,469	4	+13,469	+4
Total Appropriation	-	-	-	-	-	-	13,469	4	+13,469	+4

Note: The 2020 and 2021 Enacted Appropriations were funded as a General Provision in the Farm Security and Rural Investment Programs Account. 2022 assumes the program will continue under an Annualized Continuing Resolution as a General Provision in the Farm Security and Rural Investment Programs Account.

JUSTIFICATION

- (1) An increase of \$13,469,000 and four staff years for the Urban Agriculture Innovative Production Program (no funding available in 2022) as this was funded previously as a general provision in the Farm Security and Rural Investment Programs Account.

The funding increase will allow NRCS to continue critical activities to support full implementation of the Office as directed by statute. These include expanding grant opportunities to historically underserved communities, leveraging existing authorities within USDA agencies to amplify ongoing programs, managing the needs of the Federal Advisory Committee (established in fall of 2021 and meeting three times in 2022), expanding opportunities to address food loss and waste to include encouraging composting through agreements with local government, and supporting pilot Farm Service Agency (FSA) Urban / Sub-Urban County Office Committees in 17 cities selected for pilot committees. These urban offices will have staff on the ground in selected cities to guide urban producers through the process of signing up for a FSA farm number and accessing programs and services from NRCS, FSA, as well as other programs from across USDA that are available to help urban and innovative producers, including Agricultural Marketing Service, Rural Development and Food and Nutrition Service.

NRCS will invest funds into agreements with extension, land grant universities, local soil and water and conservation districts, local Environmental Protection Agency offices, and other partner organizations in areas with Urban / Sub-Urban county committees to allow urban office locations to provide urban producers with access to specialized educational, technical and training resources tailored to local production needs, beyond what is available from USDA.

NRCS proposes to invest more in grant opportunities, with a priority on supporting historically underserved communities.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND FTE***Table NRCS-50. Geographic Breakdown of Obligations and FTE (thousands of dollars)***

State/Territory/Country	2020		2021		2022		2023	
	Actual	FTE	Actual	FTE	Estimated	FTE	Estimated	FTE
District of Columbia	-	-	-	-	-	-	\$13,469	4
Obligations	-	-	-	-	-	-	13,469	4
Total, Available	-	-	-	-	-	-	13,469	4

CLASSIFICATION BY OBJECTS**Table NRCS-51. Classification by Objects (thousands of dollars)**

Item No.	Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
	Personnel Compensation:				
	Personnel Compensation, Field	-	-	-	\$384
11	Total personnel compensation	-	-	-	384
12	Personal benefits	-	-	-	137
	Total, personnel comp. and benefits	-	-	-	521
	Other Objects:				
25.2	Other services from non-Federal sources	-	-	-	12,948
	Total, Other Objects	-	-	-	12,948
99.9	Total, new obligations	-	-	-	13,469
	Position Data:				
	Average Salary (dollars), ES Position	-	-	-	\$200,806
	Average Salary (dollars), GS Position	-	-	-	\$76,074
	Average Grade, GS Position	-	-	-	10.0

Note: The position data reported above is representative of data collected across all funding sources provided to NRCS, including, but not limited to Conservation Operations, Watershed Rehabilitation (Technical Assistance), Watershed and Flood Prevention Operations (Technical Assistance), Water Bank Program (Technical Assistance), and Farm Security and Rural Investment Program (Technical Assistance).

The 2020 and 2021 Enacted Appropriations were funded as a General Provision in the Farm Security and Rural Investment Programs Account. 2022 assumes the program will continue under an Annualized Continuing Resolution as a General Provision in the Farm Security and Rural Investment Programs Account.

ACCOUNT 8: FARM SECURITY AND RURAL INVESTMENT PROGRAMS

PROJECT STATEMENTS

Table NRCS-52. Project Statement by Appropriations Detail (thousands of dollars, FTE)

Item	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE	Inc. or Dec.	FTE Inc. or Dec.	Chg Key
Discretionary Appropriations:											
Wetlands Mitigation Banking.....	\$5,000	-	\$5,000	-	\$5,000	-	-	-	-\$5,000	-	(1)
Urban Agriculture and Innovative.....	5,000	2	7,000	2	7,000	2	-	-	-7,000	-2	(2)
Subtotal.....	10,000	2	12,000	2	12,000	2	-	-	-12,000	-2	
Mandatory Appropriations:											
Environmental Quality Incentive Program.....	1,616,013	2,425	1,666,663	2,953	1,713,813	4,354	\$1,878,838	4,401	+\$165,025	+47	
Conservation Stewardship Program (2018).....	661,041	640	686,066	618	733,216	1,094	921,816	716	+188,600	-378	
Conservation Stewardship Program (2014).....	1,727,069	811	-	857	-	36	-	471	-	+435	
Agricultural Conservation Easement Program.....	415,143	321	416,043	407	416,043	585	416,043	586	-	+1	
Regional Conservation Partnership Program.....	282,300	69	282,900	98	282,900	114	282,900	114	-	-	
Conservation Reserve Program (TA Only).....	89,503	700	220,770	853	220,770	1,050	220,770	1,050	-	-	
Agricultural Management Assistance.....	4,705	6	4,715	7	4,715	7	4,715	6	-	-1	
Voluntary Public Access and Habitat Incentive Prg.....	-	-	-	1	-	2	-	2	-	-	
Feral Swine Eradication and Control Pilot Program.....	-	1	-	4	-	4	-	4	-	-	
Agricultural Water Enhancement Program.....	-	1	-	-	-	1	-	-	-	-1	
Chesapeake Bay Watershed Program.....	-	7	-	1	-	-	-	-	-	-	
Farm and Ranch Lands Protection Program.....	-	-	-	-	-	-	-	-	-	-	
Grassland Reserve Program.....	-	-	-	-	-	-	-	-	-	-	
Wetlands Mitigation Banking Program.....	-	1	-	-	-	-	-	-	-	-	
Wetlands Reserve Program.....	-	2	-	2	-	2	-	1	-	-1	
Wildlife Habitat Incentives Program.....	-	9	-	2	-	4	-	2	-	-2	
Healthy Forests Reserve Program.....	-	-	-	1	-	-	-	-	-	-	
Subtotal.....	4,795,774	4,993	3,277,157	5,804	3,371,457	7,253	3,725,082	7,353	+353,625	+100	
Total Adjusted Approp.....	4,805,774	4,995	3,289,157	5,806	3,383,457	7,255	3,725,082	7,353	+341,625	98	
Add back:											
Rescission, Transfers In and Out.....	60,228	-	60,228	-	60,228	-	60,228	-	-	-	
Sequestration.....	304,468	-	201,730	-	207,430	-	228,805	-	+21,375	-	
Total Appropriation.....	5,170,470	4,995	3,551,115	5,806	3,651,115	7,255	4,014,115	7,353	+363,000	98	
Transfers Out:											
NRCS/ACEP.....	-8,307	-	-8,307	-	-8,307	-	-8,307	-	-	-	
NRCS/CSP.....	-21,184	-	-21,184	-	-21,184	-	-21,184	-	-	-	
NRCS/EQIP.....	-30,737	-	-30,737	-	-30,737	-	-30,737	-	-	-	
Total Transfers Out.....	-60,228	-	-60,228	-	-60,228	-	-60,228	-	-	-	
Sequestration.....	-304,468	-	-201,730	-	-207,430	-	-228,805	-	-21,375	-	
Recoveries, Other.....	335,389	-	369,536	-	-	-	-42,584	-	-42,584	-	
Bal. Available, SOY.....	1,985,801	-	2,334,039	-	2,513,060	-	1,653,207	-	-859,853	-	
Total Available.....	7,126,964	4,995	5,992,732	5,806	5,896,517	7,255	5,335,705	7,353	-560,812	98	
Lapsing Balances.....	-327	-	-198	-	-	-	-	-	-	-	
Bal. Available, EOY.....	-2,334,039	-	-2,513,060	-	-1,653,207	-	-1,457,388	-	+195,819	-	
Total Obligations.....	4,792,598	4,995	3,479,474	5,806	4,243,310	7,255	3,878,317	7,353	-364,993	+98	

Note: The project statement and MAX discrepancy is due to MAX reporting reimbursable funding and FTEs, which are not included in the project statement.

Table NRCS-53. Project Statement by Obligations Detail (thousands of dollars, FTE)

Item	2020 Actual	FTE	2021 Actual	FTE	2022 Estimated	FTE	2023 Estimated	FTE	Inc. or Dec.	FTE Inc. or Dec.
Discretionary Obligations:										
Wetlands Mitigation Banking	-	-	\$5,000	-	\$10,000	-	-	-	-\$10,000	-
Urban Agriculture and Innovative.....	\$4,881	2	6,959	2	7,000	2	-	-	-7,000	-2
Subtotal Disc oblig.....	4,881	2	11,959	2	17,000	2	-	-	-17,000	-2
Mandatory Obligations:										
Environmental Quality Incentive Program	1,813,242	2,425	1,886,736	2,953	1,926,449	4,354	\$1,883,817	4,401	-42,632	+47
Conservation Stewardship Program (2018)	626,347	640	646,076	618	765,276	1,094	888,742	716	+123,466	-378
Conservation Stewardship Program (2014)	1,593,082	811	216,749	857	229,273	36	68,162	471	-161,111	+435
Agricultural Conservation Easement Program.....	492,909	321	441,986	407	571,204	585	439,047	586	-132,157	+1
Regional Conservation Partnership Program.....	52,722	69	80,286	98	350,597	114	331,006	114	-19,591	-
Conservation Reserve Program (TA Only).....	110,201	700	130,947	853	292,543	1,050	228,440	1,050	-64,103	-
Agricultural Management Assistance	4,497	6	4,558	7	4,715	7	4,715	6	-	-1
Voluntary Public Access and Habitat Incentive Program.....	49,524	-	162	1	1,658	2	117	2	-1,541	-
Feral Swine Eradication and Control Pilot Program.....	16,898	1	18,336	4	543	4	658	4	+115	-
Agricultural Water Enhancement Program.....	153	1	45	-	5,328	1	817	-	-4,511	-1
Chesapeake Bay Watershed Program	881	7	31	1	3,289	-	1,992	-	-1,297	-
Farm and Ranch Lands Protection Program	11,205	-	17,714	-	36,534	-	24,378	-	-12,156	-
Grassland Reserve Program	5,580	-	6,824	-	18,577	-	3,648	-	-14,929	-
Wetlands Mitigation Banking Program.....	153	1	263	-	618	-	-	-	-618	-
Wetlands Reserve Program	8,662	2	13,356	2	9,601	2	1,309	1	-8,292	-1
Wildlife Habitat Incentives Program.....	1,416	9	275	2	5,668	4	949	2	-4,719	-2
Healthy Forests Reserve Program	202	-	3,143	1	4,437	-	489	-	-3,948	-
Conservation Security Program.....	43	-	28	-	-	-	-	-	-	-
Subtotal Mand Oblig	4,787,717	4,993	3,467,515	5,804	4,226,310	7,253	3,878,286	7,353	-348,024	+100
Total Obligations.....	4,792,598	4,995	3,479,474	5,806	4,243,310	7,255	3,878,286	7,353	-365,024	+98
Add back:										
Lapsing Balances.....	327	-	198	-	-	-	-	-	-	-
Balances Available, EOY:										
Mandatory Farm Security and Rural Investment Program.....	2,329,039	-	2,508,060	-	1,653,207	-	1,457,388	-	-195,819	-
Discretionary Farm Security and Rural Investment Program.....	5,000	-	5,000	-	-	-	-	-	-	-
Total Bal. Available, EOY	2,334,039	-	2,513,060	-	1,653,207	-	1,457,388	-	-195,819	-
Total Available	7,126,964	4,995	5,992,732	5,806	5,896,517	7,255	5,335,674	7,353	-560,843	+98
Less:										
Total Transfers Out.....	60,228	-	60,228	-	60,228	-	60,228	-	-	-
Sequestration	304,468	-	201,730	-	207,430	-	228,805	-	+21,375	-
Recoveries, Other	-335,389	-	-369,536	-	-	-	42,584	-	+42,584	-
Bal. Available, SOY	-1,985,801	-	-2,334,039	-	-2,513,060	-	-1,653,207	-	+859,853	-
Total Appropriation.....	5,170,470	4,995	3,551,115	5,806	3,651,115	7,255	4,014,084	7,353	+362,969	+98

Note: The project statement and MAX discrepancy is due to MAX reporting reimbursable funding and FTEs, which are not included in the project statement.

The Agriculture Improvement Act of 2018 amended Title XII of the Food Security Act of 1985, reauthorizing some programs, and creating the Feral Swine Eradication and Control Pilot Program that is administered jointly by NRCS and APHIS. A number of conservation programs were extended in the 2023 Budget's baseline based upon scorekeeping conventions.

Total available budget authority is shown net of sequester, and transfers. FY 2020 sequestration was applied at 5.9 percent, FY 2021 – FY 2023 sequestration was applied at 5.7 percent.

JUSTIFICATION

A decrease of \$12,000,000 and two staff years for the Farm Security and Rural Investment Programs Account (\$12,000,000 and two staff years available in 2022).

- (1) A decrease of \$5,000,000 and no change in staff years for the Wetlands Mitigation Banking Program (\$5,000,000 and no staff years available in 2022).

No funds are requested in the General Provisions of the 2023 President’s Budget.

- (2) A decrease of \$7,000,000 and a decrease of two staff years for the Urban Agriculture Innovative Production Program (\$7,000,000 and two staff years available in 2022).

No funds are requested in the General Provisions of the 2023 President’s Budget. Funding for the Program, \$13,469,000 and four staff years, is requested in a standalone account in 2023.

GEOGRAPHIC BREAKDOWN OF OBLIGATIONS AND FTE

Table NRCS-54. Geographic Breakdown of Obligations and FTE (thousands of dollars)

State/Territory/Country	2021 ACTUALS														BCAP				
	ACEP	AMAP	AWEP	CBWP	CRPG	CSPG	CSTP	EQIP	FRPP	FSCP	GRPG	HFRP	RCPP	UAIP		VPAP	WHIP	WMBP	WRPG
Alabama	\$6,064	-	-	-	\$807	-	\$17,982	\$39,324	-	\$2,038	-	-	\$12,366	-	-	-	-	-	-
Alaska	1,058	-	-	-	103	-	848	10,114	-	-	-	-	56	-	-	-	-	-	-
Arizona	5,027	-	-	-	79	-	4,291	20,220	-	-	-	-	1,830	-	-	-	-	-	-
Arkansas	30,792	-	\$9	-	1,256	-	35,457	70,092	-	516	-	-	1,297	-	-	\$1	\$800	-	-
California	23,435	-	-	-	313	-	7,211	128,585	-	-	-	-	7,216	-	-	17	-	-	-
Colorado	16,875	-	-	-	1,719	-	16,955	56,896	-	-	-	-	91	-	-	-	-	\$109	-
Connecticut	3,531	\$205	-	-	56	-	960	9,248	-	-	-	-	118	-	-	8	-	-	-
Delaware	2,489	87	-	-	117	-	1,641	8,422	-	-	-	-	136	-	-	-	-	-	-
District of Columbia	54,726	-	-	\$2	11,165	-	132,496	180,378	\$17,692	531	\$6,750	-	12,680	\$6,959	\$70	40	93	7,835	-
Florida	13,951	-	-	-	261	-	7,876	30,481	-	536	-	-	9,043	-	-	-	-	-	-
Georgia	11,518	-	-	-	1,635	-	23,554	56,356	-	665	-	\$2,458	1,366	-	-	-	547	-	-
Hawaii	1,245	244	-	-	96	-	2,206	12,740	-	922	-	-	76	-	-	-	-	-	-
Idaho	4,358	-	-	-	881	-	8,212	29,054	-	-	-	-	219	-	8	-	-	-	-
Illinois	13,692	-	-	-	14,298	-	30,377	24,948	-	-	-	-	866	-	-	16	501	38	-
Indiana	9,833	-	-	-	8,129	-	14,944	33,612	-	-	-	139	165	-	5	-	-	-	-
Iowa	12,266	-	-	-	19,769	-	25,943	46,929	-	-	-	-	237	-	-1	-	1,009	-	-
Kansas	3,676	-	-	-	5,450	-	21,514	52,928	-	-	3	-	856	-	1	-	-	-	-
Kentucky	16,663	-	-	-	2,988	-	9,276	28,602	-	-	-	-	356	-	-	-	-	-	-
Louisiana	30,987	-	-	-	612	-	24,567	30,917	-	1,949	-	-	92	-	-	38	-	1,350	-
Maine	464	899	-	-	104	-	1,037	17,344	-	-	-	-	551	-	-	4	-	-	-
Maryland	1,091	398	-	1	1,369	-	2,239	15,547	-	-	-	-	3,064	-	-	-	-	-	-
Massachusetts	2,988	198	-	-	47	-	996	6,944	-	-	-	-	261	-	-	32	-	-	-
Michigan	2,521	-	28	-	2,309	-	14,143	23,647	-	-	-	10	510	-	-	6	803	2	-
Minnesota	2,591	-	5	-	7,978	-	25,657	35,200	-	-	-	-	3,705	-	11	-	404	106	-
Mississippi	24,589	-	-	-	3,741	-	26,831	68,717	-	1,500	-	-	780	-	-	-	-	-	-
Missouri	14,568	-	-	-	6,546	-	23,628	41,217	-	3,375	-	-	327	-	-	5	-	1	-
Montana	15,608	-	-	-	1,213	-	29,036	38,616	-	-	-	-	1,179	-	6	-	-	-	-
Nebraska	5,968	-	3	-	4,237	\$1	32,705	36,723	-	-	-	-	807	-	2	-	-	-	-
Nevada	233	300	-	-	52	-	1,069	10,406	-	-	-	-	33	-	-	-	-	-	-
New Hampshire	4,338	61	-	-	56	-	1,114	7,197	-	-	-	-	27	-	-	-	-	-	-
New Jersey	2,367	274	-	-	159	-	1,082	9,341	23	-	1	-	210	-	-	26	-	69	-
New Mexico	1,516	-	-	-	360	-	25,510	36,349	-	-	-	-	63	-	14	-	-	-	-
New York	3,739	300	-	30	1,051	-	8,188	22,926	-	-	-	-	33	-	-	-	-	-	-
North Carolina	4,936	-	-	-	659	-	10,859	32,840	-	1,390	-	-	1,190	-	-	-	-	-	-
North Dakota	3,445	-	-	-	4,899	-	30,070	25,089	-	-	-	-	621	-	-	-	-	-	-
Ohio	6,578	-	-	-	4,669	-	7,880	34,291	-	-	-	-	47	-	-	-	495	-	-
Oklahoma	2,807	-	-	-	961	-	23,957	30,799	-	1,070	-	-	42	-	-	-	-	-	-
Oregon	2,743	-	-	-	1,048	-	20,124	43,898	-	-	-	479	6,125	-	-	-	-	2,172	-
Pennsylvania	3,100	450	-	3	2,728	-	10,956	31,854	-	-	70	57	1,880	-	11	46	-	-	-
Puerto Rico	133	-	-	-	33	-	666	12,054	-	-	-	-	117	-	-	-	-	-	-
Rhode Island	2,083	145	-	-	33	-	982	5,352	-	-	-	-	830	-	-	10	-	-	-
South Carolina	2,948	-	-	-	160	3	17,279	44,065	-	915	-	-	27	-	-	-	-	-	-
South Dakota	5,764	-	-	-	4,501	-	39,067	29,540	-	-	-	-	894	-	6	-	611	-	-
Tennessee	13,581	-	-	-	836	-	16,990	50,314	-	-	-	-	727	-	-	-	-	114	-
Texas	13,687	-	-	-	5,363	-	27,200	115,121	-	2,929	-	-	528	-	1	32	-	5	-
Utah	12,769	178	-	-	170	-	9,041	34,120	-	-	-	-	1,880	-	-	-	-	-	-
Vermont	4,745	140	-	-	81	-	1,620	15,896	-	-	-	-	1,791	-	-	2	-	208	-
Virginia	1,495	-	-	-	837	-	13,337	34,410	-	-	-	-	264	-	8	-	-	9	-
Washington	2,055	-	-	-	1,684	-	16,426	34,721	-	-	-	-	564	-	-	8	-	1,301	-
West Virginia	3,159	578	-	-5	185	-	5,779	16,716	-	-	-	-	298	-	-	2	-	28	-
Wisconsin	5,090	-	-	-	2,751	24	27,139	34,956	-	-	-	-	1,779	-	11	-	-	-	-
Wyoming	6,101	101	-	-	393	-	3,908	20,680	-	-	-	-	66	-	9	-	-	9	-
Obligations	441,986	4,558	45	31	130,947	28	862,825	1,886,736	17,714	18,336	6,824	3,143	80,286	6,959	162	275	5,263	13,356	-
Lapsing Balances	-	198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bal. Available, EOY	255,710	-	6,293	8,517	106,773	7,153	563,332	465,285	109,800	2,267	23,117	4,987	928,693	-	4,705	6,808	5,618	11,116	\$2,886
Total, Available	697,696	4,756	6,338	8,548	237,720	7,181	1,426,157	2,352,021	127,514	20,603	29,941	8,130	1,008,979	6,959	4,867	7,083	10,881	24,472	2,886

Note: The Conservation Stewardship Program (CSTP) includes obligations and end of year balances for CSTP (2014) and CSTP (2018).

CLASSIFICATION BY OBJECTS**Table NRCS-55. Classification by Objects (thousands of dollars)**

Item No.	Item	2020 Actual	2021 Actual	2022 Estimated	2023 Estimated
	Personnel Compensation:				
	Washington D.C.	\$21,158	\$25,243	\$32,392	\$34,334
	Personnel Compensation, Field	367,141	398,117	510,861	541,483
11	Total personnel compensation	388,299	423,360	543,253	575,817
12	Personal benefits	159,277	189,698	243,431	258,048
13.0	Benefits for former personnel	60	62	79	84
	Total, personnel comp. and benefits	547,636	613,120	786,763	833,949
	Other Objects:				
21.0	Travel and transportation of persons	8,040	2,988	4,680	5,000
22.0	Transportation of things	2,078	1,460	2,286	1,217
23.1	Rental payments to GSA	17,192	17,928	21,719	21,495
23.2	Rental payments to others	37,344	42,623	43,742	49,621
23.3	Communications, utilities, and misc. charges	-43	2,455	3,844	2,046
24.0	Printing and reproduction	32	260	408	217
25.1	Advisory and assistance services	96	-423	-	-
25.2	Other services from non-Federal sources	263,564	280,491	434,728	224,802
25.3	Other goods and services from Federal sources	2,238	2,338	1,961	1,850
25.4	Operation and maintenance of facilities	149,438	139,109	217,647	116,090
25.5	Research and development contracts	2,165	-603	11	11
25.6	Project Services	-	77	120	64
25.7	Operation and maintenance of equipment	1,097	133	209	111
26.0	Supplies and materials	4,510	5,126	8,027	4,273
31.0	Equipment	27,141	69,410	108,676	57,867
32.0	Land and structures	285,952	222,865	254,579	249,766
41.0	Grants, subsidies, and contributions	3,444,113	2,080,107	2,353,895	2,309,898
42.0	Insurance Claims and Indemnities	-	5	7	4
43.0	Interest and Dividends	6	5	8	5
44.0	Refunds	-1	-	-	-
	Total, Other Objects	4,244,962	2,866,354	3,456,547	3,044,337
99.9	Total, new obligations	4,792,598	3,479,474	4,243,310	3,878,286
	DHS Building Security Payments (included in 25.3)	\$2,238	\$2,338	\$1,961	\$1,850
	Information Technology Investments:				
	FBC-1001 Cust Engagement & Mgmt Svcs				
25.2	External Labor (Contractors).....	11,244	6,601	9,139	9,163
25.2	Outside Services (Consulting).....	-	-	-	-
	Total FBC-1001 Cust Engagement & Mgmt Svcs.....	11,244	6,601	9,139	9,163
	FSA-127 Geospatial Services				
25.2	External Labor (Contractors).....	1,151	647	4,625	14,828
25.2	Outside Services (Consulting).....	-	14,003	10,715	368
	Total FSA-127 Geospatial Services.....	1,151	14,650	15,340	15,196
	FSA-129 Program Financial Services				
25.2	External Labor (Contractors).....	44	45	46	48
	Total FSA-129 Program Financial Services.....	44	45	46	48
	Total Major Investments.....	12,439	21,296	24,525	24,407
	Mission Area Non-Major Investment Totals.....	63,226	70,774	134,195	78,418
	Mission Area Standard Investment Totals.....	27,728	41,133	45,714	31,536
25.3	Mission Area WCF Transfers.....	121,515	132,176	132,459	136,346
	Total IT Investments.....	224,908	265,379	336,893	270,707
	Position Data:				
	Average Salary (dollars), ES Position	\$182,514	\$186,928	\$191,975	\$200,806
	Average Salary (dollars), GS Position	\$72,229	\$70,816	\$72,728	\$76,074
	Average Grade, GS Position	10.0	10.0	10.0	10.0

Note: The position data reported above is representative of data collected across all funding sources provided to NRCS, including, but not limited to Conservation Operations, Watershed Rehabilitation (Technical Assistance), Watershed and Flood Prevention Operations (Technical Assistance), Water Bank Program (Technical Assistance), and Farm Security and Rural Investment Program (Technical Assistance).

STATUS OF PROGRAMS**FARM SECURITY AND RURAL INVESTMENT PROGRAMS*****Agricultural Conservation Easement Program (ACEP)***

The Agricultural Conservation Easement Program (ACEP) is authorized by subtitle H of title XII of the Food Security Act of 1985, as amended by Section 2301 of the 2014 Farm Bill (P. L. 113-79) and sections 2601-2605 of the Agricultural Improvement Act of 2018 (2018 Farm Bill). ACEP consolidates the purposes and functions of three former easement programs that are no longer authorized: Farm and Ranch Lands Protection Program (FRPP), the Grassland Reserve Program (GRP), and the Wetlands Reserve Program (WRP). Lands previously enrolled under these former easement programs are now considered enrolled in ACEP and are eligible to receive financial and technical assistance services authorized under ACEP. ACEP is funded by the Commodity Credit Corporation (CCC) and administered by NRCS. ACEP is a voluntary program through which NRCS provides financial and technical assistance to help conserve agricultural lands and wetlands, and their related benefits, by directly acquiring or funding the acquisition of conservation easements on private or tribal lands. ACEP has two components - ACEP-Agricultural Land Easements (ACEP-ALE) and ACEP-Wetland Reserve Easements (ACEP-WRE).

ACEP-ALE helps farmers and ranchers keep their land in agriculture and continue as working lands. The program also protects grazing uses and related conservation values by conserving grassland, including rangeland, pastureland, and shrubland. ACEP-ALE easements require partnership with cooperating entities, which include Indian Tribes, State and local governments, or nongovernmental organizations (NGOs) that are committed to the long-term conservation of agricultural lands.

ACEP-ALE protects the Nation's most valuable lands for production of food, feed, and fiber by providing matching funds to ensure productive farmlands and ranchlands remain in agricultural use. By enrolling in ACEP-ALE, farmlands and ranchlands under commercial development pressures can remain productive and sustainable. Keeping land in agricultural use also reduces the amount of urban pollution (nitrogen, phosphorus, and sedimentation) from land that would otherwise be converted to lawns and impervious surfaces such as pavement and buildings. Ultimately, this assists with efforts in managing the Total Maximum Daily Load (TMDL) of nutrients flowing into public waters such as the Chesapeake Bay and the Mississippi River.

Through ACEP-WRE, NRCS provides technical and financial assistance directly to private landowners and Indian Tribes who voluntarily agree to restore, protect, and enhance wetlands through the sale of a permanent or 30-year wetland reserve easement to NRCS, or through a 30-year contract (tribes only). These wetland easements/contracts provide numerous benefits to the public that extend well beyond the footprint of the protected area. Wetlands provide habitat for fish and wildlife, including threatened and endangered species, improve water quality by filtering sediments and chemicals, reduce flooding, recharge groundwater, protect biological diversity, and provide opportunities for outdoor education, scientific, and recreational activities. The goal of ACEP-WRE is to achieve the greatest wetlands functions and values, along with optimum wildlife habitat, on every acre enrolled in the program, which is accomplished by restoring wetlands and associated habitats that were converted for agricultural use and have a high likelihood of successful restoration.

Over 50 percent of the Nation's wetlands in the lower 48 States have been lost since colonial times, and the greatest potential for restoration exists on private lands, which make up 70 percent of the land ownership in the country.

Over 80 percent of lands on which restoration is economically feasible are in private ownership. To achieve successful restoration that maximizes benefits to both the landowners and the public, ACEP-WRE focuses on: 1) enrolling marginal lands that have a history of crop failures or low production yields; 2) restoring and protecting wetland values on degraded wetlands; 3) maximizing wildlife benefits; 4) achieving cost-effective restoration with a priority on benefits to migratory birds; 5) protecting and improving water quality; 6) reducing the impact of flood events; 7) increasing ecosystem resilience; and 8) promoting scientific and educational uses on wetland easement of ACEP-WRE projects.

To enroll land through ACEP-ALE, NRCS enters into agreements with cooperating eligible entities.

NRCS requires certain terms and conditions under which the cooperating entity is eligible to receive NRCS ACEP cost-share assistance. For example, each agricultural land easement must be subject to easement deed terms that promotes the long-term agricultural viability of the land.

To enroll land through ACEP-WRE, NRCS enters into purchase agreements with eligible private landowners or Indian tribes that include the right for NRCS to develop and implement a wetland restoration plan. The plans are

designed to restore, protect, and enhance the wetlands functions and values of the land. NRCS may authorize wetland reserve easement lands to be used for compatible economic uses, including activities such as hunting and fishing, managed timber harvesting, or periodic haying or grazing if such uses are consistent with the long-term protection and enhancement of the wetland resources for which the easement was acquired.

ACEP is available on all lands in any of the 50 States, the District of Columbia, Commonwealth of Puerto Rico, Guam, the United States Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands given the following eligibility criteria:

- ACEP-ALE - cropland, rangeland, grassland, pastureland, and nonindustrial private forest land. NRCS prioritizes applications that protect agricultural uses and related conservation values of the land and those that maximize the protection of contiguous acres devoted to agricultural use; and
- ACEP-WRE - farmed or converted wetlands that can be successfully and cost-effectively restored. NRCS prioritizes applications based on the land's potential for protecting and enhancing wetland habitat for migratory birds and other wildlife.

ACEP-ALE: NRCS uses a continuous signup under which eligible entities may submit applications for funding. Upon receipt of the applications from an eligible entity, each NRCS State office evaluates the entities, land, and landowners for eligibility and ranks and prioritizes the applications based on established criteria. NRCS awards funds to the eligible entities that submit the applications for the highest-ranking parcels of land for which the State office has ACEP funding. NRCS priorities include farms and ranches that face the greatest pressure to convert productive agricultural land to non-agricultural uses or grasslands to non-grazing uses, have access to appropriate agricultural markets, contain prime soils or other soils of significance, have adequate infrastructure and agricultural support services, are located near other parcels of land that can support long-term agricultural production, or contain grasslands of special environmental significance.

ACEP-WRE: To apply for ACEP-WRE, landowners may submit applications at any time to their local USDA Service Center. NRCS determines landowner and land eligibility, ranks each application using ranking criteria developed with input from the State Technical Committee, and makes tentative funding selections. NRCS priorities for ACEP-WRE include the extent to which ACEP-WRE purposes would be achieved on the land, the significance of the wetland functions, and values that would be restored and protected, (including the value of the easement for protecting and enhancing habitat for migratory birds and other wildlife, the conservation benefits of obtaining an easement, the cost-effectiveness of enrolling the land to maximize environmental benefit per dollar expended, and whether Federal funds are being leveraged).

ACEP-ALE: NRCS and eligible entities sign a parcel cost-share agreement to obligate ACEP funds. The cooperating, eligible entities acquire the conservation easements and then hold, monitor, manage, and enforce the acquired easements. Generally, the Federal share for any easement acquisition cannot exceed 50 percent of the appraised market value of the conservation easement. Where NRCS determines that grasslands of special environmental significance will be protected, NRCS may contribute up to 75 percent of the market value of the agricultural land easement. Each conservation easement deed must include a provision granting the United States the right of enforcement to protect the Federal investment.

ACEP-WRE: NRCS and an eligible landowner sign an Agreement to Purchase a Conservation Easement to enroll land and obligate ACEP funds. NRCS acquires and holds the easement and is responsible for the restoration, monitoring, and enforcement of that easement. NRCS may enroll eligible land through various ACEP-WRE enrollment options:

- *Permanent Easements*, which are conservation easements in perpetuity. NRCS pays 100 percent of the easement value for the purchase of the easement and between 75 to 100 percent of the restoration costs.
- *30-Year Easements*, which expire after 30 years. Under these easements, NRCS pays 50 to 75 percent of the easement value for the purchase of the easement and between 50 to 75 percent of the restoration costs.
- *Term Easements*, which 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 and between 50 to 75 percent of the restoration costs.

- *30-year Contracts*, which are only available to enroll acreage owned by Indian tribes. Program payment rates are commensurate with 30-year easements.

For ACEP-WRE, all costs associated with recording the easement in the local land records office, including recording fees, charges for abstract, survey and appraisal fees, and title insurance, are paid by NRCS, as part of its acquisition of the wetland reserve easement.

ACEP-ALE: In addition to helping landowners and eligible entities develop conservation easement deeds NRCS provides technical assistance through verification of the eligibility of the entity, landowner, and land; assessment of the risk of hazardous materials; evaluation and ranking applications; development of agreements; review of deeds, title, and appraisals; and payment processing.

ACEP-WRE: NRCS conducts ecological and cost ranking and develops a preliminary site-specific restoration plan for the offered acres, using input from State wildlife agencies, and the Department of the Interior's Fish and Wildlife Service. Once the landowner accepts an offer, NRCS acquires the easement or executes the contract, completes restoration designs, and implements the conservation practices necessary to restore the identified habitats on the easement, contract, or easement area.

NRCS helps landowners throughout the life of the project under ACEP-WRE. After the initial completion of the restoration activities, NRCS works cooperatively with the private landowners to develop management and maintenance plans; conduct monitoring and enforcement; identify enhancement or repair needs; and provide biological and engineering advice on how to achieve optimum results for wetland-dependent wildlife or other desired ecosystem services.

Current Activities

In 2021, \$334 million in ACEP financial assistance funding was used to enroll an estimated 197,734 acres of farmland, grasslands, and wetlands through 361 new ACEP enrollments.

Enrollment is defined as the point at which the landowner, and NRCS enter into the agreement authorizing NRCS to proceed with the purchase of the easement or 30-year contract. The agency also closed 348 ACEP easements which protected 121,503 acres during 2021.

ACEP-ALE Enrollment. NRCS processed ACEP-ALE 416 applications on over 363,560 acres, including applications for ACEP-ALE on acres of grasslands of special environmental significance. Available funding allowed for the enrollment of applications for ACEP- ALE. Enrollment is defined as the point at which the cooperating entity, and NRCS enter into the cooperative agreement authorizing the cooperating entity to proceed with the purchase of the easement.

In 2021, NRCS enrolled a total of 154,060 acres in 173 new ACEP-ALE parcel contract enrollments through 34 program agreements (see table below). This includes 157 general agricultural land easements and 16 agricultural land easements on grasslands of special environmental significance. The average project size was 414 acres in general ALE, and 4,252 acres in ALE on grasslands of special environmental significance.

Table NRCS-56. Agreement Types

Agreement Type	2021 Parcel Contracts	2021 Acres Enrolled
Total ALE (2021 Parcel Contracts)	173	154,060

Since the inception of ACEP in 2014, NRCS has cumulatively enrolled 1,342 parcels in the ALE component of ACEP on 933,209 acres and has closed 851 easements on 526,065 acres. The table below shows ACEP-ALE cumulative enrollments and closings.

Table NRCS-57. Agreement Types

2014-2021	Parcels Enrolled – Cumulative Number	Parcels Enrolled - Cumulative Acres	Easements Closed – Cumulative Number	Easements Closed – Cumulative Acres
ACEP-ALE	1,342	933,209	851	526,065

ACEP-WRE Enrollment. In 2021, NRCS processed ACEP-WRE applications for over 548,624 acres. NRCS estimates the funding needed for enrollment of new acres in a given year by projecting the number of acres by enrollment option (i.e., permanent easements, 30-year easements, or 30-year contracts with Indian Tribes), and the geographic rate cap for the location of the acres to be enrolled.

In 2021, the agency enrolled a total of 43,674 acres in 188 new ACEP-WRE enrollments, or approximately six percent of the demand for ACEP-WRE enrollment (see table below). The average project size was 180 acres.

Table NRCS-58. Contracts

2021	2021 Agreements	2021 Acres Enrolled
Contracts		
30-year contracts with Tribes	-	-
Total (Contracts Only)	-	-
Easements		
30-year easement	14	2,159
Permanent easement	174	41,515
Total	188	43,674

Since the inception of ACEP in 2014, NRCS has cumulatively enrolled 1,948 applications in the WRE component of ACEP on 374,581 acres and closed 1,466 easements on 257,053 acres. The below table shows ACEP- WRE cumulative enrollments and closings.

Table NRCS-59. 2014- 2021 ACEP-WRE Cumulative Enrollments and Closings

2014 – 2021	Applications Enrolled Cumulative Number	Applications Enrolled Cumulative Acres	Easements Closed Cumulative Number	Easements Closed Cumulative Acres
Contracts	1,948	374,581	1,466	257,053
30-year contracts with Tribes	2	447	N/A	N/A
Total (Contracts Only)	2	447	N/A	N/A
Easements				
30-year easement	163	33,762	140	29,540
Permanent easement	1,783	340,372	1,326	227,513
Total	1,946	374,134	1,466	257,053

Agricultural Management Assistance

Agricultural Management Assistance (AMA) authorizes the Secretary of Agriculture to use \$10 million of Commodity Credit Corporation (CCC) funds for financial assistance in selected States where participation in the Federal Crop Insurance Program is historically low. Section 524(b) identifies the following States as eligible for AMA: Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming. AMA is administered jointly by NRCS, the Risk Management Agency (RMA), and the Agricultural Marketing Service (AMS).

NRCS administers the conservation provisions of the AMA program, which provides financial assistance to agricultural producers to address water management, water quality, and erosion control issues by incorporating conservation into their farming operations. By statute, the agency receives 50 percent of the funds apportioned to AMA each year. With AMA funds, producers 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.

AMA addresses the following national priorities:

- Reducing non-point source pollution, such as nutrients, sediment, pesticides, or excess salinity in impaired watersheds consistent with total maximum daily loads, where available;
- Reducing surface and groundwater contamination;
- Promoting conservation of ground and surface water resources;
- Reducing emissions, such as particulate matter, nitrogen oxides, volatile organic compounds, and ozone precursors and depleters that contribute to air quality impairment violations of National Ambient Air Quality Standards;
- Reducing unacceptably high levels of soil erosion and sedimentation on agricultural land; and
- Promoting at-risk species habitat conservation.

Like other financial assistance programs, AMA implementation is derived from a contract based on a conservation plan containing highly effective conservation practices to help mitigate the negative effects of resource concerns on the landscape and to the environment.

The practices most frequently utilized in conservation plans and AMA contracts include:

- Seasonal high tunnels to control the growing environment and improve plant health;
- Irrigation pipelines to convey irrigation water in an efficient and effective manner;
- Irrigation water management to assist clients in more effective and efficient management of water;
- Micro irrigation systems to deliver water more consistently;
- Cover crops to help improve soil health, reduce erosion, and improve air quality;
- Fencing installation to assist in the management of livestock grazing; and
- Brush management to control invasive species and increase land productivity.

The conservation provisions developed by the agency make program implementation flexible enough to allow States the opportunity to use it to meet their resource needs. States individually determine the resource concerns to be addressed, eligible practices, applicant ranking criteria, ranking processes, and cutoff dates for ranking applications. States are responsible for within-State fund allocations, payment methods, and public outreach and information activities. Participants may use AMA in conjunction with other USDA conservation programs.

Applicants must own or control the land, which must be within a State in which the program is authorized and comply with the adjusted gross income limitation provisions of the Food Security Act of 1985. Eligible land includes cropland, rangeland, grassland, pastureland, nonindustrial forestland, and other private land that produces crops or livestock where risk may be mitigated through operation diversification or change in resource conservation practices.

Participation in AMA is voluntary, and the agency works with the applicant to develop the required conservation plan. A contract may be for a period not to exceed ten years, and participants must agree to maintain cost-shared practices for the life of the practice. In addition, they may contribute to the cost of a practice through in-kind contributions, which may include personal labor, use of personal equipment, donated labor or materials, and on-hand or approved used materials.

Current Activities

In 2021, over \$7 million in CCC funds for financial assistance was obligated for 432 AMA contracts covering 6,050 acres. AMA provides many producers a first-time opportunity to address natural resource concerns on their lands. For example, many producers have not been able to participate in the Environmental Quality Incentives Program (EQIP) due to the eligibility requirement that land must have been irrigated for two of the previous five years to

receive EQIP funding. A number of these EQIP-ineligible producers are small-acreage or specialty-crop farming operations that provide high dollar value products to the public. By helping to mitigate the risks associated with these kinds of agricultural enterprises, AMA helps agriculture remain a valuable segment of local economies.

Agricultural Water Enhancement Program

Section 2510 of the Food, Conservation, and Energy Act of 2008 (P.L. 110-246) established the Agricultural Water Enhancement Program (AWEP) by amending section 1240I of the Food Security Act of 1985 (16 U.S.C. 3839aa-9). Section 2706 of the Agricultural Act of 2014 (the 2014 Farm Bill) (P.L. 113-79) repealed AWEP. However, Section 2706 also provided transitional language that ensured prior enrollments will continue to provide technical and financial assistance by NRCS. The 2014 Farm Bill consolidated AWEP into the Regional Conservation Partnership Program (RCPP).

The purpose of AWEP was to promote improved ground and surface water conservation and water quality by leveraging the Federal government's investment in natural resources conservation, with services and resources of other eligible partners. Eligible partners included Federal, State, and local entities, as well as local conservation districts, whose conservation goals complement the agency's mission.

AWEP was specifically created to address serious surface and ground water shortages and water quality concerns in many agricultural areas, and AWEP followed the established national priorities for the Environmental Quality Incentives Program (EQIP).

Through AWEP, eligible partners submitted proposals for funding. The proposals were evaluated, and successful applicants entered into multi-year agreements with NRCS to promote ground and surface water conservation and improve water quality on eligible agricultural lands in a specific geographic area. In evaluating partnership proposals, priority was given to those that:

- Included a high percentage of agricultural land and producers in the region or other appropriate area;
- Resulted in high levels of applied agricultural water quality and water conservation activities;
- Significantly enhanced agricultural activity;
- Allowed for monitoring and evaluation;
- Assisted agricultural producers in meeting a regulatory requirement that might otherwise reduce the economic scope of the producer's operation;
- Projected achieving the project's land and water treatment objectives within no more than five years;
- Included conservation practices supporting conversion of agricultural land from irrigated to dryland farming;
- Leveraged AWEP funds with funds provided by partners; and
- Assisted producers in areas with high-priority water quantity concerns in the following regions: Eastern Snake Plains Aquifer, Puget Sound, Ogallala Aquifer, Sacramento River Basin, Upper Mississippi River Basin, Red River, or Everglades.
- AWEP contracts provided technical and financial assistance directly to eligible producers to do the following:
 - Construct or improve irrigation systems and increase irrigation efficiency; and
 - Implement conservation practices to improve water quality and mitigate the effects of drought by conversion to less water-intensive agricultural commodities or to dryland farming.

Eligible program participants receive a payment amount that includes up to 75 percent of the incurred costs to implement one or more structural, vegetative, or land management practices, and up to 100 percent of estimated foregone income. Limited resource farmers, beginning farmers, and landowners or operators that are historically underserved receive up to 90 percent of the incurred costs and up to 100 percent of foregone income.

Total conservation payments are limited to \$300,000 per person or legal entity during any six-year period, regardless of the number of farms or contracts. Applicants must be an agricultural producer, have control of the land for the life of the contract, develop an AWEP plan of operations, and be compliant with statutory payment eligibility provisions

and limitations, including highly erodible land compliance, wetland conservation compliance, adjusted gross income limitations, and protection of tenants and sharecroppers.

Current Activities

The 2014 Farm Bill repealed the authority to enter into new AWEP agreements and contracts. As a result, NRCS is assisting producers to implement existing contracts. In 2021, the assistance provided to the producers helped to implement more than five practices for \$62,544 in payments for the completed practices. Currently, four AWEP contracts remain active.

Chesapeake Bay Watershed Program

The Chesapeake Bay Watershed Program (CBWP) was authorized by Section 1240Q of the Food Security Act of 1985, as amended by Section 2605 of the Food, Conservation, and Energy Act of 2008 (P.L. 110-246). Authority for new funding for CBWP expired at the end of 2013. Section 2709(a) of the 2014 Farm Bill (P.L. 113-79) repealed the Chesapeake Bay Watershed Program. However, Section 2709 also provided transitional language that ensured prior enrollees will continue to be provided technical and financial assistance by NRCS. The purposes and activities of CBWP were consolidated into the Regional Conservation Partnership Program (RCPP) authorized by the 2014 Farm Bill.

The Chesapeake Bay is a national treasure, constituting the largest estuary in the United States and one of the largest, and most biologically productive estuaries in the world. However, water pollution in the Chesapeake Bay is preventing the attainment of existing State water-quality standards and the “fishable and swimmable” goals of the Clean Water Act.

The CBWP helped agricultural producers to improve water quality and quantity, and restore, enhance, and preserve soil, air and related resources in the Chesapeake Bay Watershed through the implementation of conservation practices. These conservation practices reduce soil erosion and nutrient levels in ground and surface water; improve, restore, and enhance wildlife habitat; and help address air quality and related natural resource concerns. CBWP encompassed all tributaries, backwaters, and side channels, including their watersheds, which drain into the Chesapeake Bay. This area includes portions of the States of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia.

CBWP funding supported the Chesapeake Bay Program, a regional initiative that helped Federal and State agencies, local governments, nonprofit groups, and citizens address resource concerns and reach mutually established goals for clean and sustainable ecosystems. CBWP funding also supported Executive Order 13508, Chesapeake Bay Protection and Restoration. This Executive Order declared the Chesapeake Bay a national treasure and ushered in a new era of shared Federal leadership, action, and accountability. Thus, CBWP priorities were also national priorities and included focusing on high priority watersheds, focusing and integrating Federal and State programs, accelerating conservation adoption, and accelerating development of new conservation technologies.

Section 2709 of the 2014 Farm Bill authorizes NRCS to use any funds made available for CBWP prior to October 1, 2013, to carry out contracts, agreements, and easements entered into prior to February 7, 2014, the date of enactment of the 2014 Farm Bill. Therefore, financial assistance under CBWP is used to support existing contracts.

All remaining technical assistance through CBWP is used to help agricultural producers implement their existing contracts.

Current Activities

In 2021, all activities focused on implementing existing contracts. Currently, 3 CBWP contracts on 196 acres remain active.

Implementation of existing CBWP contracts continues to play an important role in the improvement of water quality by addressing numerous natural resource concerns:

- Nitrogen, phosphorous, sediment and chemical contaminants make achieving water quality goals throughout the Chesapeake Bay and its watershed a challenge;
- Low or fluctuating populations of fish and shellfish, including American and hickory shad, river herring, striped bass, eel, weakfish, bluefish, flounder, oysters, and blue crabs continue to be a concern. These various populations hold tremendous ecological, commercial, and cultural value; and

- Development leads to continued loss of habitats and agricultural land.

Conservation Stewardship Program

The 2018 Farm Bill reauthorized CSP through 2023, and changed the program from acre-based to a cash-based program. In addition, the Grassland Conservation Initiative (GCI) was added to CSP. The Commodity Credit Corporation funds CSP.

CSP provides opportunities to recognize excellent stewards and deliver valuable new conservation. CSP encourages agricultural and forestry producers to maintain existing conservation activities and adopt additional activities on their operations. The program helps producers identify natural resource problems in their operation and provides technical and financial assistance to solve those problems in an environmentally beneficial and cost-effective manner.

CSP addresses priority resource concerns as identified at the national, State, or local level. Below are examples of how the program addresses some priority concerns:

- Soil erosion - reducing the amount of soil lost through wind, sheet and rill erosion from cropland, stream banks, and farm roads;
- Soil quality - increasing soil organic matter, reducing compaction, reducing organic matter oxidation, removing soil contaminants, and utilizing nutrient cycling;
- Water quantity - mitigating the impact of excess water, improving water usage through irrigation efficiency, and selecting crops based on available moisture;
- Water quality - reducing the negative impact of transported sediments, nutrients, pesticides, salinity, and pathogens on surface and subsurface water sources;
- Air quality - reducing the contribution of agricultural operations to airborne soil particles and greenhouse gas emissions, controlling chemical spray drift, and reducing odors from livestock operations;
- Plant resources - improving the quantity, diversity, health, and vigor of plants while creating conditions for recognized threatened and endangered species to reestablish;
- Animal resources - improving the cover, food, and water available for domestic and wildlife species and improving habitat for aquatic and recognized threatened and endangered species; and
- Energy - promoting energy efficiencies for on-farm activities.

CSP is a voluntary program available through a continuous sign-up process, with announced cut-off dates for ranking and funding applications. This allows producers to submit their applications at any time. NRCS evaluates applications that face similar natural resource problems using a competitive ranking process.

CSP is available to all producers, regardless of operation, size or crops produced, in all 50 States, the District of Columbia, and the Caribbean and Pacific Island areas. Even though the program is national in scope, the agency did not establish national targeted resource concerns. Instead, States determine five targeted resource concerns that are of respective specific concern or for geographic areas within the State.

To be eligible for CSP, an applicant must meet each of the following three components - applicant, land, and stewardship threshold eligibility. Individuals, legal entities, joint operations, or Indian Tribes may apply. To be accepted, the applicant must have effective control of the land, and be the operator of record within the FSA records system. An operator of record waiver can be approved by NRCS where sufficient evidence of control exists. Eligible lands include cropland, pastureland, rangeland, non-industrial private forestland, associated agricultural land, farmstead, agricultural land under the jurisdiction of an Indian tribe, and other private agricultural land on which resource concerns related to agricultural production could be addressed.

Once applicant and land eligibility are determined, NRCS uses a science-based stewardship threshold for each resource concern to assess an applicant's existing and planned conservation activities. These activities must meet or exceed the stewardship threshold for at least two resource concerns at the time of the application, as well as one additional resource concern by the end of the CSP contract. In 2019, NRCS began using new tools to evaluate

applications, including Conservation Assessment and Ranking Tool (CART) to assist customers and planners with the specific land use evaluations of the overall land use management systems that are part of the agricultural operations. NRCS uses CART to determine eligibility for the program, and to document customer decisions to adopt conservation activities. The evaluations provide estimates of the applicant's current and future conservation levels. The tool also increases awareness of which conservation activities can be adopted to meet additional resource concerns of the operation. Eligible applications are then ranked using CART.

CSP provides participants with two possible types of payments. An annual payment is available for installing new conservation activities and maintaining existing conservation activities. A supplemental payment may be earned by participants already receiving an annual payment who also adopt or improve a resource-conserving crop rotation. CSP pays participants for conservation performance of existing activities in place at the time of supplemental payment enrollment based on resource concerns met at the time of enrollment, the higher the performance, the higher the payment. Payment rates and estimated costs incurred for new conservation activities are documented in the developed and approved NRCS payment schedules. New conservation activities adopted through CSP must meet NRCS technical standards and nationally developed enhancement job sheets to earn program payment. States develop supplements to the job sheets to address additional local conditions and resource concerns. CSP contracts are for a five-year period, and payments are made as soon as practicable after October 1 of each year for contract activities installed and maintained in the previous year. Contract terms for CSP establish that payments to a person or legal entity may not exceed \$40,000 in any year, and \$200,000 during any five-year period. However, joint operations may qualify for up to \$400,000 over the term of the initial contract period.

CSP offers technical assistance to producers to address resource concerns in a comprehensive manner. Through the planning process, the agency helps producers, including forestry landowners, identify natural resource problems in their operation and provide technical and financial assistance to solve those problems in an environmentally beneficial and cost-effective manner.

Partnerships have been created with Federal, State, and local entities, including the National Association of Conservation Districts, State Associations of Conservation Districts, and local conservation districts to deliver a program beneficial to participants and the environment.

Cooperation is formed with Federal, State, and local partners to address local and national conservation issues. Through interactive communication between the local community, local interest groups, and State and Federal agencies, the partnership provides the entities with information and resources needed to address local priorities and implement State and national programs such as CSP.

Current Activities

In 2021, CSP provided more than \$513.6 million in financial assistance funding for new enrollments, as shown in the three State distribution tables below. These funds will be used to treat over 9.8 million acres. CSP funds also support conservation initiatives focused on targeted areas through the following land conservation initiatives: Lesser Prairie Chicken Initiative, Longleaf Pine Initiative, Sage Grouse Initiative, and Mississippi River Basin Initiative.

Table NRCS-60. 2021 CSP - Classic Enrollment

State	Acres Treated	Financial Assistance (\$ Obligated)
Alabama	114,431.1	\$13,822,800
Alaska	215.7	\$197,766
Arizona	408,491.1	\$2,784,386
Arkansas	80,460.8	\$13,746,332
California	185,168.6	\$2,370,581
Caribbean Area	1,022.7	\$313,513
Colorado	199,369.8	\$10,666,733
Connecticut	5,677.7	\$510,358
Delaware	3,458.6	\$239,540
Florida	160,416.4	\$4,485,796
Georgia	45,297.5	\$9,635,848

State	Acres Treated	Financial Assistance (\$ Obligated)
Idaho	105,369.0	\$4,238,550
Illinois	96,611.5	\$10,919,868
Indiana	75,674.1	\$8,855,004
Iowa	94,327.2	\$10,378,231
Kansas	138,061.6	\$10,860,074
Kentucky	23,025.6	\$3,193,480
Louisiana	67,369.6	\$10,906,307
Maine	5,131.7	\$502,823
Maryland	9,983.2	\$1,044,335
Massachusetts	4,505.8	\$491,113
Michigan	101,767.5	\$8,720,057
Minnesota	96,332.7	\$10,370,382
Mississippi	58,883.0	\$11,293,106
Missouri	106,522.9	\$9,691,076
Montana	263,243.3	\$10,775,266
Nebraska	249,024.3	\$10,589,472
Nevada	48,447.0	\$546,566
New Hampshire	4,672.4	\$422,348
New Jersey	3,444.6	\$556,481
New Mexico	673,330.8	\$10,668,798
New York	51,597.4	\$3,939,104
North Carolina	27,790.6	\$6,853,138
North Dakota	128,940.7	\$8,281,461
Ohio	27,261.0	\$2,657,226
Oklahoma	154,016.7	\$7,805,837
Oregon	146,148.8	\$8,534,334
Pacific Island Area	1,747.3	\$1,339,367
Pennsylvania	31,276.1	\$4,918,696
Rhode Island	1,262.2	\$349,143
South Carolina	68,390.6	\$8,028,396
South Dakota	174,395.2	\$10,862,173
Tennessee	96,538.2	\$10,678,054
Texas	396,447.3	\$9,473,858
Utah	569,926.6	\$3,669,187
Vermont	8,048.8	\$910,432
Virginia	38,336.0	\$7,004,243

State	Acres Treated	Financial Assistance (\$ Obligated)
Washington	167,089.7	\$9,152,149
West Virginia	13,955.8	\$2,144,617
Wisconsin	135,951.4	\$9,096,466
Wyoming	175,259.6	\$2,159,497
Grand Total	5,844,117.8	\$311,654,368

Source: NRCS Protracts October 2021

Table NRCS-61. 2021 CSP - Renewal Enrollment

State	Acres Treated	Financial Assistance (\$ Obligated)
Alabama	12,288.8	\$1,362,195
Alaska	36,313.5	\$217,926
Arizona	39,350.5	\$396,276
Arkansas	68,149.5	\$9,146,837
California	189,874.1	\$2,151,108
Colorado	80,889.2	\$2,364,038
Connecticut	659.9	\$71,994
Delaware	8,685.7	\$970,465
Florida	29,162.8	\$1,732,393
Georgia	35,272.0	\$7,758,219
Idaho	75,144.6	\$1,701,687
Illinois	94,652.0	\$9,727,015
Indiana	25,570.3	\$2,668,018
Iowa	91,912.1	\$9,307,245
Kansas	84,279.5	\$4,902,059
Kentucky	29,563.2	\$3,566,080
Louisiana	73,601.1	\$8,855,428
Maine	704.7	\$57,569
Maryland	2,035.5	\$196,101
Massachusetts	567.5	\$78,440
Michigan	34,145.8	\$2,229,431
Minnesota	75,794.9	\$7,464,451
Mississippi	73,762.4	\$9,184,253
Missouri	84,334.5	\$7,082,045
Montana	349,527.8	\$9,282,491
Nebraska	184,760.4	\$9,240,511
New Hampshire	2,962.6	\$100,998

State	Acres Treated	Financial Assistance (\$ Obligated)
New Jersey	468.5	\$82,275
New Mexico	513,365.2	\$9,297,632
New York	23,415.9	\$2,008,394
North Carolina	13,035.8	\$1,352,261
North Dakota	106,001.5	\$7,769,934
Ohio	32,768.6	\$2,486,450
Oklahoma	96,768.1	\$4,114,528
Oregon	126,586.8	\$6,571,244
Pacific Island Area	36.3	\$19,381
Pennsylvania	25,619.5	\$3,010,301
Rhode Island	1,410.6	\$285,628
South Carolina	75,667.9	\$6,253,664
South Dakota	164,648.0	\$9,195,743
Tennessee	22,520.4	\$2,467,791
Texas	276,771.4	\$5,918,926
Utah	378,790.2	\$2,475,053
Vermont	3,470.2	\$110,002
Virginia	24,311.4	\$3,522,041
Washington	54,273.8	\$2,848,922
West Virginia	14,367.9	\$1,736,369
Wisconsin	115,690.6	\$9,094,818
Wyoming	23,373.8	\$273,085
Grand Total	3,877,327.3	\$192,709,715

Source: NRCS Protracts October 2021.

Table NRCS-62. 2021 CSP – Grassland Conservation Initiative

State	Acres Treated	Financial Assistance (\$ Obligated)
Alabama	1,212	\$151,285
Arkansas	938	\$84,410
California	235	\$21,120
Colorado	2,973	\$266,814
Florida	14	\$1,270
Georgia	1,546	\$135,307
Idaho	219	\$19,720
Illinois	160	\$14,115
Indiana	102	\$9,210
Iowa	442	\$39,780

State	Acres Treated	Financial Assistance (\$ Obligated)
Kansas	7,077	\$636,542
Kentucky	161	\$14,485
Louisiana	1,779	\$160,165
Maine	38	\$3,450
Maryland	49	\$4,430
Massachusetts	9	\$830
Michigan	10	\$900
Minnesota	261	\$23,520
Mississippi	558	\$50,155
Missouri	3,976	\$355,015
Montana	3,316	\$298,425
Nebraska	3,953	\$355,895
New Mexico	609	\$54,845
New York	136	\$12,260
North Carolina	396	\$34,825
North Dakota	4,459	\$401,430
Ohio	89	\$7,995
Oklahoma	39,655	\$3,478,039
Oregon	54	\$4,860
Pennsylvania	102	\$9,151
South Carolina	301	\$27,115
South Dakota	3,374	\$303,745
Tennessee	892	\$80,339
Texas	23,997	\$2,114,244
Utah	77	\$6,925
Virginia	478	\$43,090
Washington	23	\$2,025
West Virginia	425	\$38,255
Wisconsin	5	\$435
Wyoming	42	\$3,745
Grand Total	104,142	\$9,270,166

Source: NRCS Protracts October 2021, official end-of-year data set.

Environmental Quality Incentives Program

Sections 2301-2309 of the 2018 Farm Bill reauthorized and revised the Environmental Quality Incentives Program (EQIP) (16 U.S.C. 3839aa).

America faces serious environmental challenges that can be addressed through financial and technical assistance delivered through EQIP. Federal, State, tribal, and private lands face pressing environmental

concerns that pose risks to the long-term sustainability of our natural resources. For example, regulation of on-farm air pollution poses challenges to agriculture, while changing growth and marketing conditions for producers, high costs for energy, and the desire on the part of many producers to reduce greenhouse gas emissions are some of the new challenges faced by today's agriculture industry. To meet these and other challenges to agricultural sustainability, EQIP promotes the voluntary application of land-based conservation practices and activities that maintain or improve the condition of the soil, water, plants, and air; conserve energy; and address other natural resource concerns.

EQIP is carried out in a manner that optimizes conservation benefits. EQIP provides:

- Technical and financial assistance to help farmers and ranchers that face the most serious threats to soil, water, plants, and air conserve energy and address related natural resources concerns;
- Assistance to farmers and ranchers in complying with Federal, State, and local environmental regulatory requirements;
- Assistance to farmers and ranchers in making beneficial, cost-effective changes to cropping systems; grazing systems; manure, nutrient, pest, or irrigation management systems; or land uses to conserve and improve soil, water, air, and related natural resources; and
- Consolidated and simplified conservation planning and implementation to reduce the administrative burden on producers.

National Priorities – EQIP statutory provisions require that at least 50 percent of the financial assistance funds for EQIP be targeted to livestock-related operations, including both confined livestock operations and grazed lands. With input from the public, agricultural and environmental organizations, Conservation Districts, agencies, and other partners, NRCS has the following national priorities for EQIP:

- Reduction of nonpoint source pollution, such as nutrients, sediment, pesticides, or excess salinity in impaired watersheds consistent with TMDLs, where available;
- Reduction of contamination from agricultural point sources, such as concentrated animal feeding operations;
- Reduction of surface and groundwater contamination and conservation of surface and groundwater resources;
- Reduction of emissions, such as particulate matter, nitrogen oxides, volatile organic compounds, and ozone precursors and depleters, that contribute to air quality impairment violations of National Ambient Air Quality Standards;
- Reduction in soil erosion and sedimentation;
- Promotion of at-risk species habitat conservation; and
- Promotion of energy conservation.

To participate in EQIP, both the land and the applicant must be eligible. Eligible land includes cropland, rangeland, pastureland, private nonindustrial forestland, Tribal land, and other farm or ranch lands. The land must have an identified natural resource concern that poses a serious threat to soil, water, air, or related resources by reason of agricultural production activities with respect to soil type, terrain, climatic conditions, topography, flooding, saline characteristics, or other natural resource factors. Publicly owned land is eligible when the land is under the control of an eligible producer for the contract period, is included in the participant's operating unit, and the participant has written authorization from the government agency to apply conservation practices. Publicly-owned land may also be eligible for certain water conservation or irrigation efficiency projects that help private agricultural producer with managing water distribution or conservation systems. For irrigation-related practices, the land must have been irrigated for two out of the last five years. However, a limited waiver to this irrigation history requirement is available for limited resource and historically underserved farmers and ranchers (including Tribal entities) when the land has not been irrigated for reasons that are beyond the producer's control.

An eligible applicant must be an agricultural producer, have control of the land for the life of the contract, develop an EQIP plan of operations, and be in compliance with statutory payment eligibility provisions and limitations, including highly erodible land compliance, wetland conservation compliance, adjusted gross income limitations, and protection of tenants and sharecroppers. Eligible applications are accepted year-round at local USDA Service Centers, but cut-off dates are established by States to allow time for ranking and

approval of applications.

The agency works with the participant to develop the EQIP plan of operations, which forms the basis of the EQIP contract. The plan may be developed with technical assistance or EQIP may provide financial assistance to the participant to obtain the services of an agency-certified technical service provider (TSP) who develops a conservation plan or EQIP plan of operations for the offered acres initially determined eligible. The plan identifies the conservation practices and activities that will be implemented through EQIP.

Implementation of conservation practices must contribute to an improvement in the identified natural resource concern as determined through the application evaluation and ranking process. Conservation practices include structural practices, land management practices, vegetative practices, forest management practices, conservation activities, and other improvements that achieve the program purposes. Conservation activities supported through EQIP may include the development of specialized plans such as comprehensive nutrient management plans, agricultural energy management plans, dryland transition plans, forest management plans, integrated pest management, and other similar plans. To earn program payment, these plans, activities, and practices must meet NRCS technical standards adapted for local conditions.

EQIP payment rates may be up to 75 percent of the estimated incurred costs and up to 100 percent of income foregone related to implementing certain conservation practices. Historically underserved producers, including limited resource, veteran, or beginning farmers and ranchers, and tribal members, may be eligible for payment rates up to 90 percent for the estimated incurred costs and up to 100 percent of income foregone. Payment rates and estimated incurred costs are documented in agency developed and approved payment schedules. Contracts have a maximum term of not more than ten years.

Total EQIP conservation payments are limited to \$450,000 in financial assistance per person or legal entity for contracts entered into between 2018 through 2022, regardless of the number of contracts. Tribal entities themselves are not subject to payment limitations provided they certify that no individual tribal member exceeds their individual payment limitation.

The agency cooperates with Federal, State, and local partners to address local and national conservation issues, and to complement their conservation programs. Partners include the National Association of Conservation Districts, State Associations of Conservation Districts, and local conservation districts in an effort to deliver a program beneficial to program participants and the environment. Through interactive communication between the local community, local interest groups, and State and Federal agencies, EQIP provides the partners with information and resources needed to address local priorities and implement State and national programs.

Joint Chiefs' Landscape Restoration Partnership – Through the Joint Chiefs' Landscape Restoration Partnership (LRP), NRCS and Forest Service are combining resources and coordinating activities to restore landscapes across ownership boundaries. The aim of the partnership is to reduce wildfire threats to communities and landowners, protect water quality and supply, and improve habitat for at-risk species seamlessly across public and private lands. By working across agency lines on adjacent public and private lands, conservation work in the project areas will be more efficient and effective. Projects selected for the Joint Chiefs' LRP demonstrate strong collaborations with local partners and readiness to implement the restoration work. These cross-boundary projects address priority conservation needs in that landscape while delivering benefits to local communities. Sixteen new three-year-long projects in fourteen States were selected in 2020. Currently, 36 projects across 23 States and United States territories are being implemented.

EQIP Conservation Incentive Contracts (EQIP-CIC) Pilot – The 2018 Farm Bill authorized NRCS to provide technical and financial assistance for the implementation, adoption, management, and maintenance of incentive practices that address at least one priority resource concern within a State-identified high priority area. Four western States participated in a pilot of the new EQIP-CIC in 2021 to help agricultural producers in Arizona, California, Colorado, and Oregon with impacts of drought and related fire remediations, as well as climate smart resiliency. NRCS entered into contracts with producers with an initial length of 5 years but has authority to extend EQIP-CIC contracts for up to 10 years, based on science-informed data showing the extension would continue to provide the expected environmental benefits. Through the pilot, NRCS entered into 514 contracts covering 458,741 acres and totaling \$44.78 million in financial assistance.

Current Activities

In 2021, EQIP financial assistance obligations totaled over \$1.26 billion in 34,054 active or completed contracts covering an estimated 11.6 million acres. In addition to regular EQIP projects, these funds also supported projects in initiatives focused on environmental benefit and agricultural production as compatible goals, such as air quality, on-farm energy conservation, migratory bird habitat in the Mississippi River Basin, organic production, and high tunnel systems.

Air Quality – Through this initiative, NRCS provides assistance to farmers and ranchers to reduce air pollution generated from agricultural operations in areas designated by the Environmental Protection Agency as non-attainment areas for ozone and particulate matter.

Organic Production – The Organic Initiative is a nationwide special initiative that provides assistance to organic producers, as well as producers in the process of transitioning to organic production. One critical benefit of the Organic Initiative is sustaining the natural physical, biological, and chemical properties of the soil, which is vital to organic production.

EQIP is popular among producers, and demand for the program is high across the country. Nationally, 53.9 percent of qualifying projects (valid applications which met all program requirements) were funded in 2021, as the table below shows.

Table NRCS-63. 2021 Total EQIP Program Demand

State	Total Applications Received	Number of Active and Completed Contracts	Unfunded Valid Applications	Valid Applications Funded (Percent)	2021 Average Contract Amount (Dollars)	Estimated Unfunded Application Amount (Dollars)
Alabama	2,979	1,476	429	77.5	\$19,636.06	\$8,423,868.07
Alaska	125	72	2	97.3	\$106,988.01	\$213,976.02
Arizona	430	144	147	49.5	\$108,660.47	\$15,973,088.91
Arkansas	6,971	1,354	2,328	36.8	\$38,078.47	\$88,646,673.36
California	5,501	1,749	1,571	52.7	\$58,798.49	\$92,372,428.01
Colorado	1,709	553	686	44.6	\$76,076.02	\$52,188,147.36
Connecticut	207	91	61	59.9	\$71,700.50	\$4,373,730.39
Delaware	408	87	190	31.4	\$66,844.24	\$12,700,406.01
Florida	1,302	597	285	67.7	\$39,549.62	\$11,271,642.26
Georgia	5,291	1,459	981	59.8	\$29,439.09	\$28,879,747.20
Hawaii	304	87	139	38.5	\$91,155.38	\$12,670,598.20
Idaho	1,127	454	315	59.0	\$44,670.51	\$14,071,209.19
Illinois	2,121	528	64	89.2	\$33,649.28	\$2,153,553.82
Indiana	2,276	857	487	63.8	\$27,613.91	\$13,447,971.85
Iowa	4,467	969	946	50.6	\$32,720.10	\$30,953,217.77
Kansas	3,363	1,218	464	72.4	\$32,194.81	\$14,938,390.00
Kentucky	2,195	666	418	61.4	\$30,149.85	\$12,602,636.42
Louisiana	2,147	535	588	47.6	\$41,808.25	\$24,583,252.35

State	Total Applications Received	Number of Active and Completed Contracts	Unfunded Valid Applications	Valid Applications Funded (Percent)	2021 Average Contract Amount (Dollars)	Estimated Unfunded Application Amount (Dollars)
Maine	986	458	367	55.5	\$25,431.58	\$9,333,389.44
Maryland	644	230	194	54.2	\$43,612.47	\$8,460,820.04
Massachusetts	308	149	28	84.2	\$31,135.73	\$871,800.46
Michigan	2,265	851	404	67.8	\$21,379.15	\$8,637,175.63
Minnesota	3,406	686	336	67.1	\$39,963.73	\$13,427,812.56
Mississippi	10,766	1,810	3,389	34.8	\$28,509.31	\$96,618,067.22
Missouri	3,895	1,045	694	60.1	\$30,512.52	\$21,175,692.03
Montana	1,151	445	209	68.0	\$65,369.04	\$13,662,128.98
Nebraska	3,636	1,035	668	60.8	\$26,036.83	\$17,392,602.85
Nevada	195	84	44	65.6	\$93,968.05	\$4,134,594.39
New Hampshire	376	216	19	91.9	\$23,632.20	\$449,011.74
New Jersey	470	234	94	71.3	\$27,528.97	\$2,587,723.17
New Mexico	1,408	306	226	57.5	\$94,433.62	\$21,341,997.09
New York	1,035	414	68	85.9	\$38,325.06	\$2,606,104.27
North Carolina	2,882	513	1,222	29.6	\$50,024.95	\$61,130,493.00
North Dakota	1,368	474	502	48.6	\$39,712.70	\$19,935,774.24
Ohio	2,302	835	804	50.9	\$27,988.12	\$22,502,448.26
Oklahoma	3,109	792	1,056	42.9	\$27,697.33	\$29,248,376.51
Oregon	1,649	696	412	62.8	\$50,464.90	\$20,791,539.29
Pennsylvania	2,138	475	819	36.7	\$46,839.63	\$38,361,658.83
Rhode Island	261	127	45	73.8	\$30,841.00	\$1,387,844.92
South Carolina	2,677	1,034	665	60.9	\$31,264.96	\$20,791,196.82
South Dakota	1,423	354	282	55.7	\$58,476.40	\$16,490,343.53
Tennessee	3,392	1,321	1,015	56.5	\$28,033.54	\$28,454,046.78
Texas	8,126	3,023	2,099	59.0	\$28,703.11	\$60,247,835.12
Utah	1,613	404	814	33.2	\$64,704.53	\$52,669,489.88
Vermont	869	332	127	72.3	\$31,701.61	\$4,026,104.97
Virginia	1,399	392	445	46.8	\$60,765.77	\$27,040,769.84
Washington	652	332	108	75.5	\$78,673.41	\$8,496,728.40
West Virginia	1,438	356	719	33.1	\$31,321.08	\$22,519,855.09
Wisconsin	3,269	1,171	722	61.9	\$27,386.87	\$19,773,323.52

State	Total Applications Received	Number of Active and Completed Contracts	Unfunded Valid Applications	Valid Applications Funded (Percent)	2021 Average Contract Amount (Dollars)	Estimated Unfunded Application Amount (Dollars)
Wyoming	730	253	150	62.8	\$59,052.71	\$8,857,906.20
American Samoa	34	15	-	100.0	\$31,202.40	-
Guam	15	6	5	54.5	\$7,797.83	\$38,989.17
Northern Mariana Islands	12	9	-	100.0	\$36,936.89	-
Puerto Rico	1,039	280	257	52.1	\$28,195.35	\$7,246,205.13
Virgin Islands of the U.S.	32	1	7	12.5	\$11,339.00	\$79,373.00
Grand Total	113,893	34,054	29,116	53.9	\$38,853	\$1,131,253,760

Source: Protracts as of October 2021.

Unfunded valid applications include pre-approved, deferred, and eligible. Estimated value of unfunded valid applications (\$) is determined from number of unfunded valid applications multiplied by average 2021 contract amount.

Conservation Innovation Grants (CIG)

Conservation Innovation Grants (CIG) are authorized as part of the Environmental Quality Incentives Program (EQIP) (16 U.S.C. 3839aa-8). CIG stimulates the development, adoption, and evaluation of innovative conservation approaches and technologies in conjunction with agricultural production. CIG projects transfer conservation technologies, management systems, and innovative approaches (such as market-based systems) to agricultural producers, NRCS staff, and the private sector.

The 2018 Farm Bill authorized a new CIG component—On-Farm Conservation Innovation Trials (On-Farm Trials). The traditional CIG component (Classic) and On-Farm Trials complement each other, with CIG Classic funding pilot projects, field demonstrations, and on-farm conservation research of promising technologies or approaches, and On-Farm Trials funding wider-scale adoption and evaluation of innovative conservation approaches such as those proven effective in CIG Classic. On-Farm Trials includes the Soil Health Demonstration Trial as a subcomponent.

Annually, NRCS publishes notices of funding opportunity for national Classic and On-Farm Trial competition. In addition, NRCS state offices may opt to administer their own CIG competitions using a portion of their EQIP allocations. Between 20 and 30 states generally take advantage of this opportunity each year.

Current Activities

In 2021, \$15 million in funding was made available for the national Classic competition which received over 77 applications in five priority areas – conservation adoption, grazing lands, nutrient management, soil health, and water resources and increased resilience. Nineteen Classic awards were announced in December 2021.

Twenty-five million in funding was made available for the 2021 national On-Farm Trials competition. Seventy proposals were received across four priority areas - irrigation management technologies, climate smart agricultural solutions, management technologies and strategies, and the soil health demonstration trial. On-Farm Trials awards were announced in October 2021. In addition, 25 state offices held state-level CIG competitions in 2021 and made approximately \$8.2 million in funding available.

Farm and Ranch Lands Protection Program

The Farm and Ranch Lands Protection Program (FRPP) was authorized by Subchapter C of Chapter 2 of Subtitle D of Title XII of the Food Security Act of 1985 (16 U.S.C. 3838h et seq.), as amended. Section 2704 of the Agricultural Act of 2014 (P.L. 113-79) (the 2014 Farm Bill) repealed FRPP. However, Section 2704 also provided transitional language that ensures NRCS has authority to provide prior enrollees technical and financial assistance to complete work on prior year FRPP enrollments as needed. FRPP protected lands by providing matching funds to

keep productive farm and ranch lands in agricultural use. The purposes and functions of FRPP were consolidated into the Agricultural Land Easements component of the Agricultural Conservation Easement Program (ACEP-ALE). Lands enrolled under FRPP are considered enrolled in ACEP-ALE and are eligible to receive financial and technical assistance services authorized under ACEP.

Section 2704 of the 2014 Farm Bill authorized the continued validity of FRPP contracts, agreements, and easements, and authorized any unobligated FRPP funds made available between 2009 to 2013 to be used to support FRPP activities entered into prior to February 7, 2014, the date of enactment of the 2014 Farm Bill. Upon exhaustion of these prior year FRPP funds, the 2014 Farm Bill authorizes the use of ACEP funds to carry out these FRPP activities.

In addition to helping landowners and entities develop conservation easement deeds and conservation plans, NRCS may use FRPP prior year funds to provide technical assistance, as needed, for existing FRPP enrollments to complete activities such as final verification of the eligibility of the entity, landowner, and land; completion of hazardous materials assessments; enforcement of the terms of cooperative agreements; final review of deeds, title, and appraisals; and payment processing on lands enrolled into FRPP prior to February 7, 2014.

Current Activities

The 2014 Farm Bill repealed FRPP and combined its purposes with the Wetlands Reserve Program and the Grassland Reserve Program to create ACEP. No new enrollments of FRPP occurred in 2020. However, an adjustment of the FRPP acreage is a result of corrections to administrative records. The acquisition and closing of all FRPP-funded conservation easements have been completed.

Table NRCS-64. Cumulative Program Activity Through 2020

Closed Easements (Permanent)	Cumulative
Number of Easements	4,323
Number of Acres	1,068,031
Financial Assistance Funding	\$668,794,600

Grassland Reserve Program

The Grassland Reserve Program (GRP) was authorized by Sections 1238 N through Q of the Food Security Act of 1985 (P.L. 99-198), as amended. Section 2705 of the Agricultural Act of 2014 (P.L. 113-79) (the 2014 Farm Bill) repealed GRP. However, Section 2705 also provided transitional language that ensured prior enrollments will continue to provide technical and financial assistance by NRCS. The 2014 Farm Bill combined the purposes and functions of GRP into the Agricultural Land Easement component of the Agricultural Conservation Easement Program (ACEP-ALE). Lands previously enrolled in GRP are now considered enrolled in ACEP-ALE, and the repeal of GRP does not affect the validity or terms of any contract, agreement, or easement entered into prior to the 2014 Farm Bill enactment.

Section 2705 of the 2014 Farm Bill authorized the continued validity of GRP contracts, agreements, and easements, and authorized any unobligated GRP funds made available between 2009 to 2013 to be used to support GRP activities entered into prior to February 7, 2014, the 2014 Farm Bill enactment date. The 2014 Farm Bill also authorized the use of ACEP funds to carry out these GRP activities.

GRP technical assistance includes development of grazing management plans, reviews of restoration measures, guidance on management activities, and biological advice to achieve optimum results considering all grassland resources. The 2014 Farm Bill authorized GRP prior year funds to be used by NRCS to provide ongoing technical assistance to existing GRP enrollments.

Current Activities

The 2014 Farm Bill repealed GRP and combined its purposes with the Wetlands Reserve Program and the Farm and Ranch Lands Protection Program to create ACEP. No new additional enrollment of GRP lands has occurred since 2013; however, contracts and easements signed prior to February 7, 2014, continue to be serviced by the agency. All GRP agreements for easements have completed the acquisition of the conservation easement. Enrollments include current active and completed agreements, but do not include cancelled or expired agreements.

Table NRCS-65. 2009 to 2013 GRP Enrollment Summary

No. of Agreements	391
No. of Acres Enrolled	266,133
Financial Assistance Funding	\$320,641,800

Information regarding GRP rental contracts is available from the Farm Service Agency.

Healthy Forests Reserve Program

Title V of the Healthy Forests Restoration Act of 2003 (P.L. 108-148) authorized the establishment of the Healthy Forests Reserve Program (HFRP). The Food, Conservation, and Energy Act of 2008 (P.L. 110-246) amended the program to provide mandatory funding through the Commodity Credit Corporation. The 2014 Farm Bill made minor changes to HFRP by adding a definition of the term “acreage owned by Indian tribes”, identifying HFRP as a contributing program or (“covered program”) authorized to accomplish the purposes of RCPP, replacing mandatory funding with authorization of appropriations, and authorizing the use of conservation operation funds for HFRP stewardship responsibilities. The 2018 Farm Bill amended the provisions.

HFRP assists landowners in restoring, enhancing, and protecting forest ecosystems in order to: 1) promote the recovery of threatened and endangered species; 2) improve biodiversity; and 3) enhance carbon sequestration. HFRP provides financial assistance for specific conservation actions completed by the landowner. The agency’s Chief solicits project proposals that State Conservationists have developed in cooperation with partnering organizations. States with approved projects provide public notice of the availability of funding within the selected geographic area(s). HFRP offers four enrollment options:

- 10-year restoration agreement. The landowner may receive 50 percent of the average cost of the approved conservation practices.
- 30-year contract (equivalent to the value of a 30-year easement). The landowner may receive 75 percent of the easement value of the enrolled land plus 75 percent of the average cost of the approved conservation restoration practices. This option is only available on acreage owned by Indian Tribes.
- 30-year easement. The landowner may receive 75 percent of the easement value of the enrolled land plus 75 percent of the average cost of the approved conservation practices.
- Permanent easement. The landowners may receive 100 percent of the easement value of the enrolled land plus 100 percent of the average cost of the approved conservation practices.

Only privately held land, including acreage owned by Indian tribes, is eligible for HFRP enrollment. The definition of land owned by Indian tribes was expanded in the 2014 Farm Bill to include land that is held in trust by the United States for Indian tribes or individual Indians. In addition, to be eligible, the landowner must commit to restoring, enhancing, or measurably increasing the likelihood of recovery of an at-risk species. At-risk species include threatened or endangered species or candidates for the Federal or State threatened or endangered species list. Landowners must also improve biological diversity or increase carbon sequestration on enrolled land. For all enrollment options, landowners develop a restoration plan that includes practices necessary to restore and enhance habitat for at-risk species. Technical assistance is provided to help landowners develop and comply with the terms of their HFRP restoration plans.

Landowners may receive “safe harbor” assurances from the regulatory agencies for land enrolled in HFRP if they agree, for a specified period, to protect, restore, or enhance their land for threatened or endangered species habitat. In exchange, landowners avoid future regulatory restrictions on the use of that land under the Endangered Species Act.

The agency provides financial assistance payments consistent with enrollment in either a single payment or in ten or fewer annual payments, as agreed to between the agency and the landowner. Cost-share payments are also provided upon a determination that an eligible conservation practice, or an identifiable component of the conservation practice has been established in compliance with appropriate standards and specifications.

In coordination with the Department of the Interior’s Fish and Wildlife Service and the Department of Commerce’s National Marine Fisheries Service, the agency provides technical assistance to landowners through the development of healthy forests management conservation plans for land eligible for enrollment in HFRP. The conservation plan integrates compatible silvicultural practices and habitat considerations to protect, restore, and enhance forest

ecosystems for the recovery of threatened and endangered species and candidate species. Technical assistance continues to be provided to the landowner after the project is enrolled by reviewing restoration measures and providing guidance on management activities and biological advice to achieve optimum results.

Current Activities

Cumulatively, 106 agreements have been enrolled between 2006 and 2021, encompassing approximately 678,616 acres.

Table NRCS-66. Cumulative Program Activity (2006 Through 2021)

Closed Easements (Permanent and 30-Year)	Cumulative
Number of Easements	86
Number of Acres	21,026
Active and Completed Restoration Cost-Share Agreements	Cumulative
Number of Agreements	16
Number of Acres	654,509
Summary	Cumulative Summary
Total Agreements Enrolled	106
Total Acres	678,616

WIN-WIN

Two new forestry easements in Georgia will help provide resiliency to climate change by sequestering carbon while protecting critical habitat for endangered species candidate.

Georgia NRCS enrolled two new HFRP easements in FY 2021, covering 2,485 acres utilizing a small amount of remaining program funds. These two easements are part of the Gopher Tortoise Conservation Initiative (GTCl.) These working forest lands will protect one of Georgia's 65 viable gopher tortoise populations. The goal of the GTCl is to protect habitat to prevent the eastern population of the gopher tortoise from Federal Listing. If this listing is precluded, it will save producers and private landowners across a four-state region from federal regulations associated with the Endangered Species Act. These easements were identified as prime habitat available for conservation easements and gopher tortoise protection. These prime tortoise habitats are threatened by conversion to agriculture, solar farms, and mining. Dozens of other Candidate Conservation Species will also benefit, as will longleaf pine ecosystems in general. The listing of the tortoise and other Candidate Conservation Species could have profound impacts on the ability of producers, and public and corporate landowners, to manage their properties. Assisting GTCl by permanently protecting this one viable population, across two easements, through enrollment in HFRP is critical to the overall success of this multi-partner initiative.

Regional Conservation Partnership Program

The Regional Conservation Partnership Program (RCPP) was reauthorized by the Agriculture Improvement Act of 2018 (the 2018 Farm Bill). Through RCPP, NRCS seeks to co-invest with partners to implement projects that demonstrate innovative solutions to conservation challenges on a regional or watershed scale.

The purpose of RCPP is to further the conservation, restoration, and sustainable use of soil, water, wildlife, and related natural resources on eligible land. It encourages eligible partners to cooperate with producers in meeting or avoiding the need for regulatory requirements related to agricultural production. Through RCPP, NRCS and state, local, and regional partners coordinate resources to help producers install and maintain conservation activities in selected project areas. Partners leverage RCPP funding in project areas and report on the benefits achieved. The goal is to implement projects that will result in the installation and maintenance of eligible activities that affect multiple agricultural or non-industrial private forest operations on a local, regional, state, or multistate basis. RCPP offers new opportunities for the agency to work with partners to encourage locally driven innovation and create high-performing solutions, harness innovation, accelerate the conservation mission, launch bold ideas, and demonstrate the value and efficacy of voluntary, private lands conservation.

Under the 2018 Farm Bill, RCPP is administered through three components:

- **Classic**—Under this traditional RCPP component, partners apply to target RCPP conservation assistance to a particular place to address an identified resource concern(s). Assistance to producers and landowners flows through NRCS producer contracts and easements.
- **Renewals**—Renewals are available to partners with existing RCPP projects and intended to reward the most successful projects with additional funding.
- **Alternative Funding Arrangement (AFA)**—AFAs fund projects that are nearly entirely partner-led. AFA projects use innovative approaches such as pay-for-performance or have other characteristics that innovate the conservation delivery system.

RCPP projects can include any combination of conservation activities authorized for the program—land management, land rental, easements, and watershed projects.

NRCS funds approved partner proposals by entering into agreements with an eligible partner to implement a project that will assist producers with installing and maintaining qualified activities on eligible land. Partners contribute a significant portion toward meeting the overall costs of the project scope. RCPP-eligible partners include agricultural or silvicultural producer associations, farmer cooperatives or other groups of producers, state or local governments, Indian tribes, municipal water treatment entities, water and irrigation districts, conservation-driven non-governmental organizations, and institutions of higher education. Partner contributions are used to leverage the financial benefits of the project to increase the natural resources being protected utilizing RCPP funds. The partnership agreement details the arrangement between the agency and the partner, including the programs being offered and any alternative funding arrangements.

The RCPP project selection process is outlined through notices of funding opportunities (NFOs) posted on www.grants.gov and the NRCS website. Project selections occur after applicants submit proposals using the web-based application system for RCPP. Proposals are then evaluated by NRCS staff using criteria published in the NFO. Beyond the technical proposal evaluations, NRCS may consider available funding, geographic diversity, applicant diversity, and other factors in making the final award decisions.

Current Activities

In April 2021, NRCS announced 86 recipients of the most recent RCPP Classic competition which combined funding from FY 2020 and 2021. In September 2021, NRCS announced 15 recipients of the FY 2021 AFA competition. The next RCPP Classic and AFA competitions will be announced early in calendar year 2022.

Voluntary Public Access and Habitat Incentive Program

The Voluntary Public Access and Habitat Incentive Program (VPA-HIP) was authorized by Section 1240R of the Food Security Act of 1985 (P.L. 99-198), as amended (16 U.S.C. 3839bb-5). The program was reauthorized by the Agriculture Improvement Act of 2018 with an authorized funding level of \$50 million for the period covering fiscal years 2019 through 2023. VPA-HIP is implemented with Commodity Credit Corporation funds.

VPA-HIP is a competitive grant program that provides opportunities to state and tribal governments to promote programs encouraging owners and operators of privately held farm, ranch, and forestlands to voluntarily make land accessible to the public for hunting, fishing, nature watching, hiking, and other wildlife-dependent recreation.

Only state and tribal governments are eligible to apply for program funding through a competitive grants process. Owners of private forests, farms, or ranchlands are eligible to receive funds from the state or tribal government awardees in a manner consistent with the proposals submitted to the agency and in compliance with the conditions of the established formal agreements between NRCS and the awardees.

VPA-HIP awardees use the Federal funds to lease land from participating landowners for public use and to enhance wildlife habitat. VPA-HIP awards include funds for technical assistance to identify and/or improve existing quality wildlife habitat on private lands and provide outreach to historically underserved landowners. VPA-HIP awardees use technical assistance funds to update maps and other information to ensure the public is aware of locations providing opportunities for wildlife-dependent recreation. NRCS state offices collaborate with VPA-HIP awardees to provide needed technical assistance.

Current Activities

In September 2019, NRCS published a notice of funding opportunity that made up to \$50 million available for three-year projects. On March 11, 2020, NRCS announced the selection of 27 award recipients in 27 states. NRCS state offices managing the awards finalized award agreements for all 27 award recipients by September 30, 2020. Since that time, the state agency and tribal grantees have been implementing their projects that last up to three years.

Wetlands Reserve Program

The Wetlands Reserve Program (WRP) was authorized by Section 1237 of the Food Security Act of 1985 (P.L. 99-198), as amended, to assist landowners and tribes in restoring and protecting wetlands. WRP was repealed by Section 2703 of the Agricultural Act of 2014 (P.L. 113-79) on February 7, 2014. However, Section 2703 also provided transitional language that ensured prior enrollments will continue to provide technical and financial assistance. WRP was a voluntary program that provided technical and financial assistance to eligible landowners, enabling them to protect and restore valuable wetland ecosystems, including associated habitats such as uplands, riparian areas, and forest lands. WRP purposes were rolled into the Wetland Reserve Easements component of the Agricultural Conservation Easement Program (ACEP-WRE). Lands previously enrolled in WRP are now considered enrolled in ACEP-WRE and are eligible to receive financial and technical assistance services authorized under ACEP. The repeal of WRP does not affect the validity or terms of any contract, agreement, or easement entered into prior to the enactment of the Agricultural Act of 2014. Prior to its repeal, WRP provided landowners four options to enroll acreage: permanent easements, 30-year easements, restoration cost-share agreements, or a 30-year contract (on acreage owned by an Indian tribe only).

The 2014 Farm Bill also authorized the agency to use prior year unobligated WRP funds from 2009 - 2013 to continue to implement certain restoration and closing activities on WRP projects enrolled prior to February 7, 2014, the date of enactment of the 2014 Farm Bill. Authorized activities included restoration of the easement site, and acquisition-related costs such as title reports, hazardous substance evaluations, due diligence, boundary surveys, and easement closings.

Prior year WRP funding continues to be used to provide ongoing technical assistance to existing WRP easements and contracts entered into prior to the 2014 Farm Bill enactment date. Authorized expenditures include restoration planning and implementation for any unrestored easements, boundary surveys, and management and maintenance activities to support agency easement stewardship responsibilities.

Current Activities

The 2014 Farm Bill repealed WRP and combined its purposes with the Farm and Ranch Land Protection Program and the Grassland Reserve Program to create ACEP. No new enrollments of WRP have occurred since the 2014 Farm Bill was signed into law; all closings to date related to WRP enrollments have been completed.

Wetlands Mitigation Banking Program

The Wetland Mitigation Banking Program (WMBP) is a first-of-its-kind program funded through the 2014 Farm Bill and revised in the 2018 Farm Bill. WMBP provides a legal mechanism for agricultural producers to maintain their eligibility for USDA program benefits if they convert agricultural wetlands. In particular, a producer may offset the loss of wetland functions and values resulting from a conversion activity by restoring, enhancing, or creating wetland functions and values on a different site. Through a mitigation bank, producers can purchase offsetting wetland “credits” which come from previously drained (prior to 1985) wetlands that have been restored and approved for wetland mitigation.

NRCS accepts grant proposals to establish mitigation banks for agricultural producers. The intent of the program is for qualified third parties to operate and manage all aspects of a wetland mitigation bank with oversight by NRCS. Eligible entities include Federally recognized Indian tribes, state, and local units of government; for-profit entities; and nongovernmental organizations.

Program funds may be used to pay for:

- Development of a mitigation banking instrument.
- Identification of suitable mitigation sites and performance of functional assessments to determine the available credits and a credit release schedule.
- Market research and contracting for mitigation activities.
- Land surveys, permitting, and title searches.
- Design and formulation of mitigation plans.
- Restoration, enhancement, or creation of wetland mitigation bank sites in accordance with NRCS conservation practice standards.
- Tracking and management of wetland mitigation data.
- Direct administrative costs associated with implementing the project.
- Indirect costs of the awardee.

NRCS uses a grant agreement to provide program funds to each selected applicant. The project budget period, amount of Federal assistance, terms and conditions of the award, and reporting requirements are described and provided to the selected applicants as part of this process.

Subsequently, awardees work with NRCS to develop a mitigation banking instrument that provides full details for development, establishment, and operation of a mitigation banking program. Mitigation banking instruments are developed in conjunction with national and state NRCS staff oversight, and are subject to NRCS approval.

Eligible entities receiving funds will ensure the following wetlands receive priority for mitigation under WMBP (note that wetland designation labels are those used by NRCS for implementation of the wetland compliance provisions of the Food Security Act of 1985):

- Farmed Wetland
- Farmed Wetland Pasture
- Wetland less than five acres in size that is predominantly bordered by land that has been cropped eight of the past ten years when the wetland is designated as degraded according to a functional assessment tool
- Converted Wetland that, prior to conversion, qualified under one of the items of above, as determined by NRCS staff.

Activities funded by this program are for the sole purpose of assisting agricultural producers with wetland conservation compliance.

Current Activities

On June 16, 2021, NRCS published a notice of funding opportunity (NFO) that made up to \$5 million available for WMBP. This funding was appropriated to NRCS by the 2021 Consolidated Appropriations Bill. NRCS anticipates making selections for these awards by November 1, 2021. NRCS State offices managing these awards will execute grant agreements with the recipients by December 2021, and projects may then commence.

Wildlife Habitat Incentive Program

The Wildlife Habitat Incentive Program (WHIP) was authorized by Section 1240N of the Food Security Act of 1985 (16 U.S.C. 3839bb-1), as amended. NRCS administered WHIP with funds made available through the Commodity Credit Corporation. Section 2707 of the Agricultural Act of 2014 (P.L. 113–79) repealed WHIP. However, Section 2707 also provided transitional language that ensured prior enrollees will continue to be provided technical and financial assistance by NRCS. WHIP provided assistance to agricultural landowners for the protection, restoration, or enhancement of upland wildlife habitat, wetland wildlife habitat, threatened and endangered species, fisheries, and other types of habitats. Focused efforts on fish and wildlife habitats also contributed to more sustainable use of resources and reduced greenhouse gas emissions. The purposes of WHIP were consolidated into EQIP by the 2014 Farm Bill.

Financial Assistance. Section 2707 of the 2014 Farm Bill authorized the use of unobligated WHIP funds from 2009 through 2013 to be used to support contracts entered into WHIP prior to the date of enactment of the 2014 Farm

Bill. A WHIP contract may be modified to increase funds, provided the increased cost is the result of a valid contract modification within the original contract scope and intent.

Technical Assistance. The agency and its partners provided program participants with an assessment of wildlife habitat conditions, recommendations for practices to improve these habitat conditions, and a wildlife habitat development plan that incorporates practices, and strategies for maximizing habitat for target species. All remaining technical assistance through WHIP will be used to help agricultural producers implement their existing contracts.

Current Activities

The 2014 Farm Bill repealed the authority to enter into new WHIP contracts. As a result, priority was shifted to assist producers to implement existing contracts. In 2021, the agency worked with producers to implement 35 practices and made nearly \$98,730 in payments for the completed practices. Currently, 88 WHIP contracts remain active.

Feral Swine Eradication and Control Pilot Program

The Feral Swine Eradication and Control Pilot Program (FSCP) was authorized by Section 2408 of the Agriculture Improvement Act of 2018 (P.L. 115-334). The Farm Bill provided \$75 million in mandatory funding for 2019 through 2023, and this funding is equally divided between NRCS and the Animal and Plant Health Inspection Service (APHIS) to carry out the pilot program.

The objective of FSCP is to pilot collaborative efforts to address the threat that feral swine pose to agriculture, native ecosystems, human health, and animal health. Feral swine are an invasive species that damage agricultural crops, degrade natural systems, and can carry diseases that can be passed on to livestock and humans. Estimates of the damage caused by this invasive species, as well as associated control costs, exceed \$2 billion annually in the United States. Feral swine are inhabitants across the United States, but the heaviest concentrations are found in the Southeastern portion of the country, and stretch as far west Texas and Oklahoma, with high populations also found in California.

Pilot areas for FSCP are identified collaboratively, by NRCS and APHIS States personnel in consultation with the State technical committee. FSCP is delivered within pilot areas through three coordinated components. First, APHIS works directly to control feral swine populations. Second, NRCS provides funding to partner organizations to provide technical and financial assistance to agricultural producers for on-farm trapping, and other means of feral swine control. Partner organizations also provide other services, including pre-and post-project damage assessments, and other means to assess progress in control efforts. Finally, NRCS provides technical and financial assistance for restoration of damage caused by feral swine after those populations have been controlled.

Delivery of FSCP is prioritized to those States that have the highest and most damaging feral swine populations. The existing APHIS National Feral Swine Damage Management Program has proved effective in addressing emerging populations in conjunction with States. The pilot program builds upon and expands work already underway by APHIS' National Feral Swine Damage Management Program, to reduce damages inflicted by feral swine, in areas with high population densities and in partnership with local government, the private sector, industry, and academia.

Current Activities

In 2021, NRCS provided approximately \$17.2 million for partner activities under the program. An additional \$5.5 million was allocated to the first round of projects, and a second round of pilot projects were selected for funding. NRCS awarded \$11.7 million to partners in the form of grants across eight states for 14 projects in the second round. Of the additional four states that were eligible to participate in the second round of the program, only two states, Hawaii and Missouri, elected to propose projects and participate in the program. Between the first and second round of projects, there are a total of 12 states and 34 projects participating in the program. All projects are participating in the landowner damage assessment survey, and are working with Auburn University and Texas A&M to collect, report, and analyze damage information. As of June 2021, a total of 742 landowners and 1.3 million acres were treated or received assistance in one of the ten states participating in round one, of the program.

Office of Urban Agriculture and Innovative Production

The Office of Urban Agriculture and Innovative Production (OUAIP) was newly authorized by Section 12302 Urban Agriculture amending Section 222 of the Department of Agriculture Reorganization Act of 1994 (7 U.S.C.

6911 et seq.). The Secretary of Agriculture delegated the Natural Resources Conservation Service to lead the USDA-wide office, and work in partnership with numerous USDA agencies that support urban agriculture.

The mission of the OUAIP is to encourage and promote urban, indoor, and other emerging agricultural practices, including:

- community gardens and farms located in urban areas, suburbs, and urban clusters;
- rooftop farms, outdoor vertical production, and green walls;
- indoor farms, greenhouses, and high-tech vertical technology farms;
- hydroponic, aeroponic, and aquaponic farm facilities; and
- other innovations in agricultural production, as determined by the Secretary.

OUAIP is directed to administer grants, and cooperative agreement pilot projects in at least ten States, establish ten new Urban/Suburban County Committees for Urban Agriculture, and establish a Federal Advisory Committee for Urban Agriculture. OUAIP is also responsible for engaging in activities to carry out the mission, including managing programs for community gardens, urban farms, rooftop agriculture, and indoor vertical production; advising the Secretary; coordinating with the agencies and officials of the Department to update relevant programs; engaging in stakeholder relations and developing external partnerships; identifying common State and municipal best practices for navigating local policies; coordinating networks of community gardens and facilitating connections to local food banks, in partnership with the Food and Nutrition Service; and collaborating with other Federal agencies. OUAIP used the \$7 million in appropriated 2021 funds to meet the requirements, with a focus on developing a new comprehensive grants program and the cooperative agreement pilot project program.

Current Activities

Urban Agriculture and Innovative Production Competitive Grants

UAIP Competitive Grants Program supports a wide range of activities through two grant types, which are Planning Projects and Implementation Projects. Activities include operating community gardens and nonprofit farms, increasing food production and access in economically distressed communities, providing job training and education, and developing business plans and zoning. Priority was given to projects with positive impact where limited access to healthy affordable food is an issue as listed in the USDA Food Access Research Atlas. In its second year, USDA received 329 applications for this program. Of these, USDA awarded approximately \$1.53 million for 10 Planning Projects and approximately \$3.07 million for 11 Implementation Projects.

Community Compost and Food Waste Reduction Cooperative Agreement Pilot Program

In 2021, USDA received 52 applications for the Community Compost and Food Waste Reduction (CCFWR) Pilot Program. Through the competitive process, USDA awarded approximately \$1.92 million in 24 pilot projects that develop and test strategies for planning and implementing municipal compost plans, and food waste reduction. Priority was given to projects that anticipate or demonstrate economic benefits, incorporate plans to make compost easily accessible to farmers, including community gardeners, integrate other food waste strategies, including food recovery efforts, and collaborate with multiple partners.

Urban and Suburban County Committees

The 2018 Farm Bill authorized the Secretary to establish ten new Urban and Suburban Farm Service Agency (FSA) County Committees as part of a five-year pilot project. OUAIP worked closely with FSA to identify the locations; develop outreach, business, and operation plans and associated policies; and conduct national trainings and outreach sessions. The committees are organized through the OUIAP. On December 17, 2020, FSA announced the next six selected locations: Atlanta, Georgia; Dallas, Texas; Minneapolis-St. Paul, Minnesota; New Orleans, Louisiana; Phoenix, Arizona; and St. Louis, Missouri. The original five committees were announced earlier in 2020, and included Albuquerque, New Mexico; Cleveland, Ohio; Philadelphia, Pennsylvania; Portland, Oregon; and Richmond, Virginia. These committees will make important decisions about how Federal farm programs are administered locally. Their input is vital to how FSA carries out disaster programs, as well as conservation, commodity and price support programs, county office employment, and other agricultural issues.

Urban Agriculture and Innovative Production Federal Advisory Committee

During 2021, the OUAIP made inroads to establish the USDA Urban Agriculture and Innovative Production Advisory Committee (Committee) pursuant 7 U.S.C. §6923(b)(1). The Committee is to advise the Secretary on the development of policies and outreach relating to urban, indoor, and other emerging agricultural production practices.

At the end of 2021, OUAIP was working with the Department on finalizing the nomination slate the Secretary will use to select members on the initial Committee in accordance with the provisions of the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C. App. 2, and 41 CFR § 102-3.

Internal USDA Advisory Committee

To ensure cooperation and involvement of all relevant USDA agencies, USDA established an internal advisory committee with membership from agencies that have a mission which services urban agriculture and innovation. This Committee, identified as the OUAIP Committee, provided guidance to the OUAIP Designated Federal Official and developed recommendations on applicable policy for USDA leadership throughout 2021, and continue in 2022. Membership includes the following agencies: Agricultural Marketing Service, Agricultural Research Service, Animal Plant Health Inspection Service, Economic Research Service, Farm Production and Conservation Business Center, Farm Service Agency, Food and Nutrition Service, Foreign Agricultural Service, Forest Service, National Agricultural Statistics Service, National Institute of Food and Agriculture, Natural Resources Conservation Service, Rural Development, Risk Management Agency, Office of the Chief Economist, Office of Partnership and Public Engagement, Office of the Secretary, Rural Development, and Risk Management Agency.

SUMMARY OF PERFORMANCE**Introduction**

The Farm Production and Conservation (FPAC) mission area is USDA’s focal point for the nation’s farmers and ranchers and other stewards of private agricultural lands and non-industrial private forest lands. FPAC agencies implement programs designed to mitigate the significant risks of farming through crop insurance services, conservation programs and technical assistance, and commodity, lending, and disaster programs. These agencies include the Farm Service Agency, the Natural Resources Conservation Service, the Risk Management Agency, and the FPAC Business Center (FPAC BC),

FPAC BC’s Performance, Accountability, and Risk (PAR) division leads the mission area in Strategic Planning, Performance Management, Evidence and Evaluation, and Enterprise Risk Management (ERM). PAR works closely with each of the FPAC agencies to develop performance related practices and products. This office frequently works directly with USDA leadership and represents FPAC on the Department’s Performance, Evaluation, Evidence Committee and the ERM Committee, which are facilitated by the USDA Office of Budget and Program Analysis. FPAC’s Enterprise Risk and Strategy Committee, comprised of executives from each of the FPAC agencies, oversees and provides accountability for performance functions across the mission area.

Alignment to USDA 2022 – 2026 Strategic Plan

USDA Strategic Goal 1: Combat Climate Change to Support America’s Working Lands, Natural Resources, and Communities

- Objective 1.1: Use Climate-Smart Management and Sound Science to Enhance the Health and Productivity of Agricultural Lands
- Objective 1.3: Restore, Protect, and Conserve Watersheds to Ensure Clean, Abundant, and Continuous Provision of Water Resources
- Objective 1.4: Increase Carbon Sequestration, Reduce Greenhouse Gas Emissions, and Create Economic Opportunities (and Develop Low-Carbon Energy Solutions).

SUMMARY OF PERFORMANCE

The following table summarizes the targets for the Departmental Key Performance Indicator (KPI) for which NRCS is responsible.

Objective 1.1: Use Climate-Smart Management and Sound Science to Enhance the Health and Productivity of Agricultural Lands

Table NRCS-67. KPI Cropland with Applied SHMS

Strategic Objective 1.1		Baseline	2022	2023
Cropland with applied Soil Health Management System (SHMS)	Results	225	-	-
Cropland with applied SHMS (Thousands of Acres)	Target	-	225	225

Table NRCS-68. KPI Improved Soil Quality EQIP

Strategic Objective 1.1		Baseline	2022	2023
Improve Soil Quality EQIP	Results	3.4	-	-
Cropland on which at least one conservation practice that was applied to improve soil quality during the fiscal year for Environmental Quality Incentives Program (EQIP) (Millions of Acres)	Target	-	3.4	3.4

Table NRCS-69. KPI Improve Soil CTA

Strategic Objective 1.1		Baseline	2022	2023
Improve Soil Quality CTA	Results	6	-	-
Cropland with conservation applied to improve soil quality Conservation Technical Assistance (CTA) (Millions of Acres)	Target	-	6	6

Table NRCS-70. KPI Conservation Easements

Strategic Objective 1.1		Baseline	2022	2023
Conservation Easements	Results	163	-	-
Working lands protected by conservation easements (Thousands of Acres)	Target	-	163	163

Expected Performance Progress Towards the Achievement of Strategic Objective:

Cropland with applied Soil Health Management System (SHMS)

- This measure is the sum of units of cropland that have the minimum required conservation practice standards for soil health management treatment applied with conservation program assistance during the fiscal year. The required minimum practices are cover crops, reduced or no-till, and conservation crop rotations.

Improve Soil Quality EQIP

- Data comes from the National Practices Applied Database (NPAD). This performance measure has been a staple for many years, used as a national-level indicator of the Agency's work on soil quality.

Improve Soil Quality CTA

- This measure and target are being re-evaluated by leadership and subject matter experts. The FY 2021 target was not achieved primarily due to the implementation of the new Conservation Assessment and Ranking Tool (CART), resulting in less unfunded practices that were being implemented through CTA and, as a result, less acres being reported under this measure.

Conservation Easements

- Data Services Branch of the Easement Programs Division provided easement numbers. This KPI reflects the total acres within easements that have a closing date within the fiscal year. Large acreage easements take more time to prepare and close, therefore most conservation easements acreage is recorded in quarters 3 and 4. There is less acreage than previous years, possibly due to the effects of COVID on the previous fiscal year.

Objective 1.3: Restore, Protect, and Conserve Watersheds to Ensure Clean, Abundant, and Continuous Provision of Water Resources

Table NRCS-71. KPI Cropland Sediment

Strategic Objective 1.3		Baseline	2022	2023
Cropland Sediment	Results	6	-	-
Tons of sediment prevented from leaving cropland and entering water bodies (million tons)	Target	-	6	6

Expected Performance Progress Towards the Achievement of Strategic Objective:**Cropland Sediment**

- Conservation Effects Assessment Lab provides the data from the National Practices Applied Database (NPAD) for this KPI. Progress for sediment retained is exceeding expectations for this KPI.

Objective 1.4: Increase Carbon Sequestration, Reduce Greenhouse Gas Emissions, and Create Economic Opportunities (and Develop Low-Carbon Energy Solutions).

Table NRCS-72. KPI Contract Implementation Ratio

Strategic Objective 1.4		Baseline	2022	2023
Contract Implementation Ratio	Results	87	-	-
CIR is the percentage of contract items in a contract that are certified during the life of a contract	Target	-	87	87

Table NRCS-73. KPI Practice Implementation Ratio

Strategic Objective 1.4		Baseline	2022	2023
Practice Implementation Rate	Results	53	-	-
PIR is a percentage of timeliness of practice certifications or timely modification of past scheduled practices to reflect a new future schedule date.	Target	-	53	53

Expected Performance Progress Towards the Achievement of Strategic Objective:**Contract Implementation Ratio**

- CIR is the percentage of contract items in a contract that are certified during the life of the contract. The ratio is computed for each individual contract as the percent of practices applied out of total practices agreed to upon obligation. The CIR is calculated for each individual contract using the 3rd Year CIR. NRCS has been meeting its target of 87 percent for the past years. This indicator falls in line with creating economic opportunities to track the number of contracts and acres for conservation.

Practice Implementation Rate

- PIR targets are based on the fiscal year (FY) 2018 and FY 2019 data and are consistent with prior year targets. NRCS will compile data from FY 2020 and FY 2021 to ensure stability in new methodologies before adjusting targets to reflect nominally higher outcomes present in FY 2020 data. Numerator: a count of all practices certified within the target quarter. Denominator: a count of all practices that are expected to have been certified as of a given end-of-quarter. NRCS created economic opportunities by adding this metric to track the number of practices certified.